



# LAKELAND, FL

## Comprehensive Plan

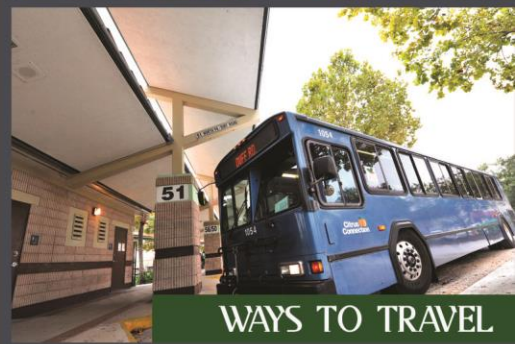
### 2010 - 2020

Adopted: August 16, 2010

Per Ordinance 5188  
(As Amended)



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# ACKNOWLEDGEMENTS FOR YEAR 2020 PLAN

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Central Florida Regional Planning Council  
Florida Fish & Wildlife Conservation Commission  
Lakeland Downtown, Mid-Town & Dixieland CRAs  
Lakeland Housing Authority  
Polk County BoCC; Polk County Health Dept.  
Polk County School Board  
Polk County Transportation Planning Organization  
Southwest Florida Water Management District  
State Dept. of Children & Families  
U.S. Soil Conservation Service

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## PREFACE

Lakeland has continued to evolve in many ways since 1991 when it adopted its first Comprehensive Plan written to comply with the 1985 Florida legislation entitled the “Local Government Comprehensive Planning and Land Development Regulation Act”, also known as the Florida 1985 Growth Management Act. The City adopted *Land Development Regulations* (LDRs) in 1993 and adopted its first Evaluation and Appraisal Report (EAR) on the Comprehensive Plan in 1998. The City limits stretched westward to County Line Road, south to Pipkin Road and north to Tomkow Road.

Basic tenants of the City government’s philosophy have not changed, i.e., that all residents deserve the opportunity for decent shelter, jobs and a certain level of quality of life which is enhanced through provision of recreation, highway beautification, lakes management, law enforcement, basic infrastructure services such as roads, water, wastewater, solid waste, and fire protection and an efficient city government. This quality of life will be increasingly challenging in recessionary economic situations. However, quality of life is a key tenet in both the Metro Lakeland Vision and the City organization’s goal areas.

As the City approaches the next decade through year 2020, efforts to improve the quality of life in Lakeland draw on its greatest asset: public involvement. The City is a partner in the Metro Lakeland Vision effort, has multiple organized neighborhood associations, many civic organizations, a downtown partnership and redevelopment board, lay boards such as the Historic Preservation Board, an Affordable Housing Committee and Citizens Advisory Committee. Each of these groups involve those who live and/or work in the City participating in efforts to make this a better place to live through short and long range goals.

Around our state we can see many examples of the good and bad qualities that urban life offers. Lakeland need not look far for examples of urban growth to avoid or imitate. The process and rules of urbanization are somewhat universal. Will our Lake Mirror Promenade be compared to Orlando’s Lake Eola? Will Florida Avenue one day rival Tampa’s Dale Mabry Boulevard? If communities now changed by growth, were given the opportunity to start again, perhaps they would manage growth differently in the future in order to improve the attractiveness, vitality and efficiency of their city. In fact, many towns and cities have raised their development requirements to a higher standard in order to address these quality of life issues. The standard Lakeland wants for its future is the subject of this plan.

What standard should the City strive for given the growth and development that all projections indicate is coming to Lakeland and Polk County? What amount of growth can we realistically manage and provide adequate services to support? What are our priorities to be? What are the problems with which we are concerned and what steps will we take to correct the problems and improve our community? The document which follows is a plan for Lakeland to improve the quality of life for existing neighborhoods, businesses and residents as we face continued growth. It is a plan that attempts to recognize the advantages we have now and the ways we can preserve those advantages. It also

recognizes problems in our City from neighborhood blight to inadequate transportation routes.

By law, this plan must also be a very specific technical document utilized to guide the public decisions which occur after its adoption. The plan will direct public decisions which impact the built environment, land use, physical appearance, and the capital improvements budget of the City. Informed citizens know what is attractive and desirable. The plan should help guide residents through the political trade-offs to support those items they clearly want; if they want an attractive urban environment then high development standards must be implemented and must be based in the Comprehensive Plan.

This is a ten year plan but it is not etched in stone. It can be changed up to twice a year, every year through public input and City Commission approval. Given existing regulations, goals, policies and funding limits, in ten years Lakeland should:

- become more attractive and “walkable” through the continued implementation of locally-desired development standards for new and existing development;
- become even more effective in strengthening neighborhoods through a well developed process of neighborhood and small area improvement studies, sector plans, CRA plans, and implementation programs; and
- still be adding to and improving its multi-modal transportation network and its parkland resources including conservation and wetland areas, despite the continued challenge of demand for improvements far exceeding funding available for those efforts.

Lakeland will continue evolving toward being a better City. As the saying goes, “success is a journey, not a destination.” In pursuing community goals, it will become increasingly important to coordinate with all major players which impact and shape our future urban form, including the State and County governments, the School Board and adjacent cities, and private sector investment.

Today there are qualities of Lakeland which stay in visitors minds: brick streets, attractive neighborhoods, peaceful lakes bedecked with swans and waterfowl, preserved 1920’s architecture in the downtown and historic districts and lush landscaping. Will those fine qualities be retained or improved in ten years? Will those urban problems which we now recognize like commercial strip development, surface water/lake degradation, homelessness, congested roadways and visual pollution from litter, be reversed or diminished? Will the County and City come to common standards for development, transportation and urban services? The effectiveness of the Lakeland ten year plan will be answered along with these questions. The effectiveness of the Plan will be made real by those City Commissioners, City employees and citizens who will use it to shape our future.

## TABLE OF AMENDMENT HISTORY

LS & LUL = Large Scale as relates to a Future Land Use *Map* Amendment; SS & LUS = Small Scale (≤10 acres)

T & CPA = Text as regards amendments to narrative, policies or illustrations in the Comprehensive Plan

TBD = To Be Determined (unknown at this time)

Amendment	Ordinance	Adopted Date	Effective Date
T-10-001 <b>(10 yr. update)</b>	<b>5188</b>	08/16/10	10/27/10
LS-10-002	5189	08/16/10	10/27/10
LS-10-003	5190	08/16/10	10/27/10
LS-10-005	5191	08/16/10	10/27/10
LS-10-006	5192	08/16/10	10/27/10
T-10-011	5213	10/18/10	11/18/10
T-11-001	5241	06/06/11	07/07/11
T-11-002	5242	06/06/11	07/07/11
T-11-003	5243	06/06/11	07/07/11
T-11-004	5244	06/06/11	07/07/11
LS-11-005	5245	06/06/11	07/07/11
T-11-006	5255	07/18/11	09/09/11
T-11-007	5256	07/18/11	09/09/11
LS-11-008	5257	07/18/11	09/09/11
SS-11-009	5237	05/16/11	06/16/11
SS-11-010	5247	06/20/11	07/21/11
SS-11-011	5249	06/20/11	07/21/11
SS-11-012	5258	07/18/11	08/18/11
T-11-013	5283	12/19/11	01/19/12
LS-11-014	5284	12/19/11	02/19/12
SS-11-015	5266	09/19/11	10/20/11
CIE UPDATE	5285	12/19/11	12/19/11
LS-12-001	5325	07/02/12	08/11/12
T-12-002	5311	05/21/12	06/21/12
T-12-003	5312	05/21/12	06/21/12
T-12-004	5313	05/21/12	06/21/12
T-12-005	5314	05/21/12	06/21/12
LS-12-006	5360	01/22/13	03/07/13
T-12-007	5361	01/22/13	03/18/13
T-12-008	5342	11/19/12	12/20/12
LS-12-009	TBD	TBD	TBD
SS-12-010	5353	12/17/12	01/17/13
CIE UPDATE	5356	12/17/12	12/17/12
SS-13-001	5371	04/15/13	05/16/13

Amendment	Ordinance	Adopted Date	Effective Date
LS-13-002	5386	06/17/13	07/29/13
T-13-003	5387	06/17/13	07/29/13
T-13-004	5374	05/20/13	06/20/13
T-13-005	5375	05/20/13	06/20/13
T-13-006	5376	05/20/13	06/20/13
T-13-007	5377	05/20/13	06/20/13
SS-13-008	5396	07/15/13	08/15/13
LS-13-009	5416	11/18/13	12/26/13
LS-13-010	5419	11/18/13	12/26/13
SS-13-011	Withdrawn by Applicant		
LS-13-012	5404	09/16/13	10/17/13
T-13-013	5410	10/21/13	11/21/13
T-13-014	5411	10/21/13	11/21/13
CIE UPDATE	5426	12/16/13	12/16/13
LUS13-002	5435	03/17/14	04/17/14
LUL14-001	5450	07/21/14	09/15/14
LUL14-002	5451	07/21/14	09/15/14
LUS14-002	Withdrawn by Applicant		
CPA14-001	5452	07/21/14	09/15/14
CPA14-002	5453	07/21/14	09/05/14
CPA14-003	5441	05/05/14	06/05/14
CPA14-004	5442	05/05/14	06/05/14
CPA14-005	5454	07/21/14	08/21/14
LUS14-003	5473	11/03/14	12/04/14
LUS14-004	5483	12/15/14	01/15/15
CIE UPDATE	5485	12/15/14	12/15/14
LUL14-003	5494	04/06/15	05/07/15
CPA14-006	5497	04/06/15	05/07/15
CPA15-001	5505	05/18/15	06/18/15
CPA15-002	5506	05/18/15	06/18/15
CPA15-003	5507	05/18/15	06/18/15
CPA15-004	5518	07/06/15	08/13/15
CPA14-007	5515	07/06/15	08/27/15
LUL15-001	5516	07/06/15	08/13/15
LUS15-001	5512	06/15/15	07/16/15
LUS15-002	5520	07/20/15	08/20/15
LUS15-003	5554	12/21/15	01/21/16
LUL15-002	5547	12/21/15	01/21/16

Amendment	Ordinance	Adopted Date	Effective Date
CPA15-005	5549	12/21/15	01/21/16
CPA15-006	5550	12/21/15	01/21/16
CIE UPDATE	5551	12/21/15	12/21/15
LUL16-001	WITHDRAWN BY APPLICANT		
LUS15-004	5568	3/21/16	4/21/16
LUS15-005	5571	3/21/16	4/21/16
CPA16-001	5575	5/16/16	6/16/16
CPA16-002	5576	5/16/16	6/16/16
LUS16-002	5588	7/18/16	8/19/16
LUS16-003	5594	9/19/16	10/31/16
LUS16-004	5595	9/19/16	10/31/16
CIE UPDATE	5608	12/19/16	12/19/16
LUS16-005	5620	2/6/17	3/9/17
CPA17-002	5636	5/15/17	6/16/17
CPA17-001	5643	7/5/17	8/4/17
LUL17-001	WITHDRAWN BY APPLICANT		
LUS17-001	5646	7/17/17	8/18/17
LUL17-002	5650	8/21/17	9/22/17
LUL17-003	5652	8/21/17	9/22/17
LUL17-004	5654	8/21/17	9/22/17
LUS17-002	WITHDRAWN BY APPLICANT		
LUS17-003	DENIED		
LUS17-004	5669	11/20/17	12/21/17
LUS17-005	5685	12/18/17	1/19/18
LUS17-006	5681	12/18/17	1/19/18
LUL15-003	5674	12/18/17	1/19/18
CIE UPDATE	5687	12/18/17	12/18/17
CPA18-001	5706	5/7/18	6/7/18

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# INTRODUCTION

## PURPOSE OF THE PLAN

The purpose of the *Lakeland Comprehensive Plan* is to establish and articulate City goals, objectives and policies in regards to growth management and redevelopment. A more ambitious function of the plan is to define the vision the City leaders have for the community for the near and long term.

The development of the City's 2010 plan used the 1991 adopted plan as its base or starting point. Behind the 1991 volume were several technical or support documents created in the late 1980's to research, compile and analyze relevant data. The City's 1998 adopted Evaluation and Appraisal Report (EAR) updated much of the required data for the Comprehensive Plan and analyzed what changes were necessary. Drafting of updated elements or chapters of this plan involved obtaining data from and discussing issues relevant to most of the City's departments. Key requirements of growth management legislation have been retained, e.g., the requirement for "concurrency", i.e. that adequate public facilities be available at the time needed for new growth or expansion.

All new public and private development activity must be consistent with this Plan, including all land use changes and public facility improvements. The Plan is the single document which defines the City's current and future growth management philosophy. All development regulations must be closely related to and consistent with the goals, objectives and policies of this Plan.

## BACKGROUND FOR PLANNING

Lakeland's first comprehensive plan was adopted in the 1950's and new plans were produced in 1970 and 1980. The 1980 Comprehensive Plan was prepared under the guidelines of the "Local Government Comprehensive Planning Act of 1975." This legislation was replaced in 1985 by the "Local Government Comprehensive Planning and Land Development Regulation Act" that mandated broad new responsibilities to all local governments and replaced general requirements to adopt plans with very specific and technical requirements. Plans under the 1985 act must closely regulate growth in concurrence with available public facilities and in accordance with mandatory land development regulations to control the physical, environmental, and visual impacts of new development.

The most notable aspect of the law, often called the "teeth" of the act, is the concurrency provision. This is the requirement that all new private development be served with adequate public facilities at the time impacts are generated. Concurrency applies to roads, parks, water, wastewater, drainage and solid waste facilities, and schools. The development of a "concurrency management system" based on public facility availability and the denial of building permits due to unavailability are required as a part of plan implementation.

Within a few years of the submission of the comprehensive plan, local governments also were supposed to formulate a unified development code. In 1993, Lakeland adopted unified *Land Development Regulations* (LDRs) to govern the development and subdivision of land, including concurrency management mechanisms, future land use designations, subdivision controls, wellfield and resource protection, floodplain and stormwater management, traffic, landscaping, signs, open space and other site design considerations.

Each comprehensive plan is reviewed by the Florida Department of Community Affairs. This review is intended to determine if the document meets both the legislative intent of the act and administrative rules enacted by the State. Chapter 9J-5, Florida Administrative Code is the administrative rule which defines the minimum criteria for acceptable plans.

Among the other major requirements contained in the 1985 Growth Management Act and Rule 9J-5, Florida Administrative Code, which lists the minimum content for the elements of the Plan, are requirements that local plans address the problems associated with urban sprawl, be consistent with related plans of regional and state agencies, encourage effective intergovernmental coordination and include Capital Improvement Elements which tie all of the financial requirements of each section of the plan into one document which is consistent with the Five Year Capital Improvements Program of the local government.

Another major requirement is that the Future Land Use Element include a future land use map. The future land use map must designate a future land use for all land within the City and adjacent to its boundaries. Any proposal for development that is not consistent with the adopted future land use map would require an amendment to the adopted comprehensive plan before development approval could be granted.

The time frame for the *Lakeland Comprehensive Plan* is ten years. Evaluations of the Plan were originally to be required every five years but that has shifted to a longer period which coincides with the time to update the Plan and extend its timeframe to the next ten years (Lakeland's second Evaluation and Appraisal Report was adopted in 2009.) Once adopted, the Comprehensive Plan can be revised or amended up to twice per year. At a minimum, the Plan will be revised each year in accordance with revisions to the City of Lakeland Budget and its five-year Capital Improvements Program.

## **OVERVIEW PRINCIPLES OF THE PLANNING PROGRAM**

---

Lakeland's 1980 Comprehensive Plan established several principles and programs that substantially affected public policy regarding the City's growth. These were:

- The City will encourage and maintain a Compact/Linear growth pattern based on existing land use and will attempt to strengthen the central City and discourage sprawl in outlying areas.
- The City will approve or deny major development proposals based on the availability of public facilities.

- In the 1980's the City used an aggressive annexation policy to deal with/limit growth related problems near its boundaries; this was an attempt to prevent the City from becoming "the hole in the doughnut," unable to control its destiny.

These three public policy positions played a major role in the regulation of development and the growth of the City over the next decade.

The 1990 and year 2000 Plans also contained a number of overall policy positions or principles which represented methods to guide the development and implementation of the Plan. Many of these principles still remain important to Lakeland's future:

- Lakeland has developed as a traditional central city serving a large population beyond its corporate limits. The characteristics Lakeland offers of a small southern city with a strong sense of place are somewhat unique in Florida and should be preserved through protection of established neighborhoods and enhancement of the built environment with new high quality development.
- Lakeland is one of Florida's oldest cities with major sections of the City developed in the 1920's, 1930's and 1940's. Some of these residential and commercial districts are among the most attractive neighborhoods in Polk County; others have suffered significant decline. In order to effectively manage growth and sustain the qualities Lakeland is most appreciated for, the City must maintain the viability of these established areas through reinvestment in public facilities, special improvement programs and other strategies.
- Lakeland citizens consistently indicate support for growth which addresses quality of new development and its direct and indirect cost to the community. Raising development standards for public and private development is the most cost effective community betterment strategy available to local government.
- The City of Lakeland is part of the larger Lakeland Urban Area. Effective management of urban problems which affect Lakeland and the surrounding urban area can only occur through cooperation with Polk County government. Urban sprawl is a key urban problem which is often unattractive and more importantly it leads to an expensive and inefficient development pattern for government to serve. The City must work closely with Polk County to encourage responsive utility strategies and regulatory disincentives to sprawl and incentives to compact growth and redevelopment.
- The five year capital improvement program or budget will allow City departments to clearly define capital needs and aid the City Commission in setting budget priorities. Through the regular use of the *Lakeland Comprehensive Plan* as the primary development guide for Lakeland and the use of capital budgeting as part of the planning process, the City Administration can implement a meaningful five-year capital improvement program which acts as a primary resource in managing Lakeland's growth and redevelopment.

As the City approaches its next decade of growth, change and redevelopment opportunities, the key principles on which the growth management plan are based required some updating.

The community of Lakeland developed a vision document through the work of many individual stakeholders and citizens. This work was spear-headed in the late 1980's by an organization known as "Lakeland Vision", a non-profit that works to improve various facets of the physical, social, economic and cultural community in the metro Lakeland area. The end result of the work was production of a narrative document with various goals and strategies intended to address many community issues such as arts and culture, diversity, education, economic development and growth & infrastructure. Lakeland Vision's summary vision document was updated in the 2008-09 period through a renewed process of community meetings for idea gathering, categorization of the ideas and prioritization of implementing strategies,

The updated Lakeland Vision document has been adopted by reference into the City's Comprehensive Plan as a means to strengthen the link between the strategies of the two documents. In the Growth and Infrastructure section, the following Goal and Strategies were adopted (spring 2009):

## **1. Growth Management**

### ***Goal***

Lakeland's growth is well planned and managed to preserve green space, create vibrant mixed-use neighborhoods, encourage infill and redevelopment, and ensure that public infrastructure can keep up with the needs of a growing population.

### ***Strategies***

1. Encourage high density development in downtown Lakeland to position it as the vibrant urban hub of the community where people live, work, and play.
2. Revise codes to provide incentives for redevelopment and infill in existing developed areas, rather than on open lands.
3. Facilitate the planning and development of existing DRIs (Developments of Regional Impact) and coordinate strategic infrastructure investments to meet the needs of these areas.
4. Develop a multi-use trail system that connects Lakeland's parks, lakes, and natural areas.
5. Inventory critical natural resource areas and restrict development in those areas.
6. Encourage the development of higher density, mixed use nodes throughout Lakeland that preserve green space and are connected to transit and trail networks.

The City of Lakeland as an organization also has adopted a vision and mission statement for its specific role in making the City a better place to live, work, learn and play. The City's Vision statement is "Lakeland, a vibrant, culturally inclusive, world-class community." The

mission statement for the city organization, as adopted by the City Commission, is as follows: “A Community Working Together To Provide An Exceptional Quality of Life.” In addition, the City adopted several specific goals:

- **Economic Opportunity Goal:**  
*“Create self-sustaining environments to grow, attract and retain a creative, talented, educated and technically qualified workforce.”*
- **Communication Goal:**  
*“Support the on-going development of an informed and engaged citizenry.”*
- **Fiscal Management Goal:**  
*“Develop and effectively manage financial resources.”*
- **Growth Management Goal:**  
*“Ensure that Lakeland’s Comprehensive Plan capitalizes on past successes utilizing smart growth principles to foster quality developments and safe, attractive neighborhoods.”*
- **Quality of Life Goal:**  
*“Support the arts, education, wellness and recreation, and provide quality public spaces and superior municipal services.”*

The City evaluated three key issues in its 2009 adopted Evaluation and Appraisal Report (EAR), all three of which related to the overall goal of creating a more sustainable community. These three key issues were:

1. Increasing mixed land uses, residential infill and densification within the urban area. (Note a related fact: based upon studies, the minimum density recommended for economic sustainability of a transit service, including bus service, is about 7 dwelling units per acre.)
2. Increasing interconnected, multi-modal transportation network choices for the entire community; this system would include roads, transit service and associated facilities, pedestrian ways, e.g. sidewalks, paths, trails and bicycle facilities, e.g. bike lanes and supporting amenities; and
3. Continuing to conserve and strategically maximize, use and allocate available water resources.

From the Lakeland Visioning process and analysis contained in the EAR, the following are recommended guiding principles for the City’s 2020 comprehensive growth management plan.

## **GUIDING PRINCIPLES**

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1. Create and maintain a sustainable community that provides the opportunity for a high quality of life for all residents.

2. Build upon the existing urban form in the core of the Central City Area and expand the application of key characteristics therein including provision of a mix of housing choices (i.e., a variety in lot size, building type and affordability), respect for the character of building design, a wide variety and mix of land uses within relatively close proximity to one another to support compact urban form, and ample connectivity within the entire transportation system including road (& alley), pedestrian, bikeway, and transit (rail and bus.)
3. Seek improved energy efficiency throughout the community through strategies that support a more well integrated pattern of proximate and complimentary (mixed) land uses; a safe, well connected multi-modal transportation system; adequate open spaces; energy-wise site, building and housing codes; protection of environmentally sensitive lands; and water and energy conservation policies and initiatives.
4. Support an economic base which includes sustainable local revenue sources to provide necessary public services and infrastructure, and a wide range of employment and educational opportunities, with a special focus on jobs that provide a living wage (typically above-average wages.)

# FUTURE LAND USE ELEMENT

## INTRODUCTION

The Future Land Use Element is possibly the single most important element of the *Lakeland Comprehensive Plan*. As the fundamental guide for future physical expansion and renewal, the Future Land Use Element coordinates the various recommendations of all the other elements of the Plan. Through the integration of these proposals into a future land use map and set of policies, the Future Land Use Element provides a basic means for ensuring plan consistency. When tied to land development regulations, consistent implementation strategies are achieved.

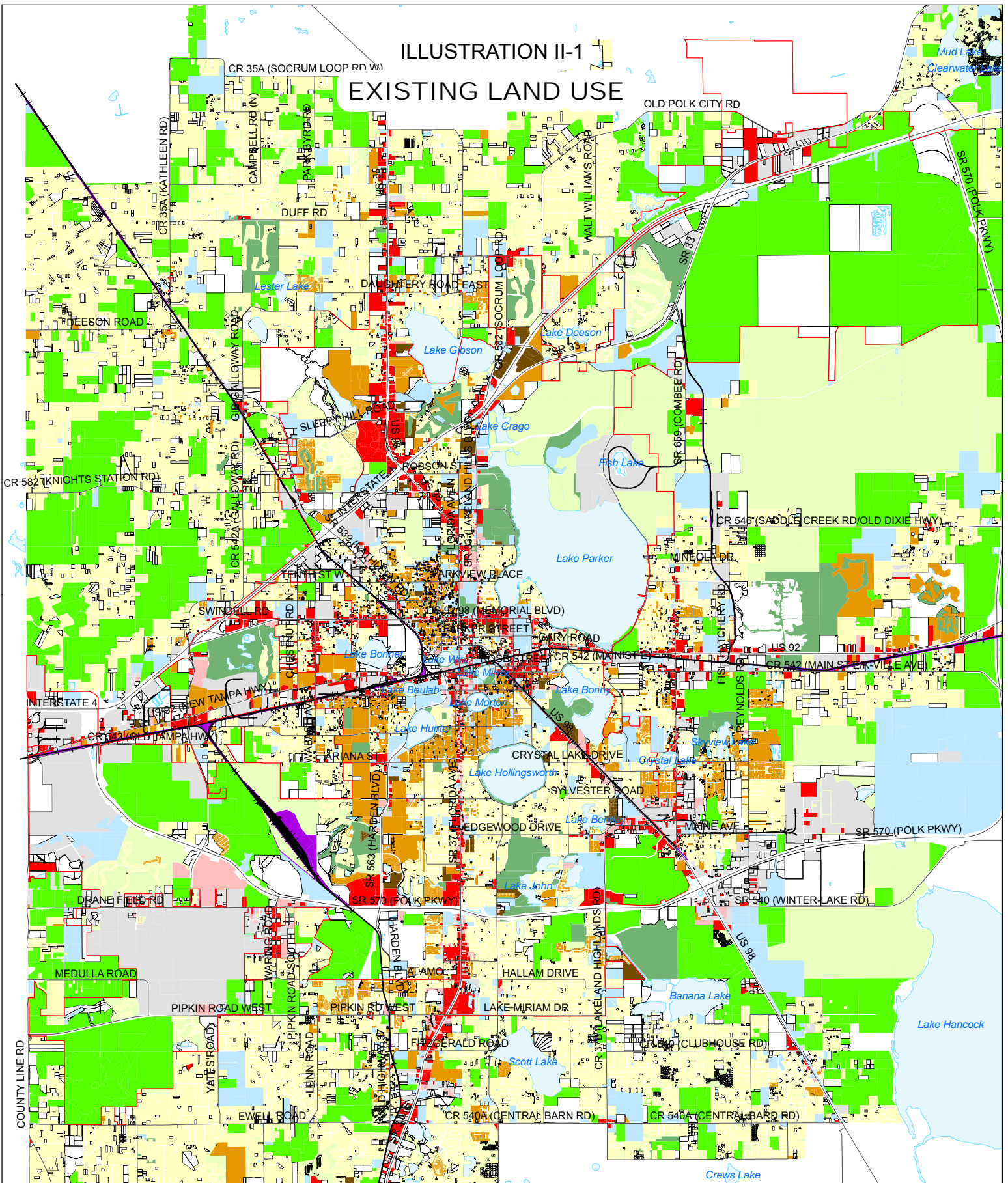
The City's Future Land Use Element (FLUE) is essentially an attempt to achieve a balanced and integrated set of policies with an accompanying future land use map to guide decisions regarding the future use of land in the City and the Lakeland Planning Area. These policies are based on considerations of existing land use problems and conditions and draw heavily on practical planning knowledge used every day in making land use decisions. The Future Land Use Element is not intended to stand alone; all elements of the comprehensive plan must work together and be consistent with one another. The City's comprehensive plan provides a blueprint for the City's preferred area-wide growth and establishes the policies necessary for achieving the preferred growth pattern. It also relates to the goals and strategies contained in the community Lakeland Vision document as well as the City's organizational mission statement: "A Community Working Together To Provide An Exceptional Quality of Life."

Although the City's land planning jurisdiction encompasses only the city limits, the Future Land Use Element examines the development patterns and potential of what is referred to in this Plan as the Lakeland Planning Area (LPA). In general, the LPA includes the City, the adjoining unincorporated areas built up in urban uses, and the surrounding vacant land that is provided with one or more City utility services. The Lakeland Planning Area boundary was drawn in 1988 as part of a Memorandum of Agreement between Polk County and its municipalities to better coordinate long range planning activities and has since been adjusted to allow the boundaries to correspond to the City's annexation areas and to the closest census boundaries for purposes of data and analysis. Examination of the planning area helps determine the future land use role of the City within the larger urban and suburban framework structure. This focus on the City as part of a larger planning area helps establish an area-wide orientation not only for the land use element, but for all other plan elements influenced by land use considerations.


The Future Land Use Element is divided into several major sections. Following this introduction, existing conditions are summarized and an existing land use map is presented. The third section examines issues and opportunities including a discussion of redevelopment of neighborhoods. The fourth section includes goal, objective and policy statements as well as a future land use map. The final section for this Element outlines the requirements for the City's Concurrency Management System, found in Appendix II-One.



# ILLUSTRATION II-1 EXISTING LAND USE



Source: Lakeland Community Development Department, 2010

- |   |                    |   |                      |   |                      |
|---|--------------------|---|----------------------|---|----------------------|
|  | Residential Low    |  | Industrial           |  | Rail Road            |
|  | Residential Medium |  | Public/Institutional |  | Water                |
|  | Residential High   |  | Agricultural         |  | Undeveloped / Vacant |
|  | Office             |  | Open Space           |   |                      |
|  | Commercial         |  | Recreation           |   |                      |



## SUMMARY OF FINDINGS

In 2008, the Community Development Department completed an existing land use report which described the salient facts and features about the land in the City and the surrounding planning area. The City's Evaluation and Appraisal Report (EAR), adopted and found sufficient in 2009, included an updated existing land use survey. The land use survey results are graphically displayed on the Existing Land Use Map, Illustration II-1. The existing land use map (ELUM) for the Lakeland Planning Area covers the following land uses: residential, commercial, industrial, agricultural, lakes/water, recreational, public institutional (includes educational), and vacant land uses, as well as lands adjacent to the City.

Natural features illustrations which are part of the Existing and Future Land Use Map series include: soils, flood hazard areas, minerals, the location of designated conservation or preservation areas, wetlands, historic districts, northwest and northeast wellfield zones of protection, and the Green Swamp Area of Critical State Concern. Lakeland has used dredging as one technique for surface water (lake) quality improvement. Potential locations for future dredge disposal are also shown on an illustration in this Element. A more detailed discussion of this topic is found in the City's Conservation Element. Please see the Table of Contents for this Plan's "List of Illustrations" to locate the illustration numbers and pages.

## EXISTING LAND USE ANALYSIS

In 2008, the Community Development Department completed an existing land use survey of the area within the corporate limits and the area immediately surrounding the City known as the Lakeland Planning Area, Illustration II-1. The intent of this analysis is to provide a thorough knowledge of existing land use patterns and site conditions by which past and current planning efforts can be evaluated and future planning efforts can be initiated. The acreages were calculated with the use of Arc GIS to map modified data from Polk County Property Appraisers Office and subjected to field verification. The results of the survey for inside the City of Lakeland (only) are found in Table II-1 while Table II-2 summarizes land uses for the revised Lakeland Planning Area.

Total acres located within the City increased by approximately 32 percent since the 1996 existing land use survey, mostly as a result of aggressive annexation. All residential land uses combined consist of 18.5 % of the existing uses in the City and the low to medium densities represent 95% of the residential total. In 1996, residential lands represented 22% of all acreage in the City, with low and medium densities consisting of 92% of the total residential uses. While new residential development continues to occur, this development tends to be generally more compact and dense as evidenced by the greater increase in new medium-density residential development compared to new low-density residential development over the last decade. From 1996 to 2008, residential medium lands increased 23% while low-density residential lands increased 19%. Residential high makes up approximately 5% of all residential lands and only 1% of all lands in the City.

**TABLE II-1  
SUMMARY OF EXISTING LAND USE, 2008  
CITY OF LAKELAND**

LAND USE	ACRES	PERCENT	RANGE OF DENSITY OR INTENSITY
Residential Low	5,367	11.6%	0 TO 5 UNITS PER ACRE
Residential Medium	2,733	5.9%	5 TO 12 UNITS PER ACRE
Residential High	447	1.0%	> 12 UNITS PER ACRE
Commercial	1,844	4.0%	500 TO 1,200,000 SQ. FT. GLA
Office	717	1.6%	500 TO 75,000+/- SQ. FT. GLA
Industrial	4,164	9.0%	1,000 TO 250,000 SQ. FT. GLA
Public Institutional	2,537	5.5%	0 TO 40,000 SQ. FT. BLDG/ACRE
Recreation	1,843	4.0%	SE PI; UP TO 268 ACRES
Open Space	3,205	7.0%	0.03 ACRES PER CAPITA
Agriculture	8,982	19.5%	0.1 ACRES PER CAPITA
Vacant	5,911	12.8%	0.06 ACRES PER CAPITA
Streets/Roads	4,095	8.9%	0.04 ACRES PER CAPITA
Rail Lines	400	0.9%	0.004 ACRES PER CAPITA
Water	3,841	8.3%	0.04 ACRES PER CAPITA
TOTAL	46,086	100.0%	

Note: Estimated City population in 2008: 93,508 per BEBR.

**Source:** City of Lakeland, Community Development Dept., Existing Land Use Survey, 2008.

Vacant lands have decreased to 13% down from 26% since 1996 as a result of those lands planned for development in the previous planning period. Agricultural lands consist of 19.5% of the total land area. Open space lands totaling 7% of the City's total area were accounted for separately from recreational uses. Recreation lands remain about the same proportion of the City's total land area at 4% despite the differentiation between open space and recreation, but since the City's total acreage has increased, this percentage represents more actual acres of recreational lands. Public streets and roads represent slightly less than 9% of the total City land area, down from 13% in 1996. Railroad right-of-ways remain less than 1% and the acreage of water bodies is 8.3% of the total land area.

Commercial land uses occupy 4% of all City lands, down from 4.9% in 1996. The majority of the land dedicated to commercial uses is found in the central business district, outlying shopping centers, such as Lakeland Square Mall and Lakeside Village, and linear commercial strips along Florida Avenue and North US 98. Additionally, minor retail commercial activities are found within and adjacent to residential neighborhoods. While the total proportion of commercial acreage has decreased, the total commercial land area has increased by 294 acres or 17%. Office uses have increased to 1.6% of the City's total land

area, up from 0.9% in 1996. Office uses are commonly adjacent or intermingled with commercial and industrial uses throughout the City; however, major concentrations exist in the central business district, Mid-town CRA, and southwest Lakeland near the Lakeland Linder Regional Airport. Existing industrial lands have decreased from 10.8% in 1996 to 9% of all lands despite an addition of 758 acres. Major concentrations of industrial activities exist in west Lakeland along the I-4 and George Jenkins Boulevard, southwest Lakeland surrounding the municipal airport, along County Line Road, and in the northeast Lakeland corridor along I-4 and SR 33.

**TABLE II-2  
SUMMARY OF EXISTING LAND USE, 2008  
LAKELAND PLANNING AREA**

LAND USE	ACRES	RANGE OF DENSITY OR INTENSITY
Residential, Total	38,493	0 TO 175 UNITS PER ACRE
Residential Low	33,224	0 to 5 UNITS PER ACRE
Residential Medium	4,7898	5 TO 12 UNITS PER ACRE
Residential High	471	> 12 UNITS PER ACRE
Commercial	2,961	500 TO 1,200,000 SQ. FT. GLA
Office	952	500 TO 75,000+/- SQ. FT. GLA
Industrial	6,369	1,000 TO 250,000 SQ. FT. GLA
Public Institutional	8,709	0 TO 40,000 SQ. FT. BLDG/ACRE
Recreation	3,163	SEE PI ; UP TO 268 ACRES
Agriculture	24,910	0.11 ACRES PER CAPITA
Vacant	16,034	0.07 ACRES PER CAPITA
Streets/Roads	11,783	0.05 ACRES PER CAPITA
Rail Lines/Row	804	0.004 ACRES PER CAPITA
Water	5,895	0.02 % OF TOTAL LAND AREA
TOTAL	132,622	

**Source:** City Of Lakeland, Community Development Department, 2008.

Table II-2 assumes an estimate of the Planning Area Population in 2008 of 225,246 persons based on the Comprehensive Plan population projections for 2010 being 231,587. The Planning Area is inclusive of the City area and therefore includes acreages of the City and the area outside the corporate limits within the Lakeland Planning Area boundaries.

Due to the new survey methodology utilizing highly accurate GIS shape file data from the Polk County Property Appraisers office, a more precise account of the uses and total acreage was possible. This resulted in a total area approximately 20,000 acres larger than in the 1996 survey and a decrease in acreage of streets and roads from 12% to 8%. Another significant difference as a consequence of the new methodology is the use of an

open space category. The open space category consists of conservation and preservation lands as well as publicly or privately constructed drainage retention facilities. Some of these lands were previously classified as vacant or recreation in the 1996 survey. The 2008 survey utilized Polk County Property Appraiser's data based on the Department of Revenue (DOR) land use codes as the basis for categorizing existing uses which separately identifies common areas such as water retention, private recreation uses, and private open space associated with both residential and non-residential developments. The associated common areas are contained on separate parcels which allow the different but associated uses to be accounted for. This appears to be one factor contributing to the reported decreased total acreage for residential high density and commercial uses. This is also the case for all residential developments that cluster and/or have common areas; however the net loss in acreage is only apparent with residential high density developments. The accuracy of the DOR land use codes also resulted in the appearance of a net decrease in commercial land uses since the 1996 survey. However, it has been concluded that the previous survey over counted the commercial acreage.

## **VACANT LAND ANALYSIS**

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As indicated above, vacant lands represent approximately 13% of all lands in the City of Lakeland, and 12% of all lands in the Planning Area (includes the City). A zoning analysis of vacant lands, as shown in Table II-3, indicates that of the total vacant land available at the time of the survey, approximately 32% is in limited development zoning districts. 36.6% is in residential or residential PUDs and 31.2% is non-residential. The Limited Development (LD) zoning district provides for rural, agricultural, conservation and recreational land uses. In future land use designations where development potential may exist but no specific type of development can be currently anticipated, the LD zoning district is treated as a "holding zone" until conditions evolve that make development feasible; e.g. available infrastructure, adjacent development, and/or market demand. The other significant zoning categories for vacant land inside the City are PUD single family and PUD industrial at about 28% and 10% percent each. Lands in the PUD and the industrial zoning districts comprise 20% of vacant lands whereas commercial and office zoning (including PUDs) only comprise 7.9%. Multi-family zoned and PUD vacant lands consist of 4.4% of the total vacant acreage.

**TABLE II-3  
SUMMARY OF VACANT LAND BY ZONE  
CITY OF LAKELAND**

<b>ZONE</b>	<b>ACREAGE</b>	<b>% OF TOTAL</b>	<b>RANK</b>
Single family	491.1	4.1%	5
Two family	18.2	0.2%	14
Multiple family	168.7	1.4%	7
Mobile Home	17.2	0.1%	15
PUD Single Family	3,322.1	27.8%	2
PUD Two Family	4.3	0.0%	16
PUD Multiple Family	354.6	3.0%	6
PUD Mobile Home	4.2	0.0%	17
PUD Mixed	52.6	0.4%	13
PUD Office	225.0	1.9%	8
PUD Commercial	306.8	2.6%	10
PUD Industrial	1,225.7	10.2%	3
PUD Unassigned	320.7	2.7%	11
Office	167.7	1.4%	12
Commercial	236.5	2.0%	9
Industrial	1,193.8	10.0%	4
Limited Development	3,849.1	32.2%	1
Total Vacant Lands	11,958.1	100.0%	

**Source:** City of Lakeland, Community Development Dept., 2009

## **DEVELOPABLE LAND ANALYSIS**

When considering whether lands are feasible for development it is necessary to consider both infrastructure availability and natural features that may be a constraint. Infrastructure availability is addressed by the City's utility service area and the capital improvements schedule, the latter of which is subject to change as financial resources become more or less scarce. Furthermore, market demand for development fluctuates and may be capable of investing or cost sharing in the necessary capital improvements. Natural features such as wetlands, flood plains and environmentally sensitive habitat are typically more static although quality and condition of these features can vary widely and change over time. While many vacant and agricultural land areas may contain wetlands, floodplains and/or sensitive habitats this does not necessarily preclude any or all development. Size, function and quality are all factors to be considered in terms of developability. These factors, in turn, must be resolved at the time of review for permits from the applicable state agency;

e.g. the South Florida Water Management District, Florida Department of Environmental Protection, and/or Florida Fish and Wildlife Commission.

Illustration II-2 depicts the Developable Land Analysis completed by the Community Development Department. The probability of development was projected based on whether significant natural constraints exist such as flood plains, wetlands and/or environmentally sensitive habitats. These lands are prioritized to reflect the challenges that exist should they be considered for future development.

## **URBAN SERVICE AVAILABILITY FOR DEVELOPMENT**

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A major consideration when determining the suitability of land for future development is the availability of public facilities and services. An analysis of public facility and service constraints includes an examination of the existing public facilities and services as well as new facilities and services required to support development and the ability of local government to provide, or require others to provide, the needed facilities and services.

Service availability for potential development of vacant lands is discussed at length in the Transportation and Infrastructure Elements. There are no level of service deficiencies or significant problems for potable water, wastewater, stormwater, or solid waste services provided by the City of Lakeland. System needs are outlined with cost estimates for the next 5 fiscal years in the Capital Improvements Program. The City's water is provided by the 13 wells at the Northwest Wellfield and the four wells at the Northeast Wellfield. Water treatment occurs at the T.B. Williams and Combee Treatment Plants.

Wastewater is treated at the Northside Treatment Plant and the Glendale Treatment Plant; both treatment facilities were expanded in the late 1990's and the Northside facility permit was again expanded in 2008 to increase design capacity sufficient for the next 10 years. Solid waste service is provided by the City for the entire corporate limits. No residential solid waste collection is made by the private sector except for construction debris. Most solid waste is sent to the Polk County North Central Landfill located on C.R. 540; the landfill has sufficient capacity through year 2020 and beyond.

Future levels of service (LOS) for the major roadway network in the Lakeland Planning Area have been determined by projecting existing traffic volumes to 2010, 2015 and 2020 using the Polk County Standard Transportation Model with population and employment and other socioeconomic data prepared by the Polk Transportation Planning Organization for use in its 2035 Mobility Vision Plan (Long-Range Transportation Plan Update). In addition to projected traffic volumes, "committed" and "cost-feasible" road improvements derived from the Polk County adopted 2030 Long-Range Transportation Plan were used to determine probable future levels of service. The City analyzed Year 2020 level of service both with projected roadway improvements and without such network improvements. As would be expected, the analysis indicated many more network level of service failures if no improvements were funded and implemented. In 2015, with committed roadway improvements funded, it is anticipated that there will be 12 directional links on the State

road system, six links on the County roadway system, and two links on the City roads that will be below the adopted LOS standard. In 2020, the same number of links is expected to be below the LOS standard if planned improvements are funded (for specific links, see Transportation Element, Traffic Circulation).

## POPULATION PROJECTIONS

Historically the City’s annual population growth varies greatly depending upon the level of referenda annexation activity of already populated areas as is shown in the table below. In the 1980’s, the City had a very aggressive program for annexation of developed areas leading to high rates of population growth. In the 1990’s annual population growth slowed considerably in part due to limitations in city revenues to serve the now swelled population. It is not unexpected that the City’s annexation activity wanes significantly upon fiscal constraints related to providing services, including police and fire services, to newly annexed and populated areas.

Due to that fiscal constraint, the aggressive annexation program envisioned for the years 2000-2006 was pursued only through about 2003 except for some select non-residential areas. The City had annexed over 8,000 residents in the first few years of the decade, equal to the growth of the entire previous decade (1990-2000). Thus, after about 2003, voluntary annexations of mostly undeveloped areas continued but the annual rate of growth slowed. The national, state, and regional recessionary trends of 2007 through the present, with repercussions from a oversaturated housing market, then further slowed population growth in the last few years of this decade.

Thus, the projections in the Table II-4A reflect a continued lower end rate of growth in the first five years of the planning horizon, or through 2015, similar to the annual rate of growth in the 1990s. However, a higher annual rate of growth is predicted for the 2015-2020 period due to factors such as the opening of the Florida Polytechnic University and the elimination of the City’s southwest Lakeland sewer line capacity limitation, as well as an expected upturn in the housing market as built units become absorbed and demand returns for new units. Note that the City has a twenty year water use permit as well, approved in late 2008. Projections are provided through the year 2025 for ease of transition during the next evaluation and appraisal and associated plan update period.

**TABLE II-4A  
CITY OF LAKELAND POPULATION PROJECTIONS, 2010-2025**

YEAR	ESTIMATED CITY POPULATION	PERCENT INCREASE, 5 & 10 YEARS	ANNUAL INCREASE
1980	47,406		
1990	70,576	32.8%	3.3%
1995	74,626	5.4%	1.1%
2000	78,452	4.9%	1.0%
2009	94,163	16.7%	1.7%
2010	95,472	1.4%	0.3%



YEAR	ESTIMATED CITY POPULATION	PERCENT INCREASE, 5 & 10 YEARS	ANNUAL INCREASE
2015	101,439	5.9%	1.2%
2020	110,315	8.0%	1.6%
2025	116,658	5.4%	1.1%

Source: U.S. Decennial Census data; BEBR 2009 estimate; Lakeland Community Development Department, 2009

The new city population projections were derived through an adjustment to medium level projections given the economic trends expected in the first 5 year increment as varied from the second and third 5 year increments. Below in Table II-4B is the full range of the low, medium and high end projections made for the planning period and the methodologies used to derive the projections. The medium city projections are being recommended for use as the final projections for the 2010-2020 *Lakeland Comprehensive Plan*.

**TABLE II-4B  
CITY OF LAKELAND  
RANGE OF POPULATION PROJECTIONS, 2010-2025**

YEAR	LOW	MEDIUM	HIGH
2010	92,259	95,472	117,475
2015	98,934	101,439	132,421
2020	105,608	110,315	147,753
2025	112,283	116,658	163,085
Extrapolation of 2000-2010 methods as per below:			
2010	Trend - 10%	Adjusted Growth Rate	Exponential
2015	Trend - 10%	Adjusted Growth Rate	Exponential
2020	Trend - 10%	Adjusted Growth Rate	Exponential
2025	Trend - 10%	Adjusted Growth Rate	Exponential

Source: Community Development Dept., 2009

Note that the City selected Medium population projections. These utilize adjusted growth rates as follows: applied 1.05% growth rate consistent with 1990s slow growth for 2010 vs. 2009 BEBR estimate. For 2010-2015 applied 1.25% rate; this is still relatively low growth as the economy slowly recovers. For 2015-2020, expected growth influences allow higher growth rate of 1.75%; last period to 2025 uses moderate to low 1.15% growth rate as fiscal restraints typically slow new growth.

While these are the formal population projections, the City of Lakeland does not expect all new population growth to occur in undeveloped areas. Rather, the 2010-2020 Plan envisions significant efforts towards new and redevelopment within the central city and urban development areas that will include higher densities through land use, transportation and economic incentive based policies. Similarly, the land use projections in this Element are also noted to be typical or historical based projections that should be viewed with the

same caveat that the City will try to direct a significant portion of new growth toward developed and infill areas as a means to support multi-modality and especially transit.

**Planning Area Projections:** The Lakeland Planning Area, or LPA, is a geographic area extending around the City limits that has been shifted from a non-census defined area to a census defined area. This area comprises much of what is considered “Metro Lakeland” although that term is used loosely by local groups to sometimes refer to a similar but not identical area determined through private sector demographic firms as zip code areas in the metro Lakeland area. The LPA is not identical to the Lakeland Electric (LE) Service area but is similar; however, the LE Service area does not conform to census geography. The City estimates population for the LPA in order to assess the level of growth surrounding the city limits which may be relevant for future annexation considerations as well as a rough idea of what population might need to be served with other public services. However, the City’s water and wastewater service areas do not serve the entire LPA, are not census defined nor are they equivalent to the LE service area.

The 2000-2010 population estimates for the Lakeland Planning Area as provided in Table II-5 were examined through similar methodologies as the City population estimates; the updated projections found here were selected through a share method, looking at the historic share of population contained in the LPA versus that contained in and projected for Polk County. The Polk County population projections utilized in this share method were the medium population projections provided by the Bureau of Economic and Business Research, or BEBR (these were also the projections utilized in Polk County Planning’s final adopted [2009] Evaluation and Appraisal Report).

**TABLE II-5  
LAKELAND PLANNING AREA (LPA)  
& SEASONAL POPULATION ESTIMATES, 2010-2025**

YEAR	LPA MEDIUM (SHARE) PROJECTION	LPA SEASONAL	CITY SEASONAL
2010	247,025	279,138	107,883
2015	270,805	306,010	114,626
2020	292,699	330,750	124,655
2025	313,855	354,656	131,823

**Source:** BEBR 2008 Polk Co. Projections through 2025; City of Lakeland Community Development Department, 2009.

The LPA projections are provided with the seasonal population estimates for both the City and LPA. Seasonal population consists of tourists residing in hotels/motels and non-permanent residents residing in the area for a few months a year, primarily in mobile home parks or mobile home subdivisions. The seasonal projections provided for the 2010-2025 period were conservatively estimated as compared to previous planning estimates for 2000-

2010; estimates were derived as a constant share of the projected permanent population, added to that permanent population projection.

## **ACREAGE REQUIRED TO ACCOMMODATE POPULATION PROJECTIONS**

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Land use has traditionally been perceived as the outcome of the market process and is assumed to function more or less as it has in the recent past. Use of this basic assumption results in the ability to project future land use acreage required by individual land use categories. The projected needs for the City of Lakeland and the Lakeland Planning Area are based on the medium population projections outlined above.

For purposes of clarification, future land use categories do not directly match previously defined and mapped existing land use categories. Future land use categories were devised to provide the City with flexibility in mapping land uses that responded to the intention of the overall future land use concept -- promoting infill development, discouraging urban sprawl, and maximizing the use of public facilities and services.

Acres within each future land use category needed to accommodate the projected population were determined using guidelines relating to each individual use. As would be expected, the land use category requiring the most acreage to support the projected population is residential.

The City and Lakeland Planning Area's future land use needs are projected for a 10 year period, or through 2020 (see Table II-6). The historical per capita figure for acres of a selected land use were largely used as the basis for these land use needs projections. This is primarily consistent with the methodology used in the 2000-2010 Plan.

In regard to the distribution of need for various residential densities as relates to the City's three land use categories, in 2001 the distribution had been estimated at about 22% Residential Low (RL), 70% Residential Medium (RM) and 8% Residential High (RH). The 2010 projections have slightly varied that distribution to reduce RH to about 7% and RM to about 65% and increased RL to about 27% of the projected need. Residential Very Low, a new designation only applicable to the Green Swamp Area of Critical State Concern, is projected to equal a demand of about 1% of all residential demand. The residential land area of the Planning Area has substantially more low residential densities than was projected in 2001 due to the historic County land use policy of designating low densities near the City limits due to limited availability of County wastewater services. Since some of those areas developed out in low residential densities near the City's edges may be annexed over the next 10 years, this will increase the total acreage needed in that land use category within the corporate limits.

As Lakeland and the urban area continues to develop as the key urban job center in Polk County, office employment centers, warehouse distribution and manufacturing uses will continue to project a significant demand for Business Park and Industrial Future Land Uses.

Based on the assumptions outlined above, Tables II-6 and II-7 represent estimates of the gross acreage required, by future land use category, to accommodate the City and Planning Area population projections including growth due to City annexation. The range of density or intensity for the future land use categories is stated below each category as per the generalized criteria for each land use designation, outlined within the Issues and Opportunities section of this element. The population which would be absorbed in City annexations expected over the planning period will simply shift expected land uses from the County's jurisdiction to the City's. Most of the area annexed will be already developed and have County land use designations, shown within the Lakeland Planning Area. The City's corporate limits lie entirely within the greater Lakeland Planning Area. Thus, where annexed lands are not already developed or where corrections and adjustments to former County land use designations are needed, City future land use "needs" will be absorbed primarily from those projected for the greater Lakeland Planning Area.

**TABLE II-6  
CITY OF LAKELAND PROJECTED LAND USE NEEDS BY CATEGORY 2010 THROUGH 2020**

LAND USE CATEGORY	APPX. ACREAGE REQUIRED FOR PROJECTED POPULATION			
	TOTAL ACRES NEEDED IN 2010	PROJECTED 2015	PROJECTED 2020	10 YEAR ADD
Residential High Approximate Range of Density/Intensity = 12.01 to 75 DU/Acre 15% of Total Designation can be developed as Commercial not to exceed 7,500 SF/GLA/ACRE	1,372	1,458	1,586	213
Residential Medium Approximate Range of Density/Intensity = 5.01 to 12 DU/Acre 5% of Total Designation can be developed as Commercial not to exceed 7,500 SF/GLA/ACRE	12,476	13,256	14,416	1,940
Residential Low Approximate Range of Density/Intensity = 0 to 5 DU/Acre	5,297	5,628	6,120	824
Residential Very Low Approximate Range of Density/Intensity = 0 to 3 DU/Acre	124	131	143	19
Regional Activity Center Approximate Range of Density/Intensity = 500,000 to 1,200,000 SF/GLA 20% of Total can be developed as residential not to exceed 175 DU/Acre	965	1,026	1,115	150
Interchange Activity Center Approximate Range of Density/Intensity = 250,000 to 1,000,000 SF/GLA	748	795	865	116
Community Activity Center Approximate Range of Density/Intensity = 150,000 to 500,000 SF/GLA	701	745	810	109
Neighborhood Activity Center Approximate Range of Density/Intensity = 20,000 to 150,000 SF/GLA	199	212	230	31
Mixed Commercial Corridor Approximate Range of Density/Intensity = 0 to 40,000 SF/GLA	1,045	1,111	1,208	163
Convenience Center Approximate Range of Density/Intensity = 3,000 to 20,000 SF/GLA	40	43	47	6
Business Park Approximate Range of Density/Intensity = 500,000 to 2,000,000 SF/GLA	6,835	7,262	7,898	1,063
Industrial Approximate Range of Density/Intensity = 0 to 40,000 SF/GLA	3,021	3,210	3,490	470
Public Bldgs./Grounds Approximate Range of Density/Intensity = 0 to 40,000 SF BLDG/ACRE	774	823	895	120
Recreation/Open Space Approximate Rec. Center Density/Intensity = 0 to 20,000 SF BLDG/ACRE	1,679	1,784	1,940	261
Conservation Approximate Range of Density/Intensity = 0 to 1 DU/10 ACRES	5,162	5,485	5,965	803
Preservation No development allowed Approximate Range of Density/Intensity = 0 DU/ACRE	114	121	132	18

**Source:** City of Lakeland, Community Development Department, 2009.

**TABLE II-7  
LAKELAND PLANNING AREA PROJECTED LAND USE NEEDS BY CATEGORY 2010 THROUGH  
2020**

LAND USE CATEGORY	APPX. ACREAGE REQUIRED FOR PROJECTED POPULATION			
	TOTAL ACRES NEEDED IN 2010	PROJECTED 2015	PROJECTED 2020	10 YEAR ADD
Residential High Approximate Range of Density/Intensity = 12.01 to 75 DU/Acre 15% of Total Designation can be developed as Commercial not to exceed 7,500 SF/GLA/ACRE	1,758	1,889	2,050	292
Residential Medium Approximate Range of Density/Intensity = 5.01 to 12 DU/Acre 5% of Total Designation can be developed as Commercial not to exceed 7,500 SF/GLA/ACRE	17,939	19,361	20,990	3,051
Residential Low Approximate Range of Density/Intensity = 0 to 5 DU/Acre	25,182	27,850	30,051	4,869
Residential Very Low Approximate Range of Density/Intensity = 0 to 3 DU/Acre	124	131	143	19
Regional Activity Center Approximate Range of Density/Intensity = 500,000 to 1,200,000 SF/GLA 20% of Total can be developed as residential not to exceed 175 DU/Acre	1,032	1,100	1,195	164
Interchange Activity Center Approximate Range of Density/Intensity = 250,000 to 1,000,000 SF/GLA	748	795	865	116
Community Activity Center Approximate Range of Density/Intensity = 150,000 to 500,000 SF/GLA	963	1,037	1,125	162
Neighborhood Activity Center Approximate Range of Density/Intensity = 20,000 to 150,000 SF/GLA	455	498	539	83
Mixed Commercial Corridor Approximate Range of Density/Intensity = 0 to 40,000 SF/GLA	2,486	2,721	2,942	456
Convenience Center Approximate Range of Density/Intensity = 3,000 to 20,000 SF/GLA	240	266	287	47
Business Park Approximate Range of Density/Intensity = 500,000 to 2,000,000 SF/GLA	12,975	14,124	15,287	2,312
Industrial Approximate Range of Density/Intensity = 0 to 40,000 SF/GLA	4,916	5,328	5,771	855
Public Bldgs./Grounds Approximate Range of Density/Intensity = 0 to 40,000 SF BLDG/ACRE	3,843	4,252	4,588	745
Recreation/Open Space Approximate Rec. Center Density/Intensity = 0 to 20,000 SF BLDG/ACRE	11,897	13,203	14,237	2,340
Conservation Approximate Range of Density/Intensity = 0 to 1 DU/10 ACRES	5,587	5,960	6,476	889
Preservation No development allowed Approximate Range of Density/Intensity = 0 DU/ACRE	114	121	132	18

**Source:** City of Lakeland, Community Development Department, 2009.

## ENVIRONMENTAL LIMITATIONS FOR DEVELOPMENT

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A careful analysis of land-related environmental conditions is fundamental to the development of a future land use plan. A detailed analysis of the City's natural resources and land development limitations can be found in the Conservation Element. The following is a summary of the key considerations for land use:

**Natural Resources:** The greatest natural resource to be considered in any plan for future development is the land. The Lakeland Planning Area includes approximately 112,682 acres ranging from intense urban development to agriculture. The soils are generally well drained with few areas that would completely prohibit development.

Soils are an integral part of the land resource. The soils with the highest potential for development in the planning area are primarily found along the Lakeland Ridge Area. This elevated topography extends through the center of the City and is bounded on both sides by relatively flat lowlands. Elevations range from approximately 250 feet above mean sea level in the south central highlands to about 90 feet in the southwestern and southeastern lowlands. The ridge is characterized by sinkhole lakes, typical of limestone topography. Delineation of soil potential is not meant to define strict limits for development; low potential soils may be developable but the costs of development will likely be greater than that of soils of moderate or high potential. Within the soils and geology of the land are found mineral resources. The only historically commercially valuable mineral in the Lakeland Planning Area developed to date has been phosphate. While no additional phosphate mining is anticipated in the urbanized areas, mined areas, especially those reclaimed, have potential for development and have been developed for many types of land uses.

The geology of the Lakeland Planning Area is relatively simple. The area is underlain by several porous limestone formations that are overlain with unconsolidated sand and clay material of varying thickness, forming the topography. Two artesian aquifers are found in the limestone formations including the deep Floridan aquifer that is the major source of water for the local area and much of Florida. Two other aquifers are also found in the unconsolidated surficial deposits although neither is a major source of water for domestic or other uses.

The watershed of three Florida rivers begins within the Lakeland Planning Area. The northwest watershed feeds the Hillsborough River that flows through downtown Tampa and into Hillsborough Bay. The southwest watershed feeds the Alafia River that empties into Hillsborough Bay at Gibsonton south of Tampa. The Peace River originates at Saddle Creek in the eastern half of the planning area and flows southward for 105 miles, entering the Gulf of Mexico at Charlotte Harbor.

Lakeland has numerous natural and man-made lakes which are fed by both groundwater sources and stormwater runoff. There are 52 named lakes within the planning area ranging in size from 1.6 acre Lake Blanton to 2,173 acre Lake Parker. Although these lakes are

used for boating, water skiing, fishing, and for their scenic amenities, swimming is limited because of pollution.

The Lakeland Planning Area also supports a variety of vegetative communities which provide habitat for diverse plant and animal species. Destruction of these communities has a direct bearing on the survival of many Florida plant and animal species.

Portions of the Green Swamp Area of Critical State Concern (ACSC) are located within the City and the Planning Area (see Illustration II-3). The ACSC was designated by the State of Florida in 1979 as an environmentally resource-rich and sensitive area to be given special protection. In fact, the Green Swamp is the headwaters for four major rivers and is the location for the potentiometric high for the Floridan Aquifer which in turn serves as a key source of drinking water for much of Central Florida. Thus, most development activity in the ACSC is subject to State review and oversight as are any relevant comprehensive plan policies, zoning actions and so forth. There is a set of “guiding principles” set out by the State in Chapter 380, F.S. which outlines the key issues of state concern. Lakeland Future Land Use policies include these guiding principles. As the City limits expanded into the ACSC, chiefly in order to annex lands related to the City’s N.E. Wellfield and the Williams Community Redevelopment Area, it became necessary to add more policies to address what the City would allow in regard to new or re-development within the ACSC. These policies have been added as a final section to the Future Land Use Element Goals, Objectives and Policies and address issues such as development within wetlands and floodplains, impervious surface limits, open space requirements and prohibited uses.

### **Environmentally Constrained Lands**

There are a number of environmental constraints within the Lakeland Planning Area. These constraints are shown in the series of illustrations of Soils, Surface and Commercially Valuable Minerals (aka Minerals), Floodplains, Wetlands, Conservation/Preservation Areas, and Wellfield Zones of Protection. In addition, the Future Land Use Map series includes consideration of Dredge Disposal Areas. (These maps are found as Illustrations II-4 through II-11.) Land which contains one or more of such environmental constraints cannot usually be developed without first taking steps to overcome or mitigate the individual constraints, unless such constraints are simply avoided through clustering development on the site in such a way as to avoid the constrained portions of the site. This Element includes an Illustration II-12 showing the Environmentally Constrained Lands for the Lakeland Area.

When the described environmental constraints are mapped together, a pattern emerges which shows why Lakeland has historically developed linearly north and south along the upland Lakeland ridge. The importance in describing this development pattern lies in the movement of development activity from the ridge outward into environmentally constrained areas. As the remaining upland areas in the Highlands and North Lakeland become further built-out, development activity will naturally move toward adjacent lands to the east and



west where it will encounter conditions requiring pre-development environmental mitigation measures.

- **Floodplains:** The area of the 100-year flood potential is considered a development constraint because of the special requirements relative to floor elevations, septic tanks and sewer systems, and road design. The 100-year frequency flood is the standard used for designing buildings, roads and other infrastructure. The 100-year flood zone is defined as the area covered by the highest rainfall amount expected to occur on an average of once in one hundred years. This does not mean that the rainfall would occur every 100 years (in fact there is a 1% chance of the event any given year), but would average that occurrence over a long period of time.

Flood boundaries are drawn on a set of maps called Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency for property insurance purposes. The FIRM maps have been used to delineate what are called flood hazard areas in the Lakeland area. Development in flood hazard areas is governed by City and County flood hazard ordinances. As participants in the National Flood Insurance Program, both jurisdictions were required to establish general and specific restrictions on development in areas subject to flooding. These restrictions require flood proofing of all development in flood hazard areas and, where base elevations have been identified, require residential structures to have the first floor at or above the established flood level. Special restrictions are also placed on non-residential and mobile home developments. Also, most road surfaces must be built above the anticipated flood level. Since many lakeshore areas are both flood zones and desirable residential sites, there has been extensive residential development in flood hazard areas. Although flood hazard area regulations demand more of developers, they protect the health and safety of persons living in flood prone areas and prevent unnecessary and costly damage to buildings and facilities. Most developers generally try to avoid allowing development to occur in a flood hazard area as part of sound development practice and pursuit of cost efficient development.

Flooding after a rainfall event is typically managed through some type of stormwater treatment and management system either on the same site as a development project or off site as a regional system. Comprehensive Plan Policies in the Infrastructure Element and Conservation Element allow development above the established base flood elevation (typically local requirements are a minimum of 1 foot above Base Flood Elevations or BFE but Lakeland tends to require a 2 ft above BFE as a local standard), and where such development cannot be avoided. The City's land development regulations also address natural resource protection including flood protection and stormwater management. Article 34 of the LDRs requires a stormwater management plan for all but minor construction or site alteration. Pre- and post-development volume matches are required, as is consistent with relevant State and water management district regulations. Lakeland is consistent with all adopted and enforceable water management rules which apply

to its jurisdiction (that is, all rules of the Southwest Florida Water Management District, SWFWMD.)

Polk County has used federal funding to acquire a number of flood hazard areas but at this time Lakeland does not have such an acquisition program. However, the City has acquired park lands that serve in part as retention areas. Developers who wish to develop the non-floodplain portions of a site may also dedicate to the City the wetland and/or floodplain portion where the City has an interest in acquiring that land to assist in stormwater management.

- **Wetlands:** The wetland impact area on the Environmental Development Constraints map is the generalized area where there is a high occurrence of State jurisdictional wetlands. These areas were identified from the National Wetlands Inventory. The Wetlands Inventory identifies two distinct wetland categories in the Lakeland area. The lacustrine category includes those features with principally surface water characteristics. These are either lakes with open water, or aquatic beds which exhibit characteristics of being a former lake. The palustrine category includes typical wetlands associated with land forms. In the Lakeland area these include forested swamps, bushy wetlands which are seasonally flooded, and grassy marshes. The Florida Department of Environmental Protection (FDEP) has legal jurisdiction over most wetlands in Florida (in addition to federal jurisdiction through the Army Corps of Engineers). The FDEP may allow wetland development dependent upon an agreement to mitigate or compensate wetland destruction. This procedure is controlled by State Statute and requires a permit from the FDEP or its designated agent, such as the water management district. The City of Lakeland does not have an environmental staff or authority over the permitting of development in wetlands but Conservation Element policies address documentation of the type, quality and functionality of the wetlands and the City's LDRs prohibit most development in jurisdictional wetlands. Wetlands are usually at the fringe of the shorelines and floodplains surrounding the City's lakes or along stream systems in the suburban areas. Developers typically find it cost and time prohibitive to impact wetlands. The City requires developers to identify wetlands when site plans are submitted and the Public Works Department also requires the developer to provide a copy of their application to the Southwest Florida Water Management District along with the site plan. This ensures that the drainage and wetlands plan submitted to SWFWMD is the same as the one submitted to the City.
- **Areas of Critical State Concern:** Under Chapter 380, Section 5, Florida Statutes, a geographical area with special environmental, historical, archaeological, and other significance of state or regional importance can seek protection through designation as an Area of Critical State Concern. In 1974, Governor Reuben Askew and the Cabinet designated 322,690 acres of the Green Swamp as an Area of Critical State Concern. Approximately two-thirds of the designated area is in Polk County with 5,992 acres within the Lakeland Planning Area.

The Green Swamp is considered by many scientists to be one of the most important hydrologic resources of Florida, forming the headwaters of the Hillsborough, Oklawaha, Peace, and Withlacoochee Rivers. Large portions are also believed to be prime recharge areas for the Floridan Aquifer which underlies much of Florida, providing an estimated eighty-six percent of the State's drinking water.

The Green Swamp also provides valuable habitat for many of Florida's wildlife species through its combination of uplands and wetlands. The Florida Trail Association has established a trail through the length of the swamp providing opportunities for nature study and bird watching. Fresh water fishing is allowed year round and hunting is allowed by permit during certain times of the year. The popular Van Fleet Trail, a Rails-to-Trails project, is a paved bicycle/pedestrian facility that also traverses a portion of the Green Swamp.

Due to its environmental sensitivity, the ACSC is governed by state authority to review any and all proposed levels of development in the Green Swamp. Thus, land use, zoning, site plan or construction plan review may all be required by the State (the Florida Department of Community Affairs is the acting entity with development review authority under FAC Rule 9J-1.) A stop work order may be issued by the State. All City building permits for development located in the Green Swamp ACSC contain a warning about the potential for State review and stop work authority. However, when the City annexed additional properties in the ACSC during the mid-2000s, including to bring into the corporate limits the city-owned NE Wellfield, the City adopted several new land use policies specific to development within the ACSC, followed by adoption of a corresponding special set of land development regulations (Article 27) to help ensure protection of the natural resources of this area.

- **Unreclaimed Mined Lands:** Unreclaimed mined land is considered a development constraint because of the land's radical contours, precipitous pits, or the presence of clay slimes. Most of these lands in the Lakeland Planning Area were mined prior to the State's mandatory reclamation requirements and have become naturally revegetated. Even with reclamation procedures, mined lands present several constraints to development. Based upon local experience, development constraints include unstable soils, the presence of radon gas, and disturbed natural systems such as drainage and groundwater aquifers.

Several previously mined lands have been successfully reclaimed in the Lakeland area. The most recognized is the Oakbridge development in southwest Lakeland where slime areas and mixed unconsolidated soils were removed or altered to create a stable building topography. The final land form is better drained with a few small lakes and ponds interspersed as part of the drainage system. Since mined land is known to have elevated radon gas emissions, construction techniques were incorporated at these sites intended to prevent gas buildup inside buildings. Another location that has been partially developed is located primarily north of and along SR 33, known as the Bridgewater DRI. Again, many serpentine shaped former mine pits became lake amenities for residential development. Much of the

south half of the original DRI was not developed but was purchased as an expansion area for the State Tenoroc Preserve which focuses on fish resource management. Much of the Williams DRI was also a mined land area as was the area intervening between SR 33 and the Williams DRI; these intervening lands are mostly slime areas with soil characteristics too poor to support development and as such are primarily designated as Conservation lands.

- **Surface Waters – Lakes and Rivers:** Mapped lakes consist of naturally formed water bodies, constructed lakes, and phosphate pits within reclaimed mined lands. Though lakes and rivers are not generally considered to have development potential, buildings are occasionally constructed on pilings over water. Roads, bridges and piers are frequently built over water areas as well. Lakes and rivers can also spill over onto adjacent low lying lands and cause flooding. For these reasons, lakes and rivers are mapped as environmental constraints to development. However, lands adjoining surface waters generally represent desirable areas for residential development and/or recreational uses.
- **Conservation/Preservation Areas:** Due to the many environmental resources that may be present on some sites and as described above, the City's future land use plan includes an illustration of the generalized location of conservation/preservation areas. These areas are primarily sites which are in public ownership for the purpose of preserving their natural state or are of relatively low development potential due to the presence of resources such as floodplains and wetlands. Much of this land is available for passive recreation activities and is currently part of the Lakeland Greenbelt Concept, a concept to preserve a natural lands buffer between the Lakeland and Auburndale/Winter Haven urbanized areas. Such a greenbelt provides relief from the built environment, air quality benefits, preserves natural wetland and floodplain functionality in the greenbelt and presents a unique opportunity for the linkage of natural systems and passive recreational opportunities.
- **Development Control Zones:** The City of Lakeland, as part of the future land use map series, has identified and mapped most Development Control Zones. Illustration II-13 outlines the City of Lakeland Development Control Zones. These zones comprise a group of areas which, due to some natural or man-made characteristic, are subject to special attention relative to development procedures. Identified Development Control Zones are 1) the airport clear zone (shown on airport layout maps in the Transportation Element only), 2) areas of potentially high groundwater aquifer recharge, 3) the urban area greenbelt, 4) seven historic districts and the Florida Southern College campus, and 5) zones of protection for two public water supply wellfields. Information on each area follows.
  1. **Airport Clear Zone:** Airspace around the airport must be controlled for the safety of people involved in aircraft operations and also to minimize interference with the use of land and development below the active airspace. Airspace dimensions are closely defined based on glideslope approaches to runways, flight patterns and noise levels generated by aircraft.

Within the tight confines at the ends of runways, the only way to ensure safety in the air and on the ground is outright purchase and clearing of land in order to establish a clear zone. Beyond the clear zone and over areas where flight occurs at relatively low altitudes of 1000 feet or less above ground, land use should be controlled to limit the height of structures (especially antennas), smoke, strong or unusual lights, and residential development which may be insensitive to television interference and aircraft noise. This may involve requesting aviation agreements, where necessary, to protect the Lakeland Linder Regional Airport from complaints from new development in the area.

The effort to control land use affected by the Lakeland airport airspace involves four local government jurisdictions. Besides Polk County and the City of Lakeland land jurisdictions, the approach slope to one runway (east-west) begins over Plant City and Hillsborough County. The latter have zoning regulations which address land uses relative to airports, but have not applied the zoning in conjunction with the Lakeland airport. An intergovernmental coordination effort between these jurisdictions to establish long term compatibility between off-airport and on-airport land uses within the Lakeland airspace is on-going.

The City of Lakeland has expended considerable effort in minimizing obstructions to the airport airspace. The Polk County Joint Airport Zoning Board, JAZB, includes representatives from Polk County, Lakeland and representatives from other cities in Polk County with public airports and officially includes two members from Hillsborough County. Since Lakeland is officially represented on the JAZB, the controls for airspace under the purview of the JAZB are the City's local tool for airspace regulation. Variances for such things as tall radio towers within a certain distance of a public airport are reviewed and voted on by the Joint Airport Zoning Board of Appeals, JAZBA.

Off-airport land use is another airspace issue. Besides residential developments, there are certain medical, nursing care, or communications-sensitive activities which may be adversely affected by airport operations. The City of Lakeland currently receives a minimal number of complaints from people concerned with aircraft overhead. As southwest Lakeland continues to develop and airport activity increases, complaints may increase, especially from any approved residential development within about 1 to 2 miles of the airport area. This is a reason two residential developments approved in the late 1990's and located just north of Lakeland Linder Regional Airport were requested to agree to provide notices to future buyers and hold the airport harmless for noise and other adverse affects.

- 2. Aquifer Recharge Zones:** State growth management law requires local governments to identify major natural groundwater aquifer recharge areas within their jurisdiction. Where those groundwater recharge areas are identified by the Water Management District as prime or high recharge for the deeper Floridan aquifer, they will be mapped on a topographic map. Unfortunately this has not been done by the SWFWMD. However, the model used by the St. John's River

Water Management District and adapted by Polk County Natural Resources Division, indicates one small area of “high” recharge potential near Scott Lake, south of Lakeland (see Infrastructure Element, Natural Groundwater Recharge section.)

Aquifers are formations beneath the surface which act almost like a hard sponge, with open areas to help store groundwater resources. Aquifers are vulnerable to sources of groundwater pollution or contamination, especially through the seepage of wastewater. A more common problem is the covering of recharge areas with impervious materials during development. While continued development requires greater withdrawals from the groundwater system, it allows less water to percolate to resupply the system and recharge the aquifer which allows infiltration of poorer water quality. Another geologic consideration for future development in the Lakeland Planning Area is the formation or collapse of sinkholes in the underground limestone terrain. The limestone underlying the area may contain many interconnecting openings, ranging from a fraction of an inch to many feet in size, which are a result of the solutional removal of the limestone by circulating groundwater. Such cavities located in the uppermost limestone of the area may undermine support of surface material, which then collapses, forming a sinkhole. Because of the potential hazard of sinkhole formations, the possibility of subsurface cavities should be investigated in all major load bearing development projects.

Land areas which absorb rainfall and percolate it to a depth adequate to reach underground water storage areas are deemed aquifer recharge areas. Though actual percolation depends upon the subsurface geology, there are several land surface characteristics indicative of high recharge to the groundwater aquifer. The principal characteristics include the presence of dry, xeric vegetation, upland ridge topography and the presence of sinkholes or drainage sinks.

According to the Bartow office of the U.S. Soil Conservation Service, Scott Lake is an old sinkhole formation. A 1989 sinkhole in this area occurred along E.F. Griffin Road which was 50 feet deep with a cavern of flowing water at the bottom. Such sinkholes form because surface water is draining directly into underground water systems and the ongoing erosion causes the soil to collapse when underground water volumes drop to low levels.

Under pre-development conditions, the entire Lakeland Ridge was probably a high aquifer recharge area. Urban development, however, has greatly limited the natural recharge capability. Downtown Lakeland soil characteristics are classified by the Soil Conservation Service as "Urban Complex" indicating that the extent of impervious surface gives the area a very low recharge classification.

- 3. Greenbelt:** Open spaces within and between urban areas provide separation and relief between the monotony of urban corridors, and heighten community identity and livability. Again, there are a variety of benefits to be derived from a continuous open space corridor around the Lakeland Urban Area. Besides

impacting urban development patterns, benefits also include water conveyance, drainage, storage, recharge and cleansing, vegetation and wildlife habitats, air quality and cooling benefits and varied recreation opportunities.

The proposed Greenbelt is located east of Lakeland and forms a north-south type corridor linking primarily publicly owned lands such as the Saddle Creek Park, County landfill, Circle B Bar Reserve, Tenoroc Preserve and other intervening lands not yet publicly owned. Public benefit will increase as additional lands within the identified greenbelt corridor are placed under public ownership. This can occur through further State and water management funded purchases, acquisition by local governments for public use or by conservation groups for preservation, or designation of conservation areas by property owners and developers within the corridor.

A conservation-type greenbelt should not be confused with land use designations. While land use spells out how land may be developed or preserved, the conservation goal within a greenbelt concept strives to maintain natural systems and functions within a predominantly open space environment. The open space environment can be achieved through acquisition, density control including low density or clustering, preservation of native vegetation and establishment of dense vegetative buffers. The City's proposed Greenbelt has been included in the Comprehensive Plan since 1990. The City has requested that Polk County incorporate the majority of the proposed Greenbelt area into its proposed countywide greenway system mapping project.

- 4. Historic Districts & Archeological Resources:** Historic districts are designated to recognize an area's architectural or social distinction and as an incentive to maintain and further develop its character. There are seven historic districts within the City of Lakeland, as shown in Illustration II-14, plus a significant collection of historic sites on the campus of Florida Southern College. Exterior changes to buildings which are listed on the National Register of Historic Sites or which are locally significant and contributing historic structures are subject to review by the City's Historic Preservation Board.

Details on each of the historic districts are also given in the Housing Element. The concentration of historic structures on the campus of Florida Southern College contains the structures designed by the famous American architect Frank Lloyd Wright and is listed in the National Register of Historic Places. Though some of the original campus structures may appear to be of a modern form, they were designed in 1938. The campus holds the world's largest collection of this historic architecture with its many engineering breakthroughs and uniquely designed furnishings. (See Illustration II-15.)

Under the Florida Certified Local Government Program, the Lakeland Historic Preservation Board (& Design Review Committee) reviews changes requiring a building permit within this district including historic renovations, new construction and demolitions.

According to the State of Florida, Division of Historical Resources, a systematic, professional archaeological survey of the City of Lakeland has never been completed. In addition, the Florida Master Site File does not identify many if any archaeological sites within the City of Lakeland. Because of well-drained ground surrounding many lakes, Lakeland has a moderate to high probability of containing potentially significant archaeological sites. In 1998, the City hired a private firm to study the incorporated area for potential to contain archaeological resources; a report and maps outlined potential zones for evaluation prior to development were produced in 1999. While the report was intended to function as a predictive model for site location by sampling selected areas with high potential for archaeological sites, its usefulness was limited by the technological constraints of the time. The key work product from the study was a hard copy map depicting the various “potentials” for a given area. Unfortunately this map product was not prepared in a GIS compatible format and so could only be scanned for general visual referencing but not for property or parcel level specific analyses.

- 5. Wellfield Protection Zones:** The City of Lakeland uses multiple deep wells located around the water treatment plant near I-4 and Kathleen Road that collectively comprise the Northwest Wellfield. The wells were not located under criteria which would afford each a substantial zone of protection from possible contamination. Many are located next to development with a potential to contaminate the well through the water drawdown effect of pumping, also known as the cone of influence. However, Lakeland’s *Land Development Regulations* do offer a 500 foot radial zone of protection and administrative and monitoring procedures for any business operating in the zone with certain listed chemicals or materials.

A primary reason for the City’s purchase of a major wellfield in a remote, protected area of the Green Swamp, located on the north side of Old Polk City Road at Tomkow Road, included the potential for wellfield protection given the growth of the water service area and subsequent demand for more water. In order to meet forecast demand for an increasing population, the City decided to develop a second major wellfield away from the hydrologic influences of existing major pumping areas. This strategy allows the Northeast wellfield, consisting of five drilled wells, to serve as back up to the Northwest wellfield operation and allows for the potential for cross-connection capability to cover any water shortage emergency due to major equipment failure or disaster.

By purchasing over 800 acres of land around the Northeast Wellfield to include a development-free protection zone, the City can ensure protection from surface contamination and also avoid liability for drying up private wells in close proximity to the wellfield. State interest in purchasing the land around the wellfield for public environmental lands programs should serve this same purpose. Furthermore, a protection zone is crucial at the new Northeast Wellfield because



the Floridan Aquifer from which raw water is drawn, is only 12 feet below the surface.

## **ANALYSIS OF HAZARD MITIGATION REPORTS**

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Lakeland is within Polk County, Florida, which is a designated hurricane shelter host county. The City is not within a coastal high hazard area but includes official hurricane evacuation routes on the Transportation Map Series for the *Lakeland Comprehensive Plan*. The City of Lakeland maintains emergency operations or response plans but does not have a hazard mitigation plan. Rule 9J-5.006(3)(b)(6), FAC requires the City to coordinate future land uses by encouraging the elimination or reduction of land uses that are inconsistent with any interagency hazard mitigation report recommendations from the County. The City government is required to determine which, if any, County recommendations are appropriate and relevant for incorporation into its Comprehensive Plan. Polk County adopted a hazard mitigation plan in August 1999 including a recommended list of priority projects; policy recommendations were not included in the report. Lakeland will review the County recommended list of projects and any updates to that list, for relevance to the City. The County updated the 5-Year Local Mitigation Strategy Plan in (2005) and the City adopted a resolution approving the LMS the same year. The current LMS update is scheduled for completion in summer of 2010.

Lakeland already utilizes several types of tools to prevent or avoid threats to the life and property of its residents and/or its natural resources. These tools include land development regulations regarding floodplains, wetlands, lakes and in historic districts within the City. A policy regarding back up power generation inspection and maintenance has been included in the Infrastructure Element for potable water and wastewater. Wellhead protection, fire flows and cross connection control are all addressed in the Infrastructure Element policies in order to ensure protection of the City's drinking water supply and fire pressures. The Conservation Element addresses safe collection of household hazardous wastes and recycling of used motor oil in order to protect the area groundwater resources. These policies and regulations are integrated as part of the City's everyday preventive measures used to minimize potential hazards or threats to property and natural resources.

## **URBAN SPRAWL VERSUS REVITALIZATION & REDEVELOPMENT**

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The City of Lakeland does not encourage urban sprawl either in its Comprehensive Plan or *Land Development Regulations*. Utility extensions, particularly for wastewater service, are not encouraged beyond the urban development area boundary shown on the Future Land Use Intensity Area map (FLUE). These policies are found in the City's Infrastructure Element. The City is required to review in its EAR and other analyses the potential for urban sprawl as per Rule 9J-5.006(5)(g), F.A.C., which cites thirteen indicators for checking the presence of sprawl. While this check would not be applicable to most development inside the City, it may be appropriate for development of any large land areas on the fringe of the City including areas recently annexed and not primarily surrounded by the City's urban development and services. The availability of Lakeland's centralized wastewater and

potable water services, quality community and neighborhood parks, police, fire, libraries, solid waste pick-up and generally good drainage conditions and facilities maintenance tends to attract higher intensity and density development in the central city and urban development area of Lakeland.

Two important steps in avoiding urban sprawl are the pursuit of urban redevelopment and urban infill. The City has used neighborhood and sector planning efforts that seek to examine existing conditions in the geographic area and determine needs for improvement, infrastructure needs and in particular desired future land use patterns and transportation connectivity to assist maximizing the effectiveness of the land use pattern. The City also has several redevelopment areas that are official Community Redevelopment Areas as described below. Infill housing is encouraged by the City through impact fee reductions and affordable housing construction incentives. The City also has lower roadway level of service standards in the downtown redevelopment district in order to encourage infill in that area.

**Neighborhood and Sector Planning:** The City of Lakeland has identified many neighborhoods within the city limits, as depicted in Illustration II-16, Lakeland Neighborhood Boundaries. The types of assistance needed vary by neighborhood. Some neighborhoods need guidance to establish a crime watch, a neighborhood association and/or to initiate some type of public improvement like additional street lighting. These efforts fall under what may be termed general neighborhood improvements versus redevelopment. General neighborhood improvements are designed to make minor changes that help prevent decline and improve the general “health” of a neighborhood. Those neighborhoods with fewer challenges may be able to be assisted with fewer tools, especially if there is an organized neighborhood association or leadership to assist in monitoring and follow-up efforts.

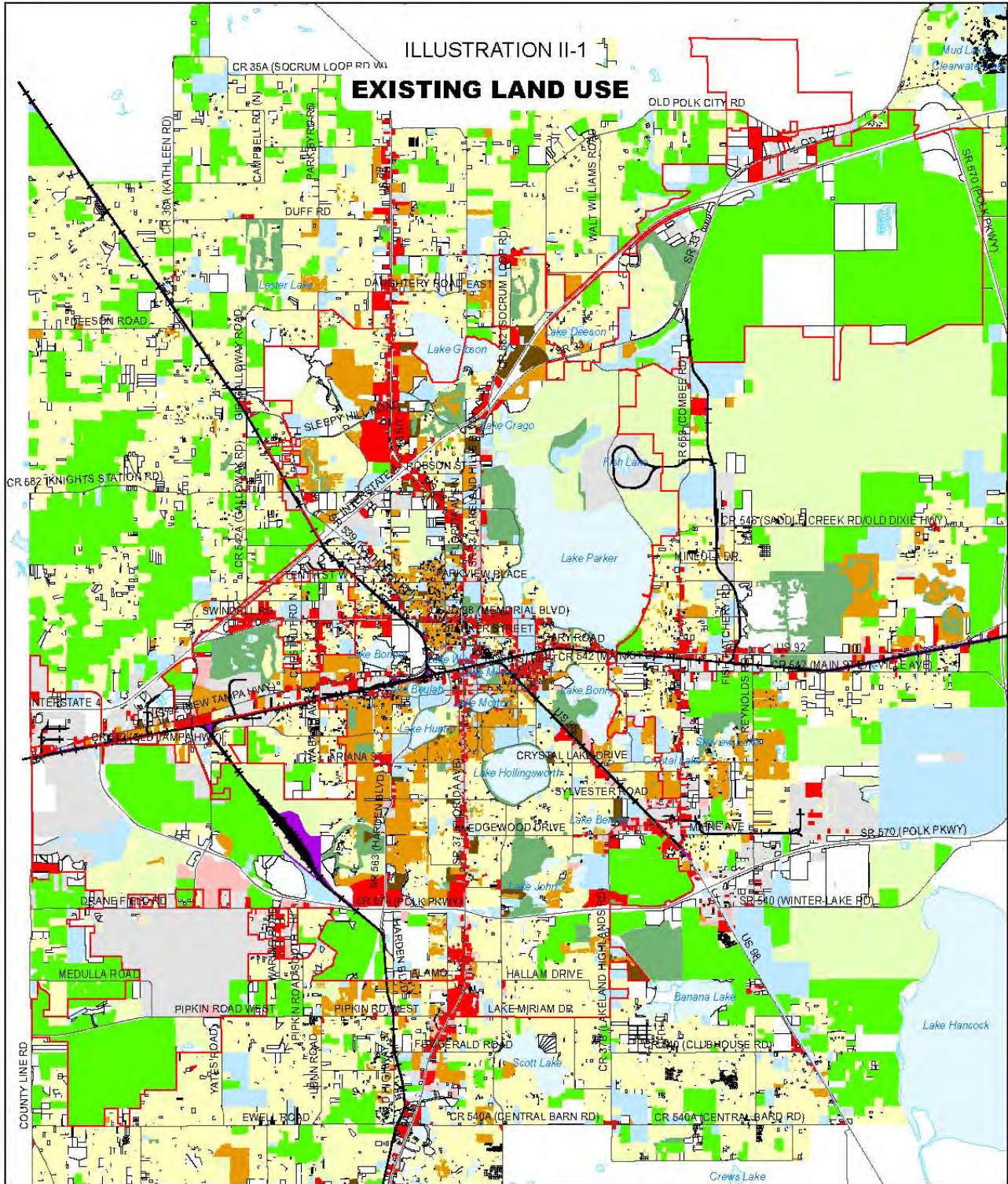
Those areas with higher levels of need require a myriad of tools to help initiate redevelopment through the development of specific neighborhood plans and encouraging additional public and private investment. Some of those tools include assistance in the form of leadership training, public improvements for parks, streets, sidewalks, landscaping, lighting and perhaps traffic calming, additional police patrol or substations, job training, code enforcement, infill and/or rehabilitated housing and other tools. These substantial multi-faceted efforts are intended to lift a neighborhood out of decline and bring about improvements that encourage new private investments in the area to effect an overall revitalization of the area.

Given limited staff and funding resources available to deal with virtually unlimited needs, the City began a new initiative referred to internally as “sector planning” which are not equivalent to the sector plans described in state statute but are simply areas that consist of multiple neighborhoods in the city plus sometimes unincorporated areas on the edge of the city (see Illustration II-17). The basic idea for the “sector” approach was to address a wider geographic area that needed review of existing conditions, estimated trends of population and growth and recommendations for future land use, infrastructure improvements or other issues. Where this approach includes unincorporated areas, coordination is required with

Polk County Planning but often there is a need for coordination with other agencies as well, such as the School Board. Partnerships will be crucial to leveraging resources; this includes using teams or partnerships within the City with other departments like the city police and city public works, and maximizing external partnerships with non-profit corporations and agencies such as the Lakeland Housing Authority and the Keystone Challenge Program.

**Community Redevelopment Areas:** The City of Lakeland has officially designated three Community Redevelopment Areas, or CRAs, to address traditional urban infill and redevelopment objectives. These three areas are shown in Illustration II-18 and include the Lakeland Downtown CRA, the Mid-Town CRA and the Dixieland CRA. The first two CRAs are targeted for non-residential and residential urban infill and redevelopment while the Dixieland CRA focuses upon redevelopment of its historical commercial corridor. Each of the three CRAs utilizes an advisory board to provide guidance to staff in implementing the adopted redevelopment plan for each area and utilizes tax increment financing to assist in funding various initiatives. Polk County also has approved an impact fee exemption area for a portion of the CRAs and the City's historic districts in order to allow for economic incentives for redevelopment in this area referred to as the "Core Improvement Area" and shown on Illustration II-18. Traditional CRAs typically involve efforts of a public-private partnership that seeks to enhance property values and quality of life in the areas utilizing tools such as urban design, façade improvements, investment in enhancing public spaces (streets, parks, drainage, transit etc.) as well as the promotion of the principles of interconnectivity of the transportation system, appropriate mixed uses, and diverse housing types and incomes.

The City of Lakeland also has within its corporate limits two, single purpose, non-traditional CRAs that were established to address transportation blight. One of these two is the Harden-Parkway CRA, a Polk County governed CRA to address multi-modal transportation improvements (including in unincorporated Polk County) as relates to a portion of the Oakbridge DRI. The other single purpose CRA is the Williams I-4 Interchange CRA which utilizes an Interlocal agreement with Polk County to effectuate annexation of the lands designated within an "ultimate" CRA boundary. The Williams CRA was established to address funding needs for a proposed new interchange on Interstate 4 located east of S.R. 33 as well as new feeder roadways to the new interchange. In 2014, the Williams interchange was removed from the Polk TPO 2035 Mobility Vision Plan (Long-Range Transportation Plan) at the request of the Williams Company along with substantial reductions in their development plan. A preliminary engineering study is called for in the Williams DRI in order to assess a future overpass connecting University Boulevard with SR 33 north of the interstate. The overpass could provide better connectivity across Interstate 4 and distribute traffic around adjacent interchanges at SR 33 (Exit 38) and the Pace Road interchange on SR 570/Polk Parkway.



Source: Lakeland Community Development Department, 2010



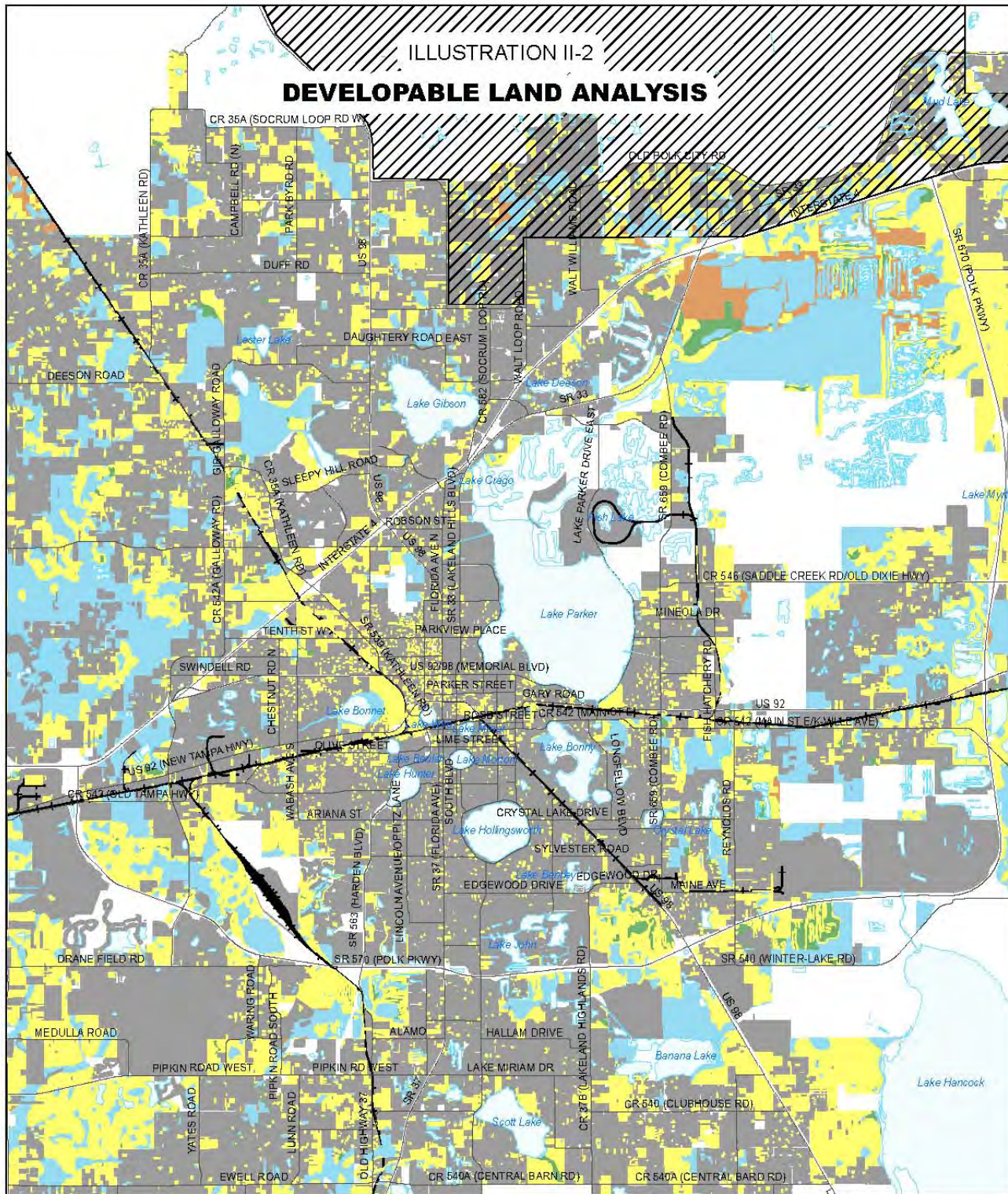
- |                    |                      |                      |
|--------------------|----------------------|----------------------|
| Residential Low    | Industrial           | Rail Road            |
| Residential Medium | Public/Institutional | Water                |
| Residential High   | Agricultural         | Undeveloped / Vacant |
| Office             | Open Space           |                      |
| Commercial         | Recreation           |                      |

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ILLUSTRATION II-2

**DEVELOPABLE LAND ANALYSIS**



Source: Lakeland Community Development Department, 2010

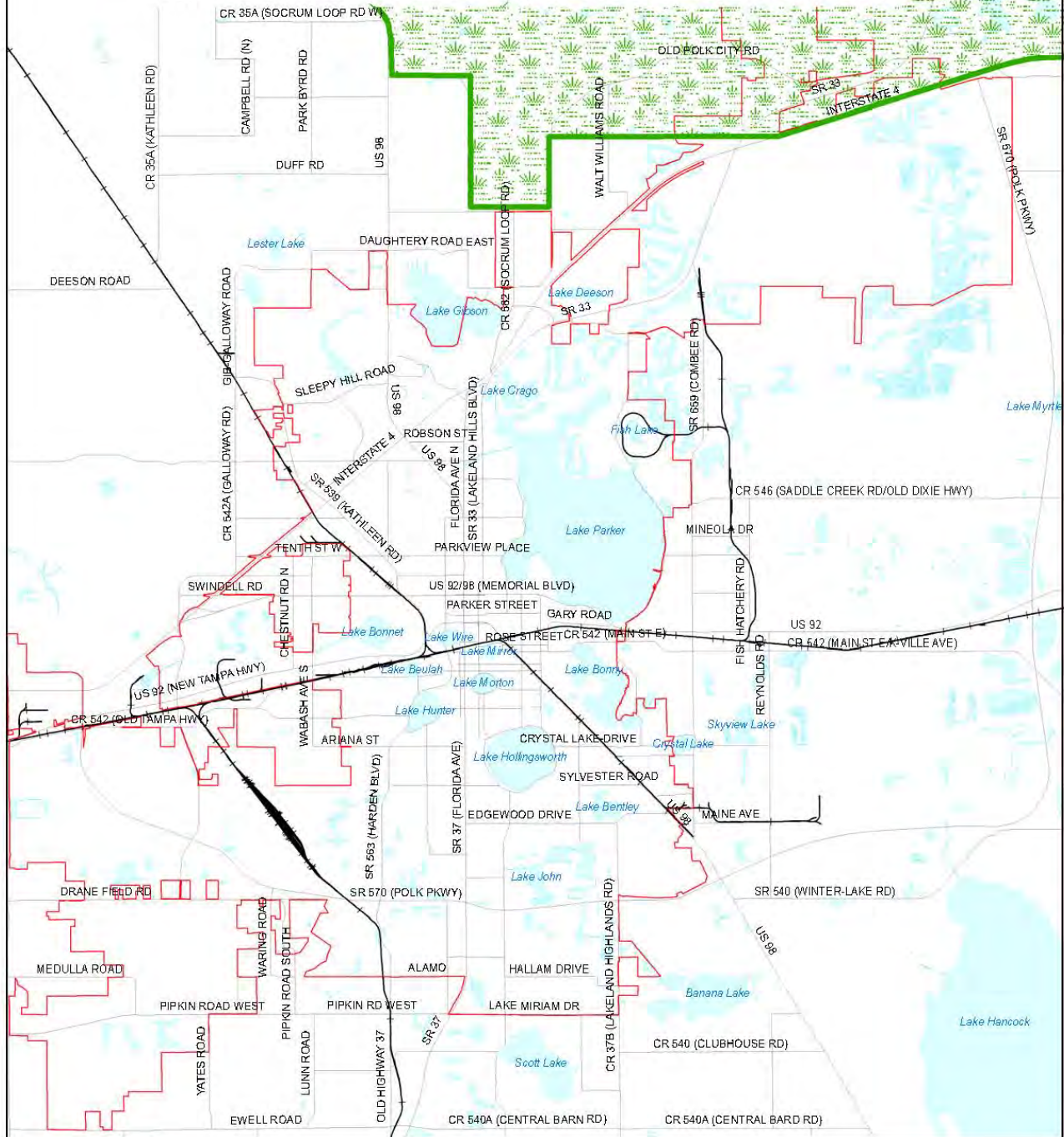


- No Constraints
- Wetlands
- Strategic Habitat
- Floodplain
- Area of Critical State Concern
- Developed Areas



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ILLUSTRATION II-3  
**GREEN SWAMP AREA OF CRITICAL STATE CONCERN**



Source: Lakeland Community Development Department, 2010



 Area of Critical State Concern



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**ILLUSTRATION II-4  
LAKELAND AREA SOILS**



Source: U.S. Soil Conservation Service Polk County 1990 Soil Survey

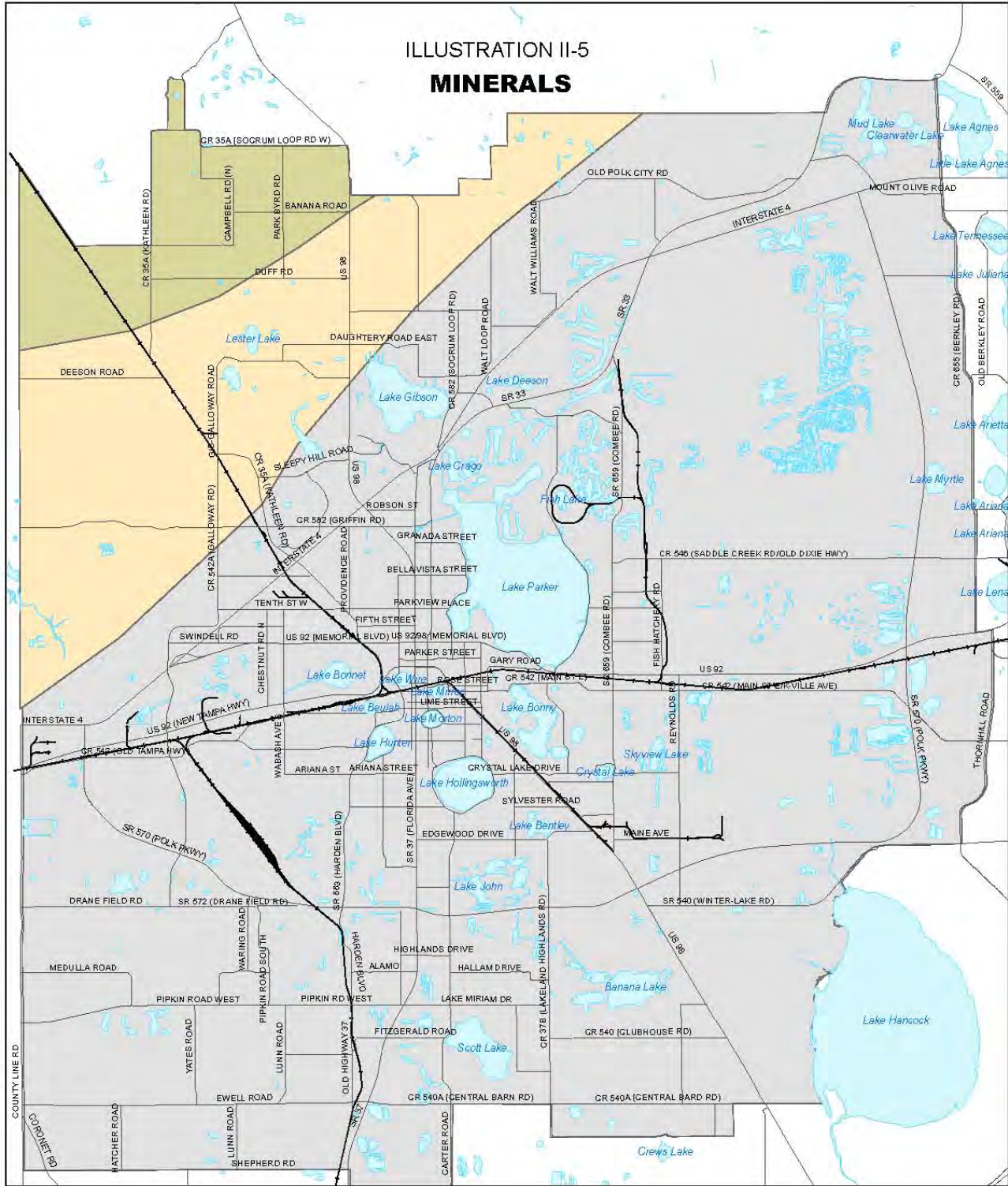


Shade	Rating	General Soil Types
	None	Ridges - Urban Land Complexes
	Well Drained	Upland Soils - Apoka Candler, Ft Meade & 4 Others
	Moderately Drained	Flatwood Uplands - Adamsville, Archbold, Arents, Sparr & 9 others
	Poor to Poorly Drained	Flood Plain/Depressional/ Mucks/Clayey - Basinger, Chobee, Fied Samsula & 32 others
	Excavation Sites	



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## ILLUSTRATION II-5 MINERALS



Source: Florida Geological Survey, Mineral Resources and Industries, 1970



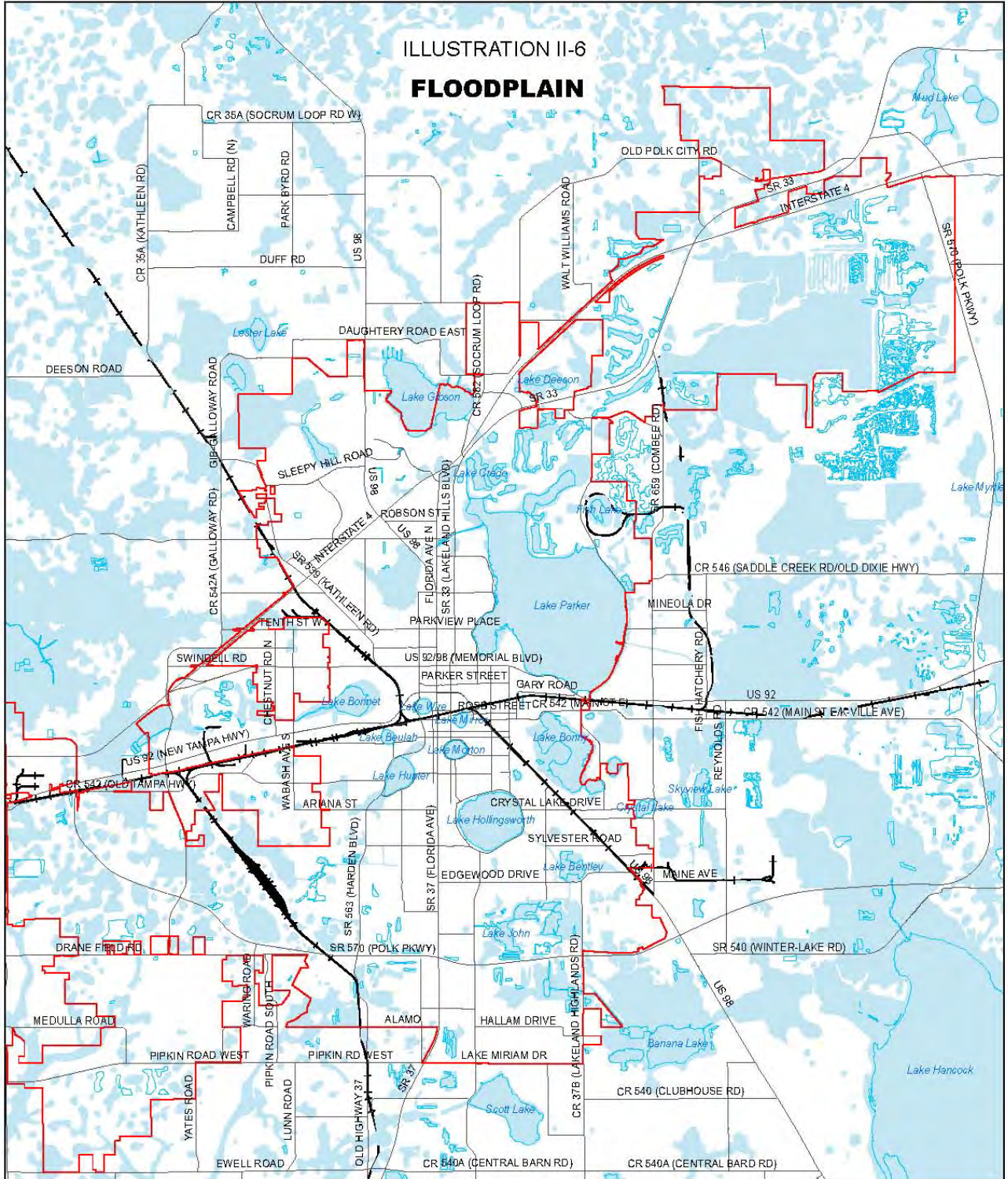
- Limestone
- Sand, Clay and Limestone
- Phosphate



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ILLUSTRATION II-6  
**FLOODPLAIN**



Source: Adopted Flood Insurance Rate Map Information Per the Federal Emergency Management Agency (FEMA), Dec., 2000

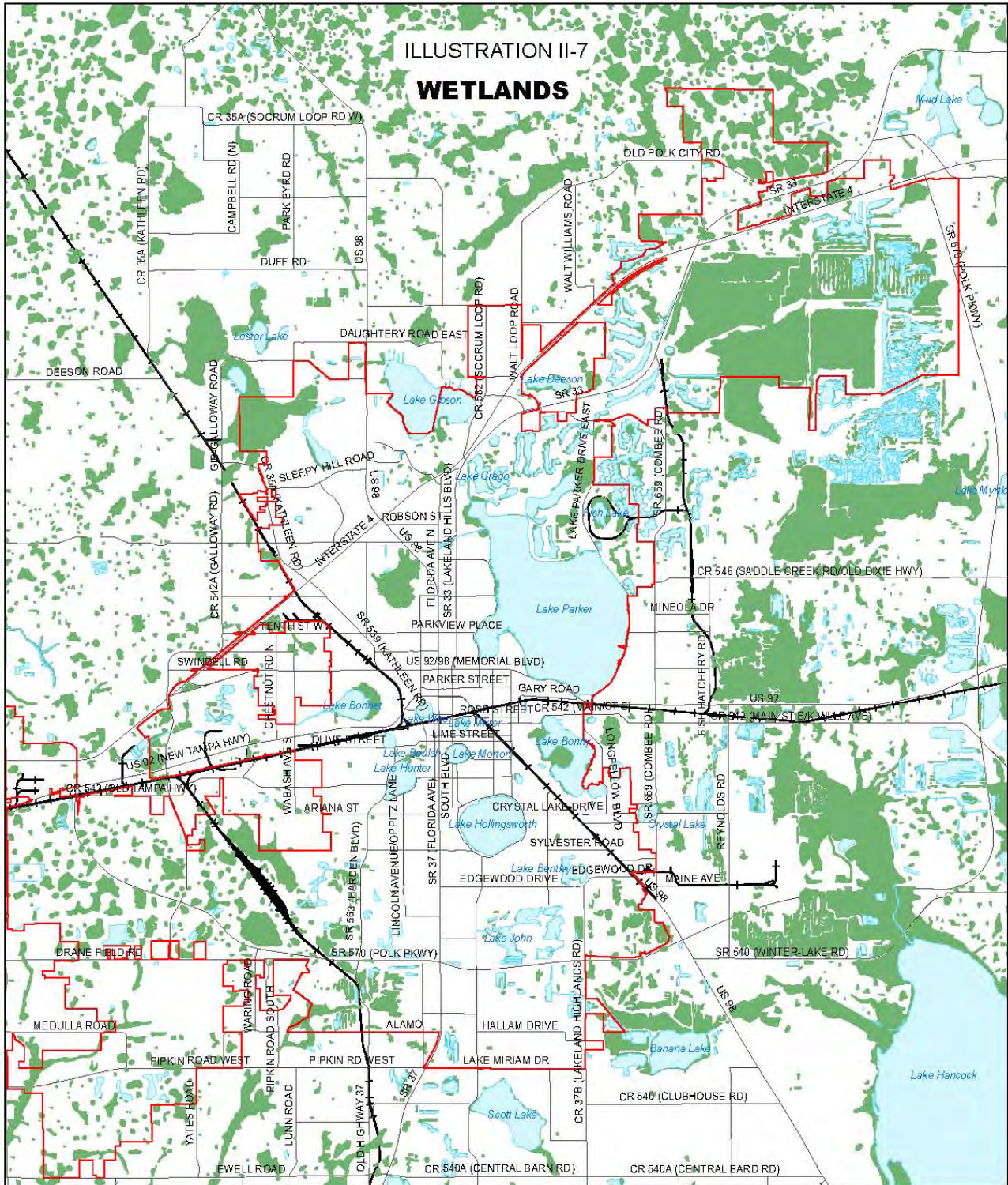


Lakeshore/Edge  
 100-Year Floodplain



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# ILLUSTRATION II-7 WETLANDS



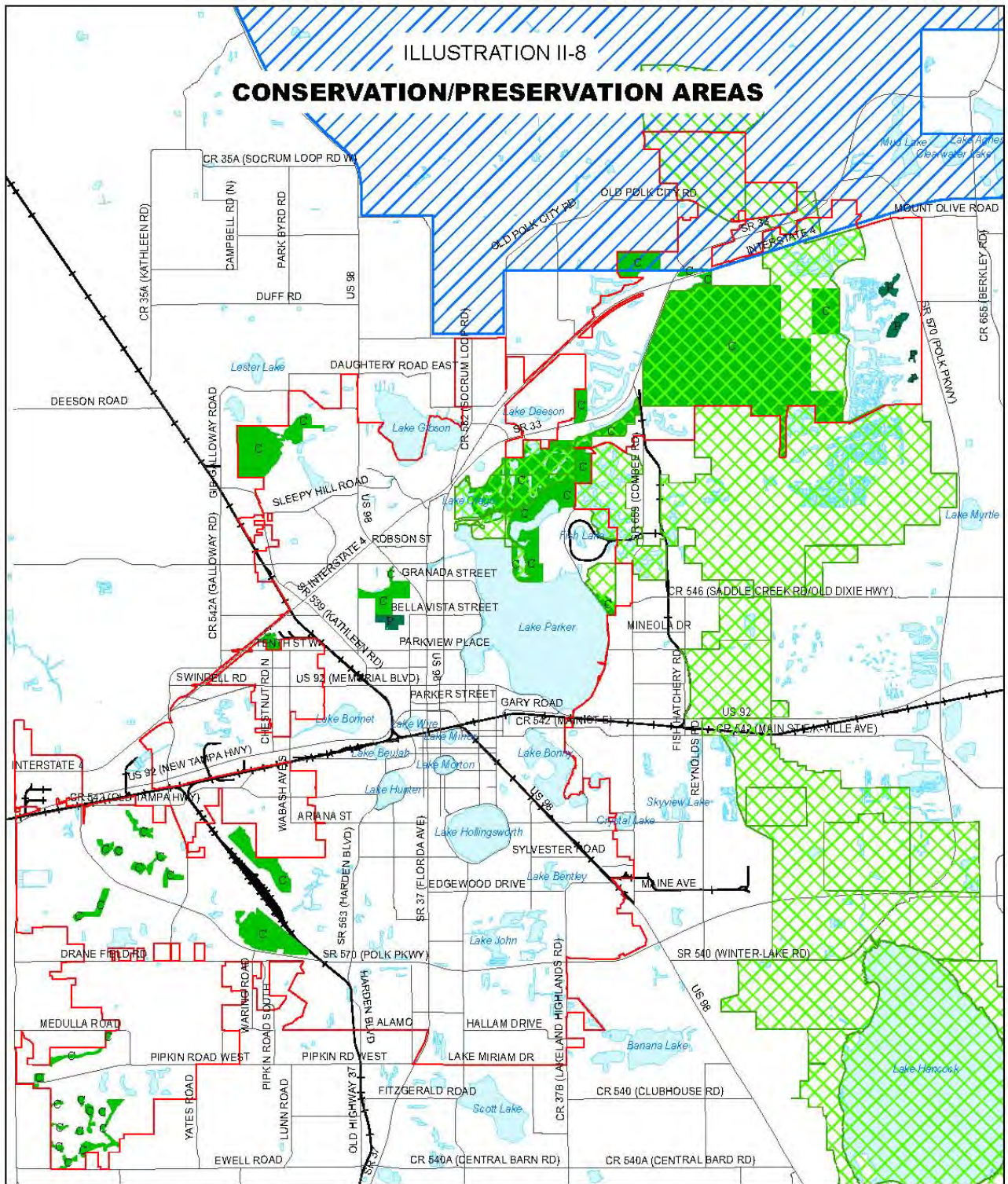
Source: U.S. Fish and Wildlife Service, September 25, 2009



- City Limits
- Lakes
- Wetlands



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Source: Lakeland Community Development Department, 2010



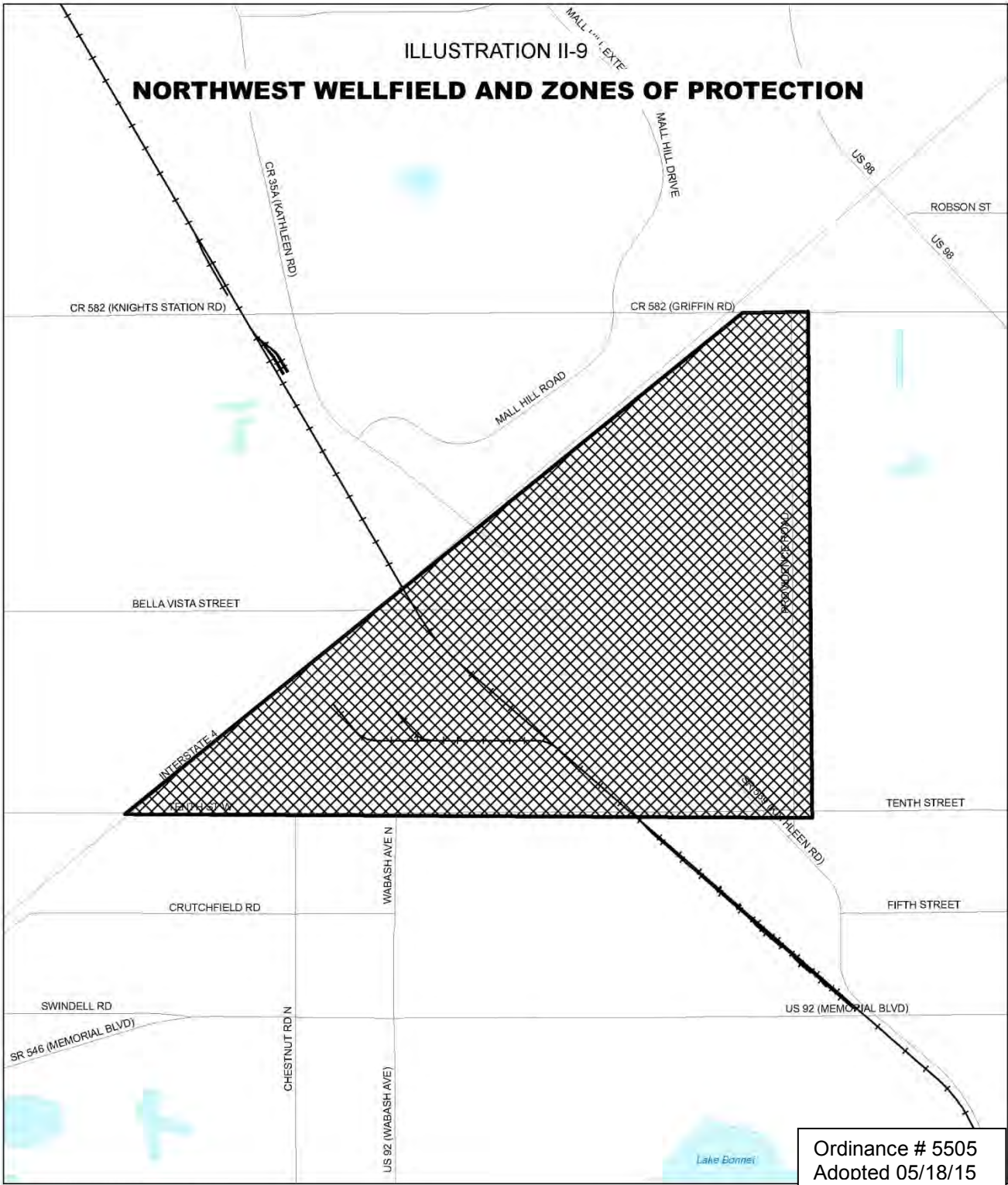
- Conservation
- Preservation
- GreenBelt
- Area of Critical State Concern



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ILLUSTRATION II-9

**NORTHWEST WELLFIELD AND ZONES OF PROTECTION**



Ordinance # 5505  
Adopted 05/18/15

Source: City of Lakeland Water Department, 2014



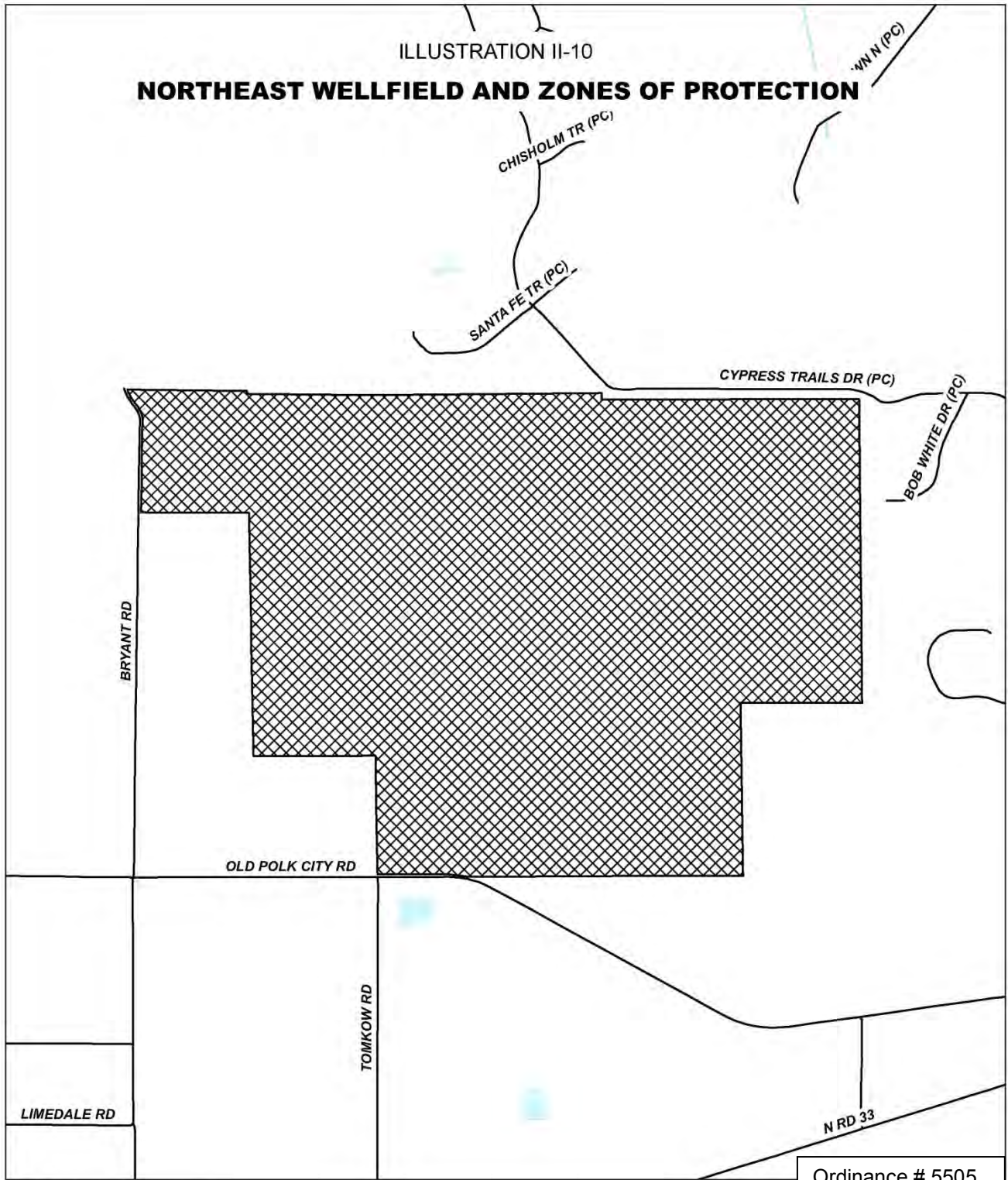
NW Wellfield (general location)  
ZOP=500 radial feet



k:\cd\mapsties\comp\_plan\Future Land Use\II\_9 NW Wellfield.mxd

ILLUSTRATION II-10


# NORTHEAST WELLFIELD AND ZONES OF PROTECTION



Source: City of Lakeland Water Department, 2014

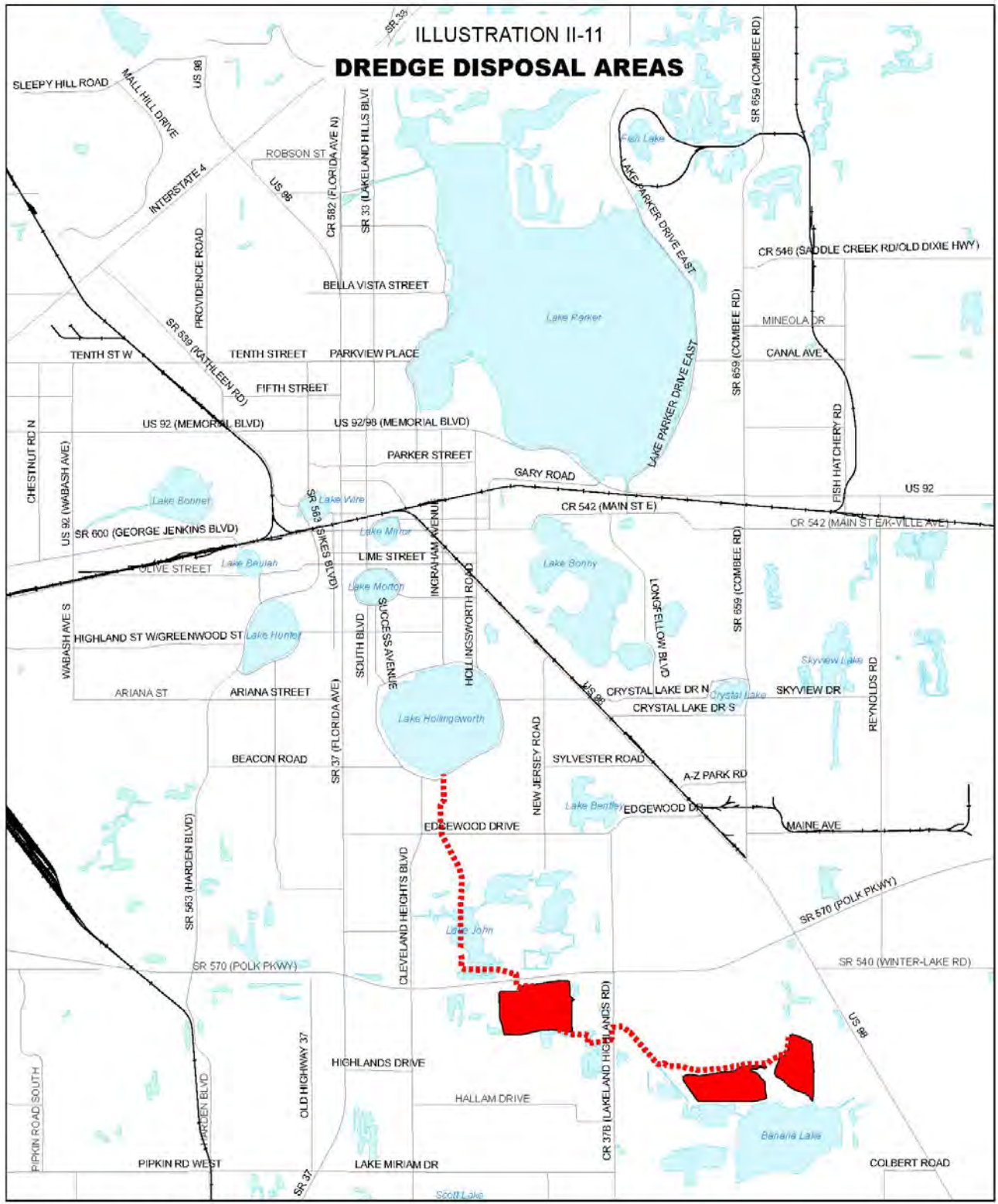
Ordinance # 5505  
Adopted 05/18/15



 NE Wellfield (general location)  
ZOP=500 radial feet



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Source: Lakeland Community Development, 2010



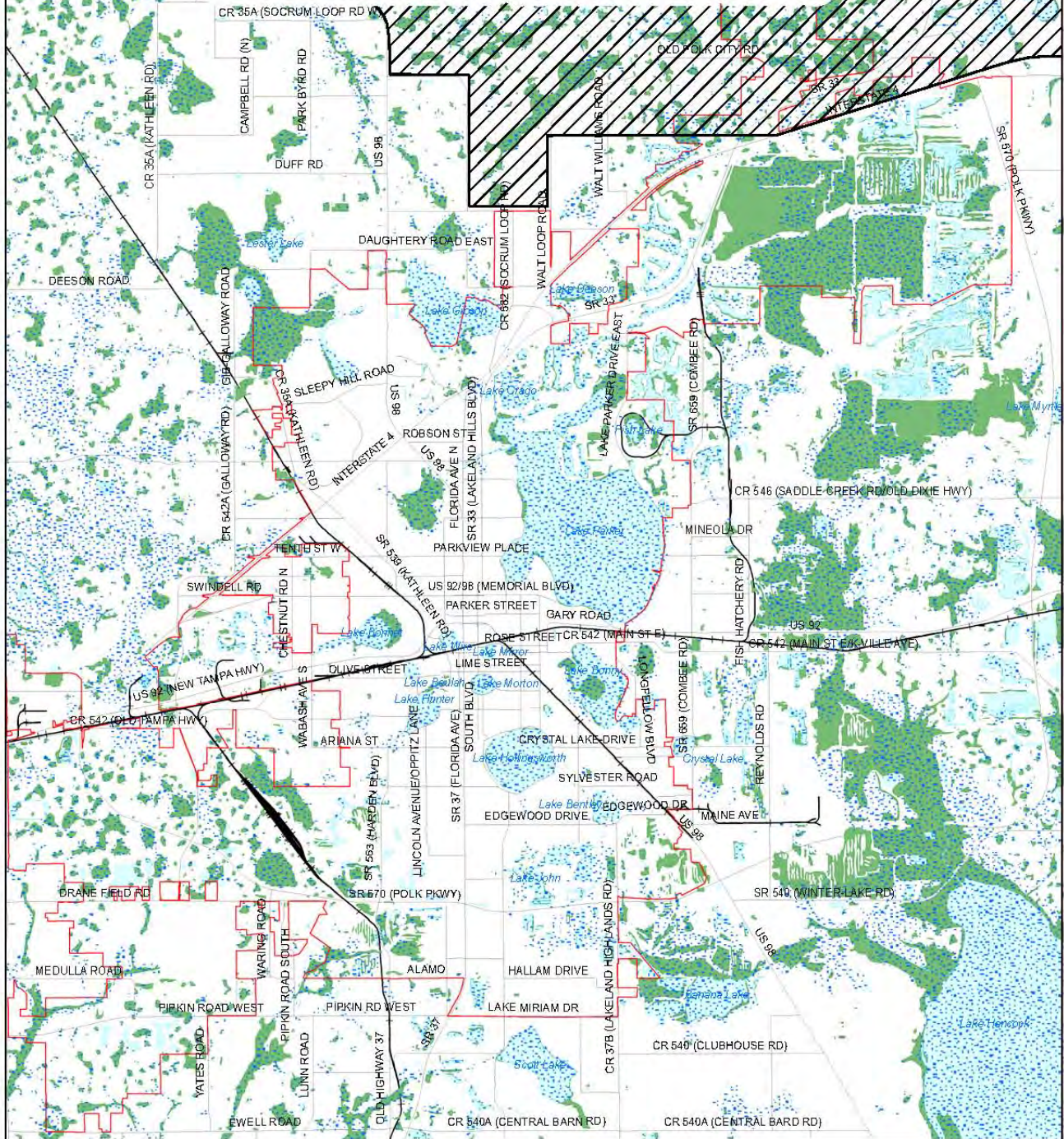
- Sites formerly used for Dredge Disposal
- Pipeline Route



k:\cd\maps\esri\comp\_plan\flu\11 Dredge Disposal.mxd

ILLUSTRATION II-12

**ENVIRONMENTALLY CONSTRAINED LANDS**



Source: U.S. Fish and Wildlife Service, September 25, 2009 and Adopted Flood Insurance Rate Map Information Per the Federal Emergency Management Agency (FEMA), Dec., 2000

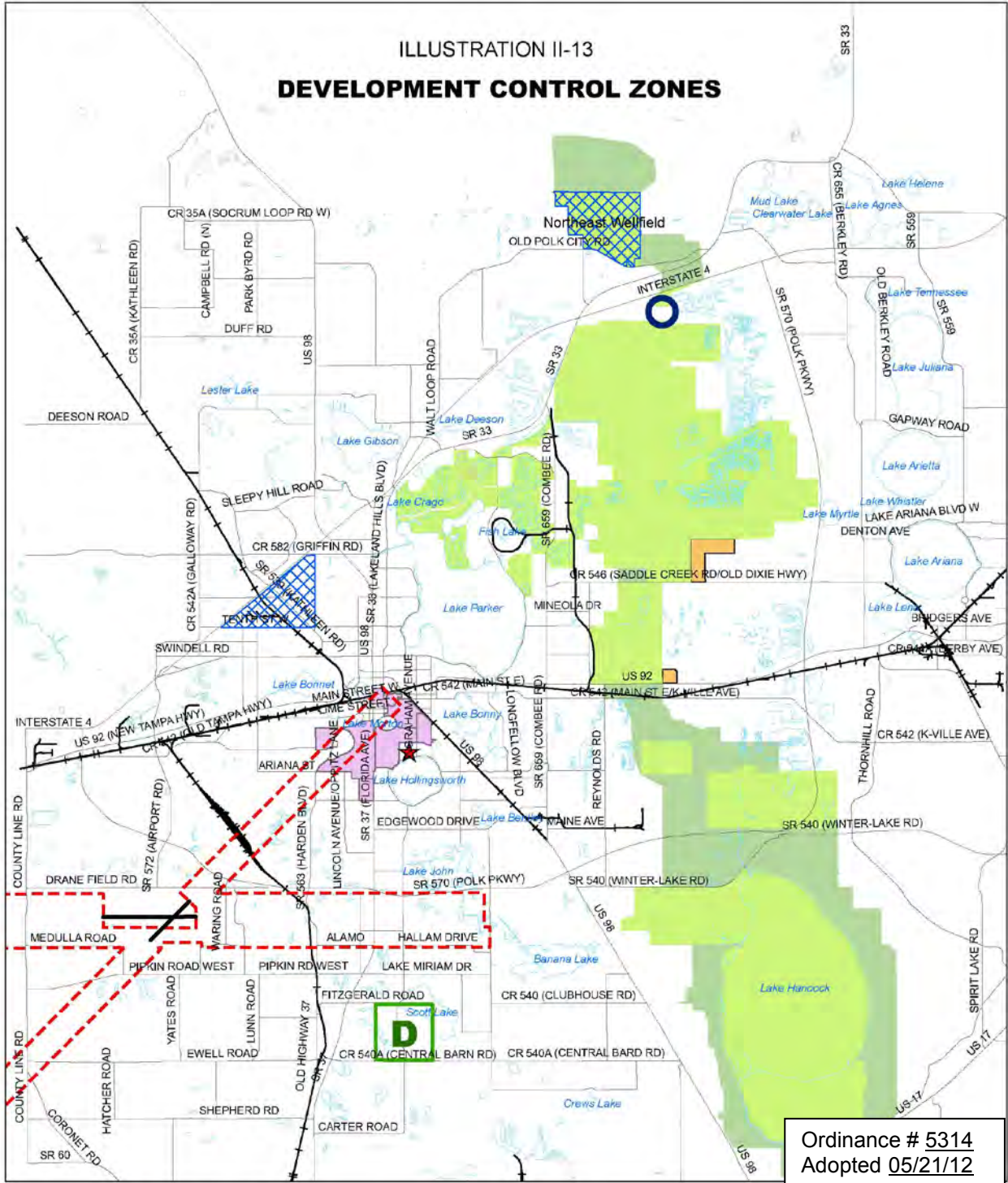


- City Limits
- Wetlands
- Green Swamp ACSC
- 100-Year Floodplain



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ILLUSTRATION II-13  
**DEVELOPMENT CONTROL ZONES**

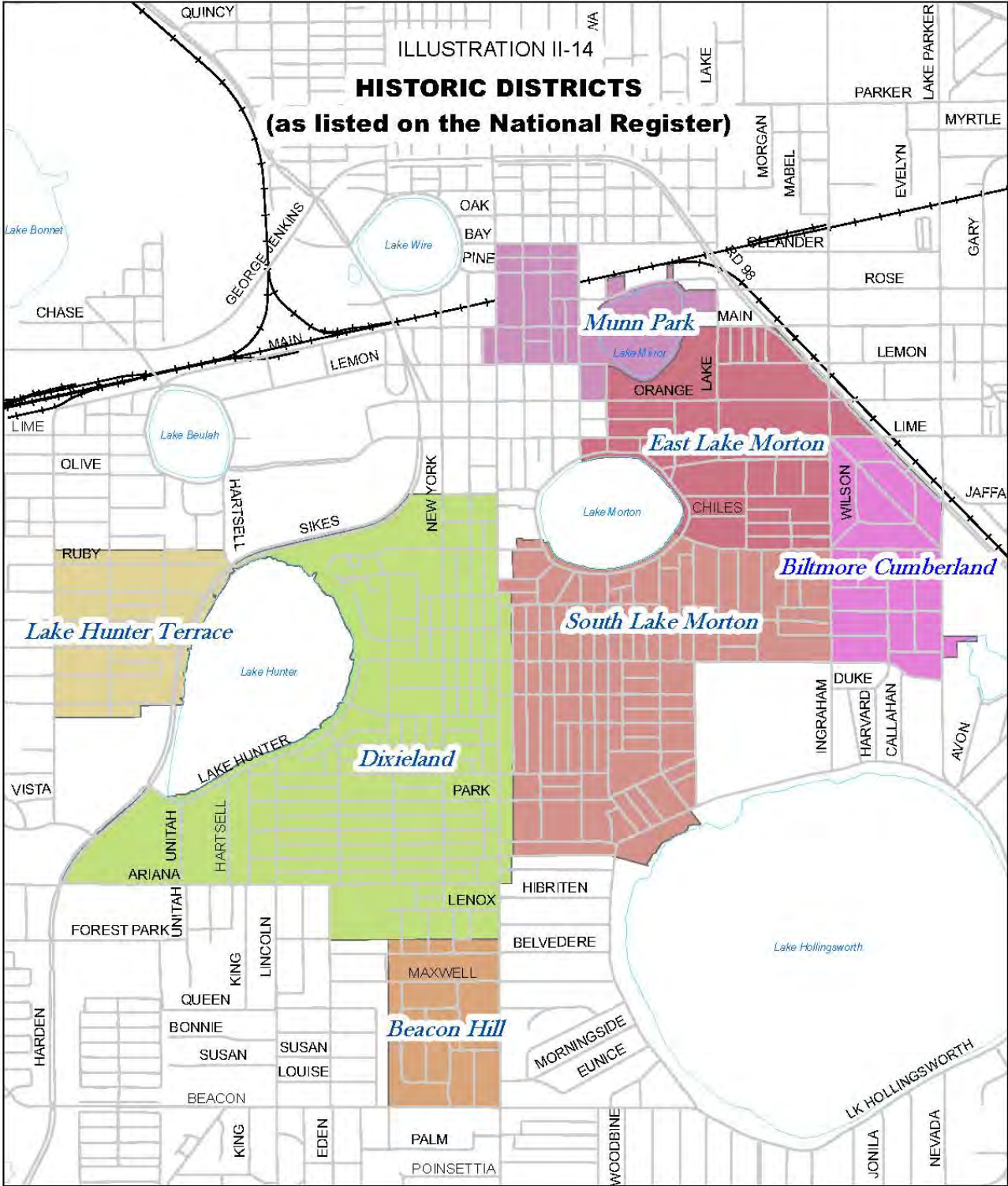


Source: Lakeland Community Development Department, 2012


- |   |                      |                              |  |
|---|----------------------|------------------------------|--|
|   | Well Fields          | Existing                     | Historic Districts                     |
| Potential High Aquifer Recharge           | Proposed Acquisition | Florida Southern College     | City of Lakeland Community Development |
| LAL Educational Facility Restriction Area | Proposed County      | Future Green Belt Connection |  |


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Source: Lakeland Community Development Department, 2010





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Source: Lakeland Community Development Department, 2010



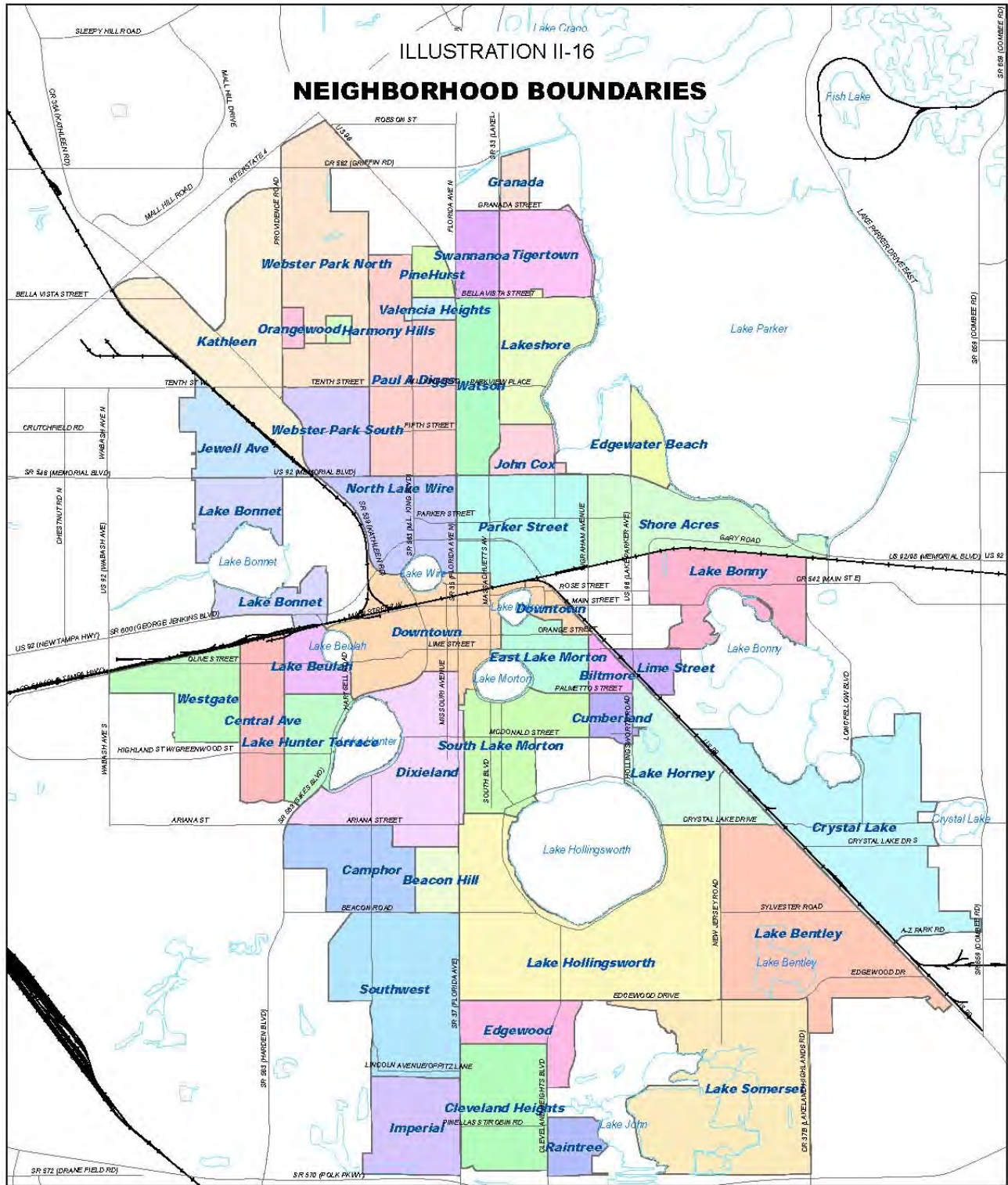
- Florida Southern College Buildings
- FSC Special Public Interest (SPI) District



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ILLUSTRATION II-16

# NEIGHBORHOOD BOUNDARIES



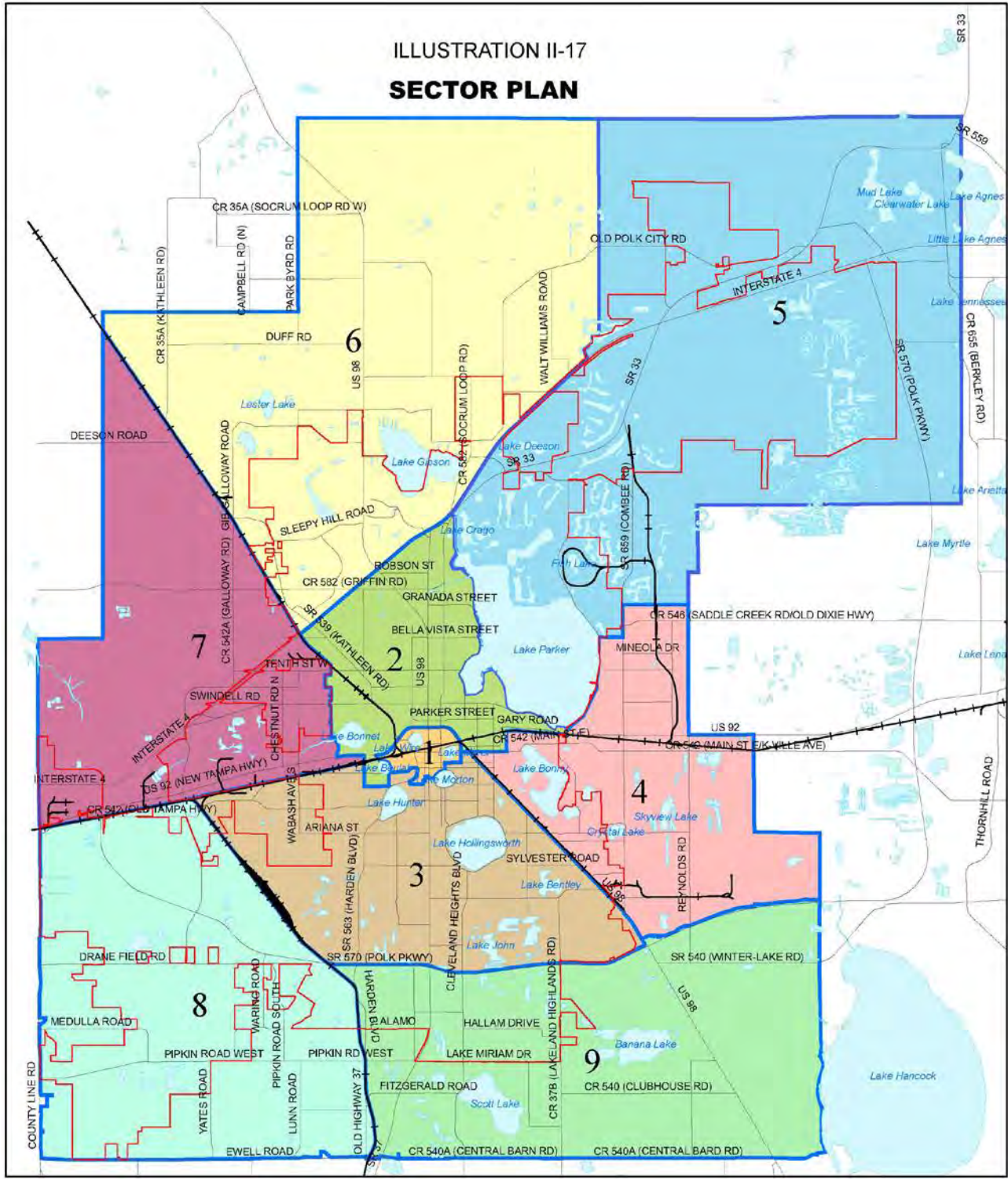
Source: Lakeland Community Development Department, 2010



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ILLUSTRATION II-17  
**SECTOR PLAN**



Source: Lakeland Community Development Department, 2010

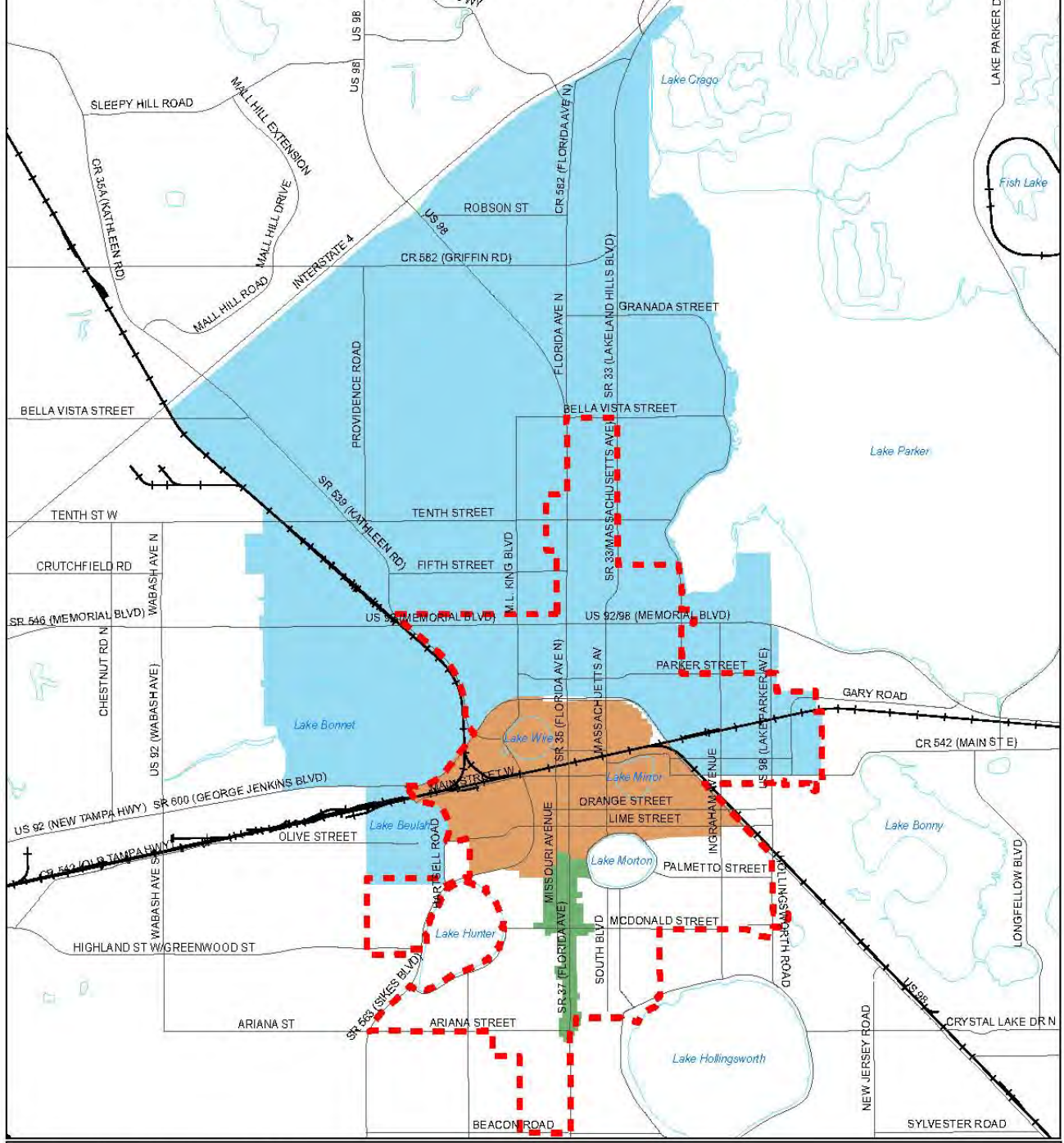


- |   |   |
|---|---|
|  1- DOWNTOWN           |  6- NORTH LAKELAND     |
|  2- MIDTOWN            |  7- NORTHWEST LAKELAND |
|  3- SOUTH LAKELAND     |  8- SOUTHWEST LAKELAND |
|  4- EAST LAKELAND      |  9- SOUTHEAST LAKELAND |
|  5- NORTHEAST LAKELAND |   |



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ILLUSTRATION II-18  
**CENTRAL CITY COMMUNITY REDEVELOPMENT AREAS**



Source: Lakeland Community Development Department, 2010



-  Core Improvement Area
-  Midtown CRA
-  Dixieland CRA
-  Downtown CRA



k:\cd\maps\esri\comp\_plan\FLUCentral City CRAs.mxd

## ISSUES AND OPPORTUNITIES

The land use planning program is conceived as a series of policies, regulations and implementation activities intended to yield a physical or built environment that corresponds as closely as possible with the wants and needs of the community. The program should include a mapped component which illustrates the desired future land use patterns, and policies and regulations which defines the means by which the land use patterns can be attained. The Future Land Use Map is the single most tangible guide that illustrates the desired land use patterns. Policies intended to guide land development include all those in the Comprehensive Plan, not only those in the Land Use Element. Another key to guiding development is the local development regulations (zoning, subdivision, and various other ordinances) which the City codified in 1993 into a unified set of *Land Development Regulations*, or LDRs. The following is a list of key principles of the City's land use planning program:

1. Promote the development of a sustainable, compact, energy efficient urban land form in which the density, intensity, and proximity of complimentary land uses helps maximize access to and efficiency in the provision of public facilities and services including recreation, utilities (water/sewer/solid waste/energy) and transportation;
2. Enhance and support the viability of central city and other older commercial and residential neighborhoods including those designated as redevelopment areas, employing strategies that result in new investment, infill, urban redevelopment and neighborhood stability;
3. Promote connectivity within the urban form to achieve a safe, efficient and attractive walkable environment that supports use of alternative transportation systems including transit (rail and bus) and bicycle systems;
4. Promote the conservation and strategic allocation of water and other natural resources, and provide or preserve open green space areas that allow for recreational opportunities and urban gathering spaces;
5. Ensure planning efforts consider integrated issues key to the various elements of the comprehensive plan, coordinating with other jurisdictions and coordination with Lakeland Vision regarding key objectives such as economic development, education, healthy communities and quality of life.

Giving close consideration to each of these principles will help to assure the development of a future land use plan that responds to the needs and desires of Lakeland's residents and visitors.

### URBAN LAND FORM & EFFICIENT PROVISION OF PUBLIC FACILITIES/SERVICES

Development of a land use plan provides the City with a unique opportunity to determine the shape and character of its future built environment. A primary fiscal concern in making future plans is the efficient provision of public facilities and services. By determining where,

and to what extent, future development will occur, the City is in a better position to determine public facility and service needs.

Promotion of a compact urban land use pattern that promotes proximate and complimentary land uses is a key element in controlling the cost and maximizing the effectiveness of public facilities and services. Historically, the City of Lakeland has supported a compact development pattern through the use of zoning, public investments in services and facilities, encouraging downtown reinvestment and neighborhood infill, and opposition to inappropriate development proposals in suburban or rural areas where services and facilities were inadequate. During the 2010-2020 planning period, the City will deliberately encourage an urban development pattern that supports connected, multi-modal transportation services including rail, bus, bicycle and pedestrian networks. Walkable communities will be an objective in all parts of the City, and in all development areas, but to different degrees. However, efficient transit service is most supported by residential densities of about seven (7) dwelling units per acre and by a mix of land uses in close proximity including civic, cultural, government, educational, commercial, office, recreational and entertainment uses. Therefore the City is proposing that its Central City Development Area, as designated on the Future Land Use Intensity Area illustration, be renamed to the Central City Transit Supportive Area.

Land uses should be proximate on a neighborhood, block and building site level depending upon the particular geographic area; such a mix can be supported best by a form-based code type of development regulation which allows a higher mix of uses than traditional pyramidal zoning. This increased focus on urban form and alternative transportation modes will require allowing a higher level of residential densities in the Central City Transit Supportive Area (CCTSA) and in particular within Transit Oriented Corridors (see Transit Oriented Corridor Illustration II-19). It will require incentives for redevelopment in the established Community Redevelopment Areas and through impact fee or other fiscal incentives that encourage growth in the areas in which transit and public services are most available.

In the Central City TSA where sufficient services, networks and connectivity are more developed than in other areas, and where there are transit services available, another incentive is the ability to more quickly adjust to market demand for a wide mix of land uses. The City of Lakeland has been certified for local comprehensive planning by the State Department of Community Affairs since 2004. The Central City TSA has been the core of the certified area and remains free of state and regional review of proposed future land use map amendments. However, the process still requires multiple public hearings and a legal challenge waiting period prior to allowing changes to go into effect. As a further incentive to urban growth in the City's most urban center, land use map amendments that could be effectuated through an administrative process would offer a significant time and money savings for prospective developers. Such an advantage, along with other incentives, could help counter the real and perceived "cheaper" land values of the suburban environment. Given most natural resources are also located in these suburban environments,

development incentives within the CCTSA will encourage urban growth in locations that offer opportunity for redevelopment. Moreover, ensuring that the city's center does not grow stagnant will assist in making Lakeland a more attractive destination for businesses/employers desiring to relocate to a well-balanced urban environment. The mix of land uses and available multi-modal transportation network in the CCTSA and expected in the Williams/FPU area have targeted those areas as having the most potential for energy conservation, including shorter vehicle miles travelled. A full narrative and map analysis of Energy Conservation Areas is found in the Conservation Element, but the two targeted areas are depicted in Illustration II-20.

None of the above means that the City will cease to grow outward, fill in enclaves or pursue strategic metro annexations, especially where those promote economic sustainability for the community. However, how growth occurs, how connected it is, under what development standards and whether it is adequately served with public facilities and urban services makes a significant difference.

## **NEED FOR REINVESTMENT AND REDEVELOPMENT**

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Lakeland is one of Florida's oldest cities with major sections of the City having been developed over seventy years ago. There are seven (7) designated historic districts, six that are residential and one commercial (downtown). Some of these areas are among the most attractive neighborhoods in Polk County; others have suffered decline or are only on the margins of stability. Some areas which developed between fifty and thirty years ago show signs of blight and deterioration. In order to effectively manage growth and sustain the qualities for which Lakeland is most appreciated, the City must maintain the viability of these established areas through reinvestment in public facilities, special improvement programs and other strategies.

The City has three traditional Community Redevelopment Areas established due to urban blight conditions and one non-traditional, transportation blight oriented CRA. The traditional CRAs are Downtown, established in 1977, and two established in 2001: the Dixieland CRA, a strip commercial area located south of Downtown, and the Mid-Town CRA located north of downtown and extending up to Interstate 4. The non-traditional Williams CRA, was created in 2002 to help fund future transportation improvements. CRAs allow a tax increment financing option for new investments in the geographic area that are consistent with the CRA's Redevelopment Plan. The tax increment is essentially the redistribution of current city and county property based tax revenues to the Community Redevelopment Agency that occur as new development and improvements add taxable value to the buildings and lands within the CRA. The increment is the value added above a base year in which tax values to the City and County were frozen.

Redevelopment plans essentially are a focused plan for growth and reinvestment to help eliminate blight and revitalize the economic, housing, employment and infrastructure assets of the CRA. Below is an excerpt from the City's first annual CRA Report (2005):



*Redevelopment activities are outlined in each of the CRA district Redevelopment Plans. The Redevelopment Plan is a document that is approved by both the City and County at the time that the CRA district is created. The Redevelopment Plan outlines the goals and objectives for the district, but more importantly, it outlines programs that allow the goals to be reached. The general goals of all four of Lakeland's CRA districts are to eliminate blight, improve public facilities, create safer traffic flows, preserve and enhance residential neighborhoods, and improve the overall economic viability of the districts. Possible programs include street improvements, park improvements, development of infill housing, recruitment of new businesses and partnerships with job-training and placement services. Most programs are designed to leverage tax increment by encouraging private developers to invest in CRA districts.*

The Central City Transit Supportive Area and Transit Oriented Corridors will be a key area in which the City can employ updated development codes focusing on compact urban form to guide new and re-development efforts in the CRAs. The City's comprehensive plan, redevelopment plans and transportation plans will encourage a walkable pedestrian-oriented environment with comfortable block lengths, street trees to provide shade, attractive and complete street typologies, transit friendly building and site designs and access to bicycle parking facilities and pedestrian networks that are well integrated with the transit system.

The land use plan and subsequent review of land development regulations take into consideration the need to maintain the attractiveness and viability of all Lakeland's neighborhoods. There is a particular need for a city as mature as Lakeland to pay special attention to the condition of its housing stock and commercial buildings and the broader problem of neighborhood decline and urban blight.

Lakeland's older neighborhoods tend to have the following similar attributes:

1. The predominant land use in each neighborhood is single-family detached dwelling units.
2. Neighborhoods within the City are served by the Lakeland Area Mass Transit District "Citrus Connection" bus system.
3. Most identified neighborhoods have some form of commercial development within their boundaries. Most of this neighborhood commercial is small scale convenience shopping, florists, dry cleaners, barbershops, offices and similar neighborhood commercial. For the most part, the uses in existence are consistent with the uses that are allowed as neighborhood commercial.
4. Most of the City's neighborhoods developed in a traditional layout of a grid street pattern with alleys, many tree lined, and most with sidewalks.

Limited commercial activity in residential areas is very important to traditional neighborhood planning. There is a reduction of trips on the overall transportation network because many

convenience needs are provided within the neighborhood, often within walking distance. There is also a distinct sense of place created through the integration of residential and appropriate neighborhood commercial activities. The key to Lakeland's successful return to traditional neighborhood planning will depend largely upon consistent application of development code related controls for neighborhood commercial activities.

Initial redevelopment efforts downtown and in various neighborhoods have been successful and, as a result, problems of urban blight are more manageable than in many cities. Public improvements by the City have not only enhanced depressed areas of the neighborhoods, but have also been an encouragement to the private sector to begin investing time and money in these areas.

Effective components of Lakeland's redevelopment program have included the work of:

- the Downtown Redevelopment Authority, Mid-Town and Dixieland CRAs and Historic Districts;
- plans for public facility improvements such as buildings, parks, street lights, sidewalk and roadway improvements;
- coordinated land use and zoning controls to maintain or enhance compatibility;
- code enforcement to reduce blight and maintain property values;
- implementation of neighborhood housing redevelopment and rehabilitation strategies and coordination with the Lakeland Public Housing Authority;
- coordination with Lakeland Police for street and community oriented police services;
- leadership training for neighborhood association members and others taking a key role in the community, and
- traffic calming strategies to reduce traffic speeds in residential areas.

In addition to specific efforts in these older areas, neighborhood enhancement and preservation is important citywide. Thus, the City has utilized its police powers to enforce minimum standards on new development and on existing properties all over the city. The tools for this effort include public appearance related ordinances regarding billboards, commercial signs, landscape requirements, and minimum maintenance standards for commercial buildings. Future efforts will include a focus on how new development relates to the street and encouraging attractive design of buildings as well as open space as consistent with the *Lakeland Comprehensive Plan* and the city's land development regulations.

The City has a lay board to oversee protection of the historic resources, including seven historic districts plus selected sites on the National Register of Historic Places, including the buildings designed by Frank Lloyd Wright on the campus of Florida Southern College (Illustration II-15). The City has made significant efforts to enhance and beautify roadways

leading into the City with new landscaping and city limit signs at all entrances to the City primarily through the assistance of FDOT highway beautification funding. The City vigorously defended its right to control and limit billboards within the City limits and continues to see reduction in total billboards within the corporate limits. Finally, Lakeland continually pursues enhanced neighborhoods and property values through neighborhood clean-up efforts, paint-your-heart-out type programs and the City code enforcement program. All these efforts work to enhance the “sense of place” and quality of life found in Lakeland and go hand in hand with the overall efforts of this Plan to limit strip commercial development, preserve open space, and redevelop and revitalize the downtown and various residential neighborhoods in Lakeland.

## **MULTI-MODAL CONNECTIVITY**

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As is true in virtually every urbanized area, increased development tends to decrease the efficiency of the traffic circulation system. The City prepared an extensive analysis of existing conditions for the transportation system in the Transportation Element. Transportation systems for the movement of people and goods in the City should be designed to support a desired urban form and ensure safe mobility rather than to only focus on ease of movement for vehicular traffic. Likewise maintenance of levels of service for movement of vehicles should not take priority over the urban area’s needs for redevelopment, infill, alternative modes of travel and walkability within the urban center. Instead, focus should be made upon the degree of connectivity with and between various modes of the transportation network in order to maximize travel choices and efficiencies.

All modes of travel should be promoted within the Central City TSA and the Urban Development Area. Particular focus on access to sidewalks, bike lanes and parking, transit shelters and stops, and other issues of multi-modalism must be made within the Transit Oriented Corridors (TOCs). Gaps within the bikeway/greenway system and sidewalks system should be filled within the CCTSA & within ¼ to ½ mile of all TOCs. Traffic calming techniques should be continued to be used in qualified neighborhoods to ensure quality of life and safety for resident pedestrians and bicyclists. With the introduction of high speed and/or commuter rail services, the City will need to require a focused small area land use plan for the area around any proposed passenger rail stations or transfer centers. A rail station small area plan must address requirements for transit oriented development and required public services and infrastructure, the necessary mix of land uses, densities and intensities, height or other mass and scale issues, parking needs, design as relates to pedestrian and bike/bus/transit users and potential for institutional or other attractor uses that help maintain a more constant flow of riders to and from the station or transfer site.

In Lakeland, new developments are required to pay impact fees to offset calculated impacts on the transportation network. Adjusting fees to incentivize new urban and redevelopment and continuation of Core Improvement Area fee exemptions should assist with implementation of the City’s redevelopment objectives and strategies and the County and regional objectives of focusing new growth in city centers. The City has had a transportation planning program that addresses improvements to the existing system and to

accommodate future needs; that program should establish priorities which are consistent with the land use objectives. Likewise, transit providers must coordinate new transit investments to be consistent with and further city and county land use planning objectives. Land use planning must establish patterns that reduce the overall load on the transportation network in terms of total number of trips and average length of trips sometimes called vehicle miles traveled or VMT. Development patterns which encourage short distance trips, a high level of internal capture, and allow or encourage non-automotive or multi-modal travel (transit, pedestrian, car pooling, etc.) will be favored over proposals which reflect land use patterns which encourage longer trips with little opportunity for alternative modes of transportation. Leap frog and strip development patterns as well as other patterns which create urban sprawl are detrimental to the road system and will be discouraged.

## **NATURAL RESOURCES & OPEN SPACES**

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**Water Conservation:** The City's Water Supply Plan is discussed in the Infrastructure Element, Potable Water sub-element. As of early 2009, the City entered into a landmark agreement with the Tampa Electric Power Company (TECO) to divert wastewater effluent flow from its effluent wetlands system near SR 60 southward to the TECO electric power generation complex in southwest Polk County. This effluent will help TECO meet its cooling water demand related to a need to expand its power generation capacity to meet the energy needs of the local population without further straining the groundwater resources. In addition, the City has a multi-pronged water conservation strategy including low flow toilet rebate program, water irrigation system monitoring for all recreational facilities and a water conservation education program for the public.

**Lake-To-Lake Greenway:** An urban, central city oriented open space strategy internal to the City is referred to as the Lake-to-Lake Greenway system. The City will continue implementation of the Lake-to-Lake Greenway system which has been delineated and is about 80% implemented/developed. This greenway system includes active and scenic greenbelt parks circling various City lakes and interconnecting to the proposed Fort Fraser Trail leading south along US 98/CSX railroad to the Bartow area, and north around Lake Parker through Tenoroc to the Van Fleet Trail in the Green Swamp. The Lake-to-Lake Greenway System is also described and illustrated in the Recreation and Transportation Elements of this Plan. (See the Lake-to-Lake Greenway Connector illustration in the Recreation & Open Space Element.)

The lakefronts are entirely public around Lakes Beulah, Mirror, Morton, Hunter, and Wire and mostly public around Lakes Hollingsworth and Parker. The City has pursued a strategy to maintain the lakeshores around all lakes as a vegetative buffer to serve both environmental and aesthetic objectives. The City will continue to discourage development in close proximity to lakefronts by requiring special setbacks, and encouraging public ownership.

Protection of sensitive environmental areas is most effectively carried out through public ownership; however, financial constraints limit this option. Existing requirements of the City

as well as those of State and Federal Agencies have established the criteria for protection of sensitive lands. Specific resources are discussed within this element under Environmentally Constrained Lands and Development Control Zones.

**Greenbelt:** To the north, east and south of Lakeland city limits there are thousands of acres of land in public ownership. These tracts include parts of the Green Swamp, Tenoroc State Preserve, Saddle Creek Park, an Audubon preserve, the Lakeland effluent wetlands, and a Polk County regional park site (also see the discussion and related illustration in the Conservation Element regarding the Greenbelt for the Lakeland Planning Area). Other sites have also been purchased or have been subject to application for purchase through the Florida Preservation 2000/Florida Forever program. The location of these open spaces relative to one another forms an alignment which lends itself to the logical establishment of a continuous, unbroken greenbelt approximately 33 miles long. The missing links needed to complete a greenbelt are generally of low development potential, often consisting of floodplains, wetlands and/or unreclaimed mined lands and pits (see related Greenbelt Illustration in the Conservation Element.)

There are immediate and long-range benefits to be derived from setting aside a corridor of open space within the urban area of Lakeland. There are recreational benefits for the public, protection of vegetative and wildlife habitats, water recharge and flood control. Natural reserves near urban areas are highly desirable as residential neighbors and increase the value of adjacent properties through the protection offered from encroachment by incompatible land uses as well as the value of an adjacent environmental amenity. As the urban area expands, a greenbelt would serve as an urban buffer zone offering a physical break from an unbroken development pattern as well as clear delineation of separate urban areas and utility service areas (although this may be altered somewhat by a potential for a large annexation located east of Lakeland, the greenbelt would still offer that physical break and natural resource protection).

The City of Lakeland has taken several steps to help implement the protection of a greenbelt including incorporating the proposal into this Plan and issuing letters of support for proposals to fund public acquisitions of additional portions of the greenbelt. The City has also requested that the Greenbelt be included in the Polk County Greenways mapping project. Coordination with the Central Florida Regional Planning Council for preservation of the Greenbelt and potential stormwater diversion from the Williams DRI into the Saddle Creek drainage basin may help promote more stable flow of water into the Saddle Creek and Peace River riverine systems.

## **COORDINATION OF PLANNING**

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The Future Land Use Element provides the physical orientation of the entire comprehensive plan. As such there is the potential to institutionalize the policies and initiatives discussed in several of the other elements and to illustrate these on the Future Land Use Map. Some of these initiatives can be easily illustrated or supported within the map (park land set aside for future use) while others are more difficult to physically represent (redevelopment

strategies). At a minimum, however, the Future Land Use Element must be internally consistent with policies contained in the other elements.

The future land use classification system, i.e. the land use categories outlined below, is a key instrument in the implementation of other goals and policies found in other elements of the Plan. Defining an advantageous land use pattern which supports efficient use of transportation facilities and other public infrastructure is discussed in both the Transportation and Infrastructure Elements and is supported throughout the Future Land Use Element including through use of “activity centers” which encourages most types of non-residential development at nodal points where two roadways intersect rather than a continuous strip of development along the roadway. The Future Land Use Classification System was formulated by first determining the future land use intensity overlay areas of the Central City Area, Urban Development Area, Suburban Development Area and the Rural Area in or surrounding the City. Then a range of specific land use categories were developed, some of which are appropriate only in certain land use intensity areas.

Consistency with the Recreation and Open Space Element and Conservation Element is also accomplished primarily through the use of the Classification System. Some aspects of the future recreation system are represented on the Future Land Use Map. Similarly, lands which are environmentally sensitive are appropriately shown as Conservation, Preservation, or low intensity land use categories. The City’s land development regulations also offer natural resource protection such as for wetlands, floodplains, vegetation and lakeshores since not all resources are most appropriately protected by a land use designation. In fact, some resources cannot be adequately surveyed or jurisdictional status cannot be determined at the time of a land use amendment; such detailed investigation normally occurs at the time of a preparation for a specific development proposal or site plan.

The major initiatives contained within the Housing Element are not specifically illustrated but are supported through issues discussed in this element, such as the preservation of existing housing stock and maintaining the viability of older neighborhoods. Consideration must also be given to coordinating and supporting the plans of adjacent local governments. This is accomplished through use of what is mostly a common Future Land Use Classification System as well as following specific objectives and policies to review and maintain consistency with the plans of nearby jurisdictions. This topic is specifically addressed in the Intergovernmental Coordination Element as well.

The City and Polk County will continue to explore the purpose and benefits of an interlocal or joint planning agreement to address issues of growth management such as clearly delineating urban service areas, maintaining common level of service standards for services, commonality of land development regulations, means to better direct growth into the urban area and away from the suburban and rural areas, and so forth. Where possible, the city should continue to seek mutually agreeable annexation and service agreements with adjacent municipalities such as the one reached with the City of Auburndale. In addition, the City must continue to participate in the Lakeland Vision efforts to measure and

assess various strategies intended to improve the community objectives regarding education, economic development and quality of life.

## **FACTORS CONSIDERED IN DEVELOPMENT OF FUTURE LAND USE CLASSIFICATION SYSTEM**

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Several key factors were evaluated to determine the boundaries of the Future Land Use Intensity Overlay Areas and subsequently to prepare the Future Land Use Map. These factors were: existing land use trends, environmental constraints, availability of public facilities and the desired future land use pattern. The first three of these were discussed in the Summary of Findings section of this element as well as in related elements of this Comprehensive Plan. The fourth factor, the desired land use pattern, is considered within this element. Applying the information included in the Summary of Findings section to the issues and objectives, numerous conclusions were reached which are reflected on the Future Land Use Map.

## **FUTURE LAND USE CLASSIFICATION SYSTEM**

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As part of the comprehensive planning process and in an effort to promote intergovernmental coordination, Polk County and its municipalities developed a common future land use classification system. Although specific definitions and procedures may vary from jurisdiction to jurisdiction, the underlying concept remains constant. In 2003 the State Department of Community Affairs found Lakeland's Comprehensive Plan eligible for certification under a new State program; the city limits, as of early 2004, were to be certified, not including any portion of the Green Swamp ACSC. However, the certified area could be extended outside the corporate limits to include potential City annexation areas. To accomplish such an extension of the certified area, the City must enter into an interlocal agreement with Polk County establishing a joint planning area (JPA) that outlines conceptual future City land uses for the potential annexation area. This interlocal agreement for the JPA would be subject to DCA approval and require a future amendment to the Comprehensive Plan showing the new boundaries for the Certified Area in order for the certification agreement and associated boundaries to be amended. The Comprehensive Planning Certification Program will allow most Plan amendments to be found exempt from State review. Exemption from State review allows map and text amendments to become effective in roughly four or five months, or about half the time it takes for non-exempt amendments. Further explanation of certification and a depiction of the boundaries of the certified area are found in the City's Intergovernmental Coordination Element.

The City's land use classification system initially defines development intensity areas, and then establishes specific future land use categories permitted within each intensity area, and establishes the maximum density or intensity of each future land use category. This effort resulted in the development of the Lakeland Future Land Use Map, which is the last illustration in this Element (Illustration II-23).

## Future Land Use Intensity Areas:

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The overlay intensity areas, as shown in Illustration II-21, define large geographic areas which are proposed for one of four types of development that extend from the most urban at the core to the least urban at the edge of the city. The availability of public services and facilities (including transportation, water and wastewater service, drainage, parks and recreation, fire protection, and police protection), environmental limitations, and compatibility with surrounding land uses are the primary factors which determine the density, intensity, and type of development that may occur within each overlay intensity area and also indicate when development can proceed so that it is not premature.

Service availability is primarily a level of service and funding decision and local governments help to shape their physical environment by expending monies for capital improvements in those areas where future growth and development is to be directed. As a result, overlay area boundaries are largely based on where public improvements are made and public decisions which promote either urban, suburban, or rural land use patterns. For purposes of future land use designation, the overlay intensity areas will correspond closely with the public service and facility improvements outlined in the Capital Improvements Program.

The overlay intensity areas are meant to be interpreted as general areas of development intensity depicting high urban type densities at the core with lower densities less urban in nature as you move outward from the urban core. The density, intensity, or types of uses permitted in any proposed development within any of the overlay intensity areas is ultimately dependent upon natural resource and environmental limitations, public service and facility availability at acceptable levels of service, compatibility with surrounding land uses, and consistency with the *Lakeland Comprehensive Plan* and the Future Land Use Map (or County Plan and County Future Land Use Map, since some of the intensity areas extend out into the County). This level of assessment can only be made on a site-by-site basis and is part of the overall development application and review process including zoning. Because there is a range of densities, intensities and types of use, there is no right to the maximums within any given future land use category at any given time.

Although service availability is a major consideration when locating potential land uses, natural characteristics of the land and other natural resources must also be considered. The development of urban uses in wetlands or other sensitive environmental areas is no longer an acceptable development practice. The location of future land uses will be greatly impacted by natural features that are either conducive to or prohibitive of development. Illustration II-12 outlines environmental constraints and natural resource limitations to urban development within the Lakeland Planning Area. Illustration II-13 outlines development control zones which require special consideration when locating future land uses.

Location of future land uses should also be based on desired land use patterns. The physical shape of developed areas is an evolutionary process based largely on public choice, financial feasibility, and compatibility with existing land use patterns. Development



of a future land use map is a prime opportunity for local governments to consciously shape their future and follow the various desires and constraints described within this element.

There are four overlay intensity areas within the larger Lakeland Planning Area as outlined in Illustration II-21. The overall future land use plan is one of compact urban development with the highest densities in the Central City and lower densities radiating outward from the urban core. This pattern is broken only by land uses previously approved through developments of regional impact or annexation agreements. Illustration II-22 depicts major factors of development including annexation agreements currently active in the Lakeland Planning Area. A description of each land use intensity area follows.

- **Central City Transit Supportive Area:** The Central City Transit Supportive Area or CCTSA is the area currently served with:
  - central water and wastewater services;
  - urban level public safety (fire and police);
  - an existing urban grid road network and sidewalk and bike path networks;
  - passenger rail service and fixed route bus service including the main transit terminal/transfer station;
  - neighborhood & community park system with library services; and
  - other facilities and services normally associated with medium to high intensity urban development.

The Central City Transit Supportive Area will allow a wide range of land uses at higher densities and intensities than normally permitted within the remainder of the Planning Area. Large commercial uses are centered in this area and serve nearby land uses as well as attracting trips from the surrounding urban, suburban and rural areas. The CCTSA is supported by a grid street network, existing transit services including express bus services, lake-to-lake greenway/bike system, pedestrian network, extensive park system, central utility services for water, wastewater and electricity, multiple Community Redevelopment Areas, and incentives for development such as the Core Improvement Area for impact fee exemptions. As a Certified community, this portion of the City has been exempt from all State and Regional review of land use amendments since 2004. As such, this area and the Transit Oriented Corridors are best positioned to allow a focus on new urban infill and development in the next planning period.

The Central City TSA will include the entire range of land use categories and is intended to contain a wide enough variety of urban uses and great enough residential densities to both require and support mass transit, enhanced pedestrian systems, cultural and social activities and the traditional synergism of urban uses that define a viable urban place. The Central Business District (CBD) is, of course,

included in the Central City TSA as are most regional commercial centers. The defined Central City TSA contains approximately one tenth of the Planning Area.

- **Urban Development Area:** The Urban Development Area, (UDA), is the area located outside the Central City TSA but is expected to be served, within the planning period, by central water, central sewer, urban level public safety, an urban road network, and other facilities and services normally associated with urban development. The Urban Development Area will allow a wide range of land uses at densities and intensities usually lower than those found within the Central City Area.

The Urban Development Area is intended to contain almost all land uses found in the Central City Area; however, the amount of land in the more intense uses will be lower and more widely dispersed. Portions of the UDA were sparsely developed with suburban uses in the 1980's but, along with the Central City Area, became the primary target of new development within the City in the housing and development boom period in early 2000-2006. The UDA was slightly expanded for the 2000-2010 Plan update; these expansions were usually partly contiguous to existing city limits. The expansions reflected where the City either will or can make available most urban services.

- Expansion of UDA to west followed expanded water/wastewater services;
- Expansion to northeast followed industrial/commercial uses north of I-4 plus the Williams DRI, but excluded the Greenbelt;
- Expansion to the south included the Medulla Road Ext. and associated undeveloped land area poised for development in the 2010-2020 planning period (and within City water/County wastewater service areas;)
- Expansion to the southeast, including a land area south of C.R. 540 and east of US Hwy 98 South/Bartow Hwy, anticipated the need to recognize potential wastewater connections that would translate into future voluntary annexation agreements in this area.

Another area of expansion for the UDA included the Development of Regional Impact known as the Williams DRI located east of north Lakeland. The Williams DRI donated about 500 acres of land for the adjoining future campus Florida Polytechnic University (FPU). This area is expected to require urban service and land use intensities which will be of urban development type intensities. While this land area could increase the City's population and related service demands, some of that demand was offset by the proposed purchase of about half of the Bridgewater DRI for use as a State preserve (resulting in less population and service demands). In addition, the Williams DRI will be developed in phases over 15-20 years and, as of early 2010, had not begun development (the FPU Campus opened in 2014.)

- **Suburban Area:** The Suburban Area is the area located outside the Urban Development Area. This area typically lacks the majority of the facilities and services associated with urban development. The single greatest public infrastructure shortcoming which distinguishes this area from the Central City or

Urban Development Areas is the rural road system. A second important factor is that this area usually is not served by a public sub-regional sewer system and may even lack an electric grid system. This area may also lack urban level public safety facilities or may have unacceptable response times. Although a Suburban Area might have one major improved four lane highway, its road system is distinctly different from the traditional grid system of parallel routes and is significantly less developed than the Urban Development Area where several four lane roads serve to move traffic into and through the area. The primary land use within the Suburban Area is low- and medium-density residential or, near County Line Road, industrial uses. New suburban development projects should include an urban sprawl analysis (as per Rule 9J-5.006 FAC) with any application for land use approval, if annexed; suburban development shall also provide for recreational amenities and on-site open space, cluster away from on-site wetlands, and provide adequate transportation network connections (road, sidewalk, bike lane and bus system). Residential densities within the City RL category may be limited to anywhere between zero and 5 units per acre with final density determined at the time of zoning.

The Suburban area was expanded eastward near the Polk Parkway due to ongoing infill approved by the County. Over the long range, the area between Auburndale and Lakeland is expected to become increasingly urbanized as it fills in with development. Given such growth, the 2010 US Census results and post-census Federal Highway analysis may designate one larger urbanized area versus the two separate Lakeland-Winter Haven urbanized areas.

- **Rural Area:** The Rural Area is the area located outside the Suburban Area. This area is typically unincorporated and has virtually none of the facilities and services associated with urban development. The primary land uses within the Rural Area are low density residential and agricultural uses. Any other proposed uses would be required to adhere to strict performance standards. Commercial shopping needs should be limited to small convenience centers with most needs met by commercial centers in Suburban or Urban Development Areas. Industrial or Business Park uses should be allowed when they are related to agricultural or natural resource uses in the Rural Area.

### **Future Land Use Categories and Map:**

Within each overlay area, a variety of land uses will be permitted. The density and intensity of each permitted use will be determined primarily by the overlay area within which the permitted use is proposed. Future land use categories mapped within the Lakeland Planning Area are described below. The Future Land Use Map is displayed in Illustration II-23. General characteristics are intended as a guideline for City development review. Note that the location criteria utilized for minimum distance or spacing between new commercial activity centers may not be able to be met by centers which existed prior to the adoption of the City's comprehensive plan (1990) or to lands designated and partially or wholly developed in the County as commercial activity centers prior to annexation.

- Regional Activity Center (RAC):** All future Regional Activity Centers will be allowed only within the Central City and Urban Development Areas. A Regional Activity Center is typically intended to accommodate the regional shopping needs of central Florida and contains a regional shopping mall, large box retail uses, or other regional attractors, and other commercial and office uses within close proximity to compliment and take advantage of the regional nature of the center. Up to 30% of land area can be devoted to medium or high density residential uses; no limit will be imposed in the Transit Oriented Corridors. Residential uses located above the first floor of non-residential uses shall not count against the 30% limit, however, such residential space shall not comprise more than half of the total non-first floor square footage within the RAC. There is no limitation on the percentage of land in retail or office uses. General characteristics of and development criteria for Regional Activity Centers are:

Access:	Intersection of two roads, with frontage on or direct access to an arterial roadway or a frontage road or service drive which directly serves an arterial roadway; for RACs located outside Central City CRAs, prefer proximity to a limited access highway. Access required to one or more existing fixed route mass transit lines. Must be designed for well connected, multi-modal internal access and include on-site transit shelter and bike rack.
Useable Site Area:	60 acres or more.
Gross Leasable Area:	400,000 to 2,000,000 square feet.
Minimum Pop. Served:	150,000 or more people.
Market Area Radius:	20 miles or more.
Location Criteria:	Central City or Urban Development Area and approximately 3 miles from another RAC

Downtown Lakeland, Lakeside Village in Oakbridge (including adjacent apartments) and the Lakeland Square mall are examples of RACs with potential to become more intense and balanced mixed-use centers over time. The City mapped the Lakeland Regional Medical Center and Watson Clinic Complex as non-retail Regional Activity Center uses; they function as major centers of employment proximate to housing and retail opportunities.

- Community Activity Center (CAC):** Future Community Activity Centers may be located within the Central City TSA or Urban Development Area. A Community Activity Center is intended to accommodate the shopping needs of persons living within the community and generally contains a shopping center which typically includes a variety of stores such as grocery, drug, one or more junior department stores, and a group of smaller uses and other commercial and office uses within close proximity. Up to 25% of land area may be devoted to residential medium or

residential high uses beyond second floor residential uses. Typically 100% of the land area will be devoted to retail and office uses with no limit on the percentage in either of these commercial uses. General characteristics of and development criteria for Community Activity Centers are:

Access:	Intersection of two roads with frontage on or direct access to an arterial or major collector roadway or a frontage road or service drive which directly serves an arterial roadway. Located within transit service district and prefer access to one or more existing fixed route mass transit lines. Design for well connected, multi-modal internal access and, where feasible, vehicular cross access.
Useable Site Area:	20 to 60 acres.
Gross Leasable Area:	100,000 to 400,000 square feet.
Minimum Pop. Served:	20,000 to 80,000 people.
Market Area Radius:	2 or more miles.
Location Criteria:	Central City or Urban Development Areas; approximately 2 miles or more from any other retail commercial activity center

- **Neighborhood Activity Center (NAC):** Future Neighborhood Activity Centers may be located within the Central City Area, Urban Development Area, and Suburban Area. A Neighborhood Activity Center is intended to accommodate the shopping needs of persons living within the immediate surrounding neighborhoods. Generally this includes a grocery and drug store and a few other small retail and office uses in the contiguous building or on out parcels. Up to 20% of land area may be devoted to residential medium or residential high uses beyond second floor residential uses. Typically 100% of the land area will be devoted to retail and office uses. There is no limit on the percentage of land in either of these commercial uses. General characteristics of Neighborhood Activity Centers are:

Access:	Intersection of two roads, with frontage on or direct access to an arterial road, or collector road. Located within transit service district; prefer access to existing fixed route transit line. Design for safe bicycle and pedestrian internal access and, where feasible, vehicular cross access.
Usable Site Area:	5 to 20 acres.
Gross Leasable Area:	10,000 to 150,000 square feet.
Minimum Pop. Served:	5,000 to 20,000 people.
Market Area Radius:	1½ miles.
Location Criteria:	Central City, Urban Development, or Suburban Area; approximately 1½ miles or more from any other retail commercial activity center

To promote walkable neighborhoods with access to healthy foods, exceptions may be made to the above general characteristics for Convenience Center site size, GLA and/or separation distance where found compatible with surrounding uses and proposing a neighborhood level grocery as the primary use; the site shall be governed by PUD zoning, employ site design that maximizes walkability and compatibility, and exclude primary uses that are auto-oriented. Local grocery stores sizes may vary but 60,000 square feet shall be the maximum and proposals for these exceptions are encouraged to use less than the maximum wherever feasible.

These general characteristics may be reasonably varied where the NAC is designed within a master planned community and is intended to function as a village or town center for a traditional or “new urbanist” type mixed-use development.

- **Convenience Center (CC):** Future Convenience Centers may be located within the Central City Area, the Urban Development Area, the Suburban Area or the Rural Area. A Convenience Center is intended to accommodate the small scale convenience shopping, commercial services and/or office needs of residents living within the immediate surrounding area. General characteristics of Convenience Centers are:

Access:	Intersection of two roads with direct frontage on or access to an arterial road, or collector road. Design for safe bicycle and pedestrian access.
Useable Site Area:	1 to 3 acres.
Gross Leasable Area:	3,000 to 10,000 square feet.
Market Area Radius:	1 mile.
Location Criteria:	Central City, Urban Development, Suburban or Rural Area; approximately 1 mile or more from any other retail commercial activity center

- **Office Centers (OC):** The Office Center land use (OC) is a future land use category intended to help meet the demand for primarily office uses, as opposed to the wide range of uses allowed in the Business Park land use category. The Office use category is intended to better address concerns of compatibility near primarily residential areas and may be used in part or whole for medium density residential uses to maximize land use options; higher residential densities may also be allowed as per the City’s Transit Oriented Corridor (TOC) policies and/or for senior housing projects. This use shall be calculated as part of the overall Business Park demand in regard to future land use needs projections. Above first floor residential uses shall not count against maximum density; up to 10% supportive retail allowed to enhance internal capture of vehicular traffic. Office uses are historically a high traffic generating use; as such, new office (OC) uses shall be designed to maximize multi-modal access and connectivity, locate proximate to complimentary land uses and, where appropriate, utilize transportation demand management techniques to reduce the impacts upon peak hour traffic flows (a.m. and p.m., as applicable). General

characteristics of the Office Center land use shall include urban infill locations where the range and type of BP uses would be inappropriate.

Access:	Direct frontage on or access to a collector or higher functioning road; design for safe bicycle, pedestrian and transit access.
Useable Site Area:	10 acres (approximate; site may be larger or smaller where other key urban objectives are met)
Gross Leasable Area:	3,000 to 40,000 square feet; up to 12 dwelling units and up to 22 dwelling units per acre for senior housing; limits may be exceeded per TOC policies.
Market Area Radius:	1 mile or more.
Location Criteria:	Central City TSA, Urban Development, and Suburban Area.

- **Mixed Commercial Corridor (MCC):** The Mixed Commercial Corridor land use category (fka LCC) is used to describe locations of what were historically strip commercial uses. This land use is permitted only as an infilling of existing commercial corridors within the Central City Area and Urban Development Area, with expansion allowed under the strict provisions provided for in the Policies within this Element. The MCC land use category generally consists of non-anchor retail and service areas that lack controlled centers sometimes too small or otherwise inappropriate for shopping centers. These commercial corridor areas are typically characterized by businesses that need high visibility and driveway access. The future opportunity to expand an MCC is not guaranteed and will be limited by the predominant surrounding land use types and patterns near a given center, and requiring a mix of non-commercial land uses.
- **Interchange Activity Center (IAC):** A special category of activity center has been created to address the unique opportunities associated with land development at limited access highway interchanges. Interchange Activity Centers may be located within the Central City Area, Urban Development Area and Suburban Area. An Interchange Activity Center is intended to delineate a coordinated development area which, due to proximity to and/or direct access to an interstate or limited access expressway, can achieve a high intensity of development activity necessitating the need for coordinated access, signage and other special development controls. This land use category encourages high intensity centers which function well and provide aesthetically attractive gateways to the community.

Final development approval for properties within this land use category will require the submission of a coordinated development plan which establishes access and other common development features through creation of a Special Public Interest Overlay District (SPI), which overlays the “base” zoning district(s) or a Planned Unit Development (PUD). Once approved, the SPI or PUD will be binding on all subparcels within the activity center. The Community Development Department will involve property owners within the development area in the preparation of the

coordinated development plan for the concurrent or subsequent zoning approvals required. The SPI or PUD requires approval by the City Planning and Zoning Board and the City Commission, and is separate from and may be concurrent or subsequent to the adoption of the IAC land use. Nothing herein is intended to deprive property owners of their legal access points existing prior to the IAC designation. However, development or redevelopment at intensities allowed in an IAC category may be possible only where the coordination of primary access points can be achieved in the form of shared or joint access drives or roads.

Land development near interchanges caters to regional travelers and includes lodging and eating establishments. However, an Interchange Activity Center may also be oriented toward a single tourist or other retail destination, an office or employment center, a high density residential center, or some other activity or mix of uses appropriate to an interchange location. Up to 35% of the total IAC may be used for medium- or high-density residential uses. Residential uses located above the first floor of non-residential uses shall not count against the 35% limit. As community gateways, light industrial or warehouse uses as allowed in the City's I-1 zoning district shall comprise no more than 30 percent of the total acres in the IAC designation as may exist in the four quadrants of the interchange. General characteristics of Interchange Activity Centers are:

Access:	Interchange of a limited access highway, with an arterial or collector road. Shared access plan is required for IAC uses to limit driveways near interchange.
Usable Site Area:	30 or more acres.
Typical Square Footage:	250,000 to 1,000,000 square feet.
Minimum Population Served:	40,000 to 80,000 people.
Location Criteria:	At or connected to one or more quadrants of a limited access roadway interchange

The above generalized criteria tend to apply to the entire Interchange Area including all four quadrants of an interchange, rather than individual parcels within or quadrants of the interchange. Therefore, acreages for some new IAC areas may be much smaller (as relates to acres and square footage) initially as new or re-development opportunities act as catalysts for the redesignation of properties to the IAC land use category.

- **Business Park Center (BP):** Business Park Centers may be located within the Central City Area, the Urban Development Area, and the Suburban Area. A Business Park Center may be located in the Rural Area if it is related to agricultural or natural resources in this area and contingent upon the availability of adequate public facilities and services and the ability of the site to meet additional zoning or performance requirements. A Business Park is intended to provide for the placement of establishments to accommodate employment centers including light-assembly, manufacturing, warehouse, distribution, showroom and local and non-



local office needs of the Planning Area. General characteristics of Business Park Centers are:

Location:	Intersection of or contiguous to an arterial road, or collector roads for local center, preferably with the capability to accommodate a fixed route mass transit line.
Useable Site Area:	10 acres and up.
Typical Square Footage:	500,000 to 2,000,000 square feet for non-local uses; typical for local uses is 20,000 to 100,000 sq. ft.
Employment Area Radius:	20 miles or more.

The Business Park category, to a great degree, replaces the broad industrial category and is a reflection of the changing types of businesses in the local economy which are neither heavy industrial nor solely retail. The Business Park category is not intended for general retail uses or commercial offices but for major employment centers. Limited retail uses will be allowed in the category where it is typically related to or supportive of the primary employers and businesses already located or under development within the Business Park Center land use; the retail shall generally be limited to those allowed in the City's O-3 zoning district plus gas station and convenience store uses. Typical retail uses might include office supply, limited restaurant uses and day care center uses. Hotel uses shall be an allowed use and not limited to the 15% retail component. Retail and hotel uses shall be subject to a high degree of internal connectivity for vehicular and pedestrian access within the business park. For hotel uses and any non-typical retail uses in a BP land use, Planned Unit Development zoning shall be required to address issues including compatibility and transportation. Not more than 15% of the total land area in a Business Park category on the future land use map may be utilized for commercial uses, subject to compatibility with uses within the business park as well as with adjacent land uses. Commercial activity that is incidental to goods manufactured on site shall not count toward the 15% of commercial uses allowed. Where more than one hotel and/or more than one restaurant is proposed, access shall be provided to a signalized intersection or frontage road with direct access to same; this access requirement may be met through an approved cross-access agreement with an adjoining non-residential or mixed use property. No residential uses are permitted in the Business Park category except medium- and high-density uses may be allowed in Transit Oriented Corridors (TOCs) and within the William's DRI as applies to lands located west of the Florida Polytechnic campus. Where a mix of residential and non-residential uses are proposed within a BP land use area, such uses may be required to provide landscaping, buffering, and site and/or building design treatments that exceed standard City code requirements in order to enhance compatibility with other uses on or adjacent to the site as well as to ensure transit friendly site design. Compatibility of uses shall address building mass, bulk, height and operational characteristics of existing or proposed uses within the business park; operational

characteristics include but are not limited to noise, lighting, transportation, emissions, waste disposal, safety issues and hours of operation.

- **Industrial (IND):** Future Industrial land uses may be located within the Central City Area, the Urban Development Area, the Suburban Area, and the Rural Area. Industrial land uses are generally characterized as uses engaged in the manufacturing, processing, assembly and/or treatment of finished or semi-finished products. Industrial uses often create impacts external to the site such as noise, dust, excessive truck traffic and should be buffered from residential uses whenever possible. Businesses which do not have such significant external impacts can usually be accommodated in the Business Park category and the number of industrial designations will be reduced through the use of the Business Park Category for employment operations with less impact. Also included in the industrial category are distribution and warehousing facilities, airports and rail yards. Location of Industrial uses within any overlay is contingent upon the availability of adequate public facilities and services and the ability to meet additional zoning or performance requirements. General retail, general office and residential uses will be prohibited in the Industrial Land Use Category.
- **Agriculture Residential Low (ARL):** is described as up to 1 dwelling unit per 10 acres and/or agricultural uses such as cattle grazing or growing of produce and related activities necessary and accessory to the primary use. This use is intended primarily for the Green Swamp ACSC.
- **Residential Very Low (RVL):** is described as up to 3 dwelling units per acre with central water and wastewater and is allowed in the Suburban and Rural Development Areas within the Green Swamp ACSC.
- **Residential Low (RL):** The Residential Low category will be allowed within the Urban Development Area, and the Suburban Area; new RL uses within the Central City Transit Supportive Area will be discouraged. Residential Low is generally characterized as low-density residential at a density of between 0 and 5 dwelling units per acre contingent upon natural and physical limitations, the availability of public services, and compatibility with surrounding land uses as determined during the development application and review process.
- **Residential Medium (RM):** The Residential Medium category will be utilized within the Central City Transit Supportive Area, the Urban Development Area, and the Suburban Area and as a part of commercial activity centers and corridors. Residential Medium is generally characterized as medium density residential at density of 5.01 to 12 dwelling units per acre, contingent upon natural and physical limitations of proposed development sites. Density less than 5 dwelling units per acre is permissible but not encouraged. To promote compact, walkable development and infill redevelopment through mixed land uses, small scale office or commercial uses are also allowed per the Policies of this Plan.

- **Residential High (RH):** The Residential High category will be utilized within the Central City Transit Supportive Area and the Urban Development Area. Residential High is generally characterized as high-density residential at a density of greater than 12 units per acre contingent upon natural and physical limitations of proposed development sites. Density less than 12 dwelling units per acre may be permissible as per the Policies of this Plan but in some areas such as the Transit Oriented Corridor Overlay, a minimum density is required. To promote compact, walkable development and infill redevelopment through mixed use land uses, office or commercial uses are allowed per the Policies of this Plan.
- **Recreation (R):** Recreation uses may be located within the Central City Area, the Urban Development Area, the Suburban Area, and the Rural Area. Recreation land uses are generally characterized as public and private facilities predominantly used for recreation purposes, but do not include commercial entertainment establishments.
- **Conservation (C):** Conservation land uses may be located within the Central City Area, the Urban Development Area, the Suburban Area, and the Rural Area. Conservation land uses are generally characterized as lands which, due to natural or environmental constraints, can only support low intensity, passive recreational uses and an allowance of up to one dwelling unit or less per ten acres to avoid an issue of a regulatory taking, except in the Green Swamp ACSC where the limit is one unit per 20 acres on upland areas only.
- **Preservation (P):** Preservation land uses may be located within the Central City Area, the Urban Development Area, the Suburban Area, and the Rural Area. Preservation land uses are generally characterized as publicly owned lands held as open space or passive recreation lands due to the natural features or limitations of the area for more intense uses.
- **Public Buildings, Grounds and Institutional Uses (PI):** Future Public Buildings, Grounds and Other Public or Institutional Uses may be located within the Central City Area, the Urban Development Area, the Suburban Area, and the Rural Area. Public land uses generally consist of a variety of public and private institutional uses such as schools, government buildings, cemeteries, post offices, and other similar facilities. Public school uses are a permitted principal use in all FLUM categories except Future Right-of-Way (FROW), Conservation (C), and/or Preservation (P). Standards differentiating public and private schools are addressed in the City of Lakeland *Land Development Regulations*.

Table II-8 represents a matrix of each of the land use categories discussed above and identifies the intensity area within which the use may be located. As can be seen, almost all high intensity and high density uses are limited to the Central City Transit Supportive Area or the Urban Development Area.

**TABLE II-8  
FUTURE LAND USE INTENSITY AREAS AND FUTURE LAND USE CATEGORIES**

LAND USE CATEGORY	INTENSITY AREA			
	CENTRAL CITY	URBAN DEVELOPMENT	SUBURBAN AREA	RURAL AREA
Regional Activity Center (RAC)	X			
Community Activity Center (CAC)	X	X		
Neighborhood Activity Center (NAC)	X	X	X	
Convenience Center (CC)	X	X	X	X
Interchange Activity Center (IAC)	X	X	X	X
Mixed Commercial Corridor (MCC)	X	X	X	
Business Park Center (BP)	X	X	X	X
Office Center (OC)	X	X	X	
Industrial (I)	X	X	X	X
Residential High (RH)	X <sup>1</sup>	X <sup>1</sup>		
Residential Medium (RM)	X <sup>1</sup>	X <sup>1</sup>	X	
Residential Low (RL)	X	X	X <sup>2</sup>	X <sup>2</sup>
Residential Very Low (RVL)			X	X
Agriculture Residential Low				X <sup>3</sup>
Recreation (R)	X	X	X	X
Conservation (C)	X	X	X	X
Preservation (P)	X	X	X	X
Public Buildings/Grounds/ Institutional (PI)	X	X	X	X

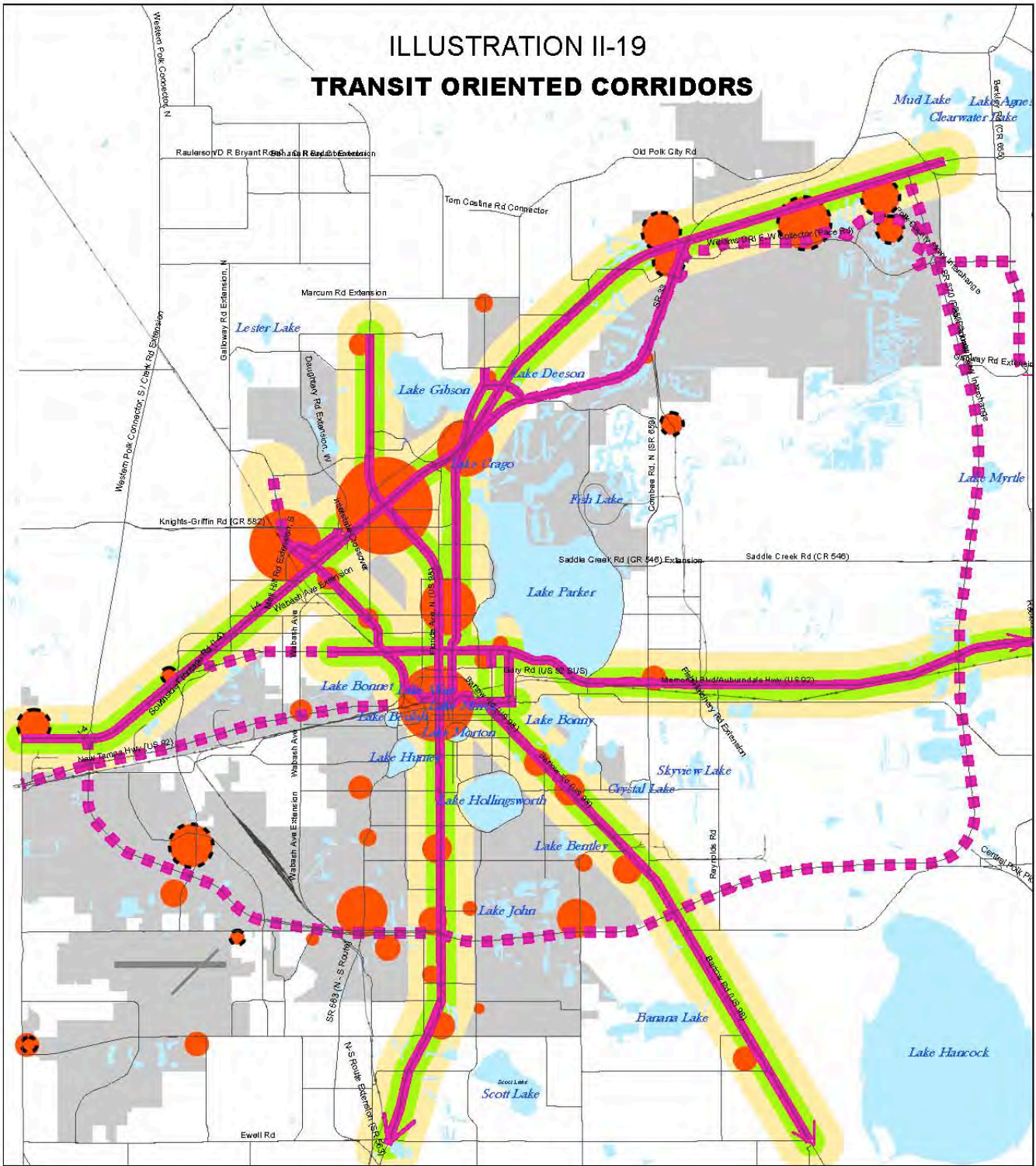
<sup>1</sup> Density may be increased in Transit Oriented Corridor Overlay areas.

<sup>2</sup> Density may be limited due to lack of public facilities and services, environmental resources and/or issues of compatibility with surrounding land uses and patterns

<sup>3</sup> This land use is primarily intended for the Green Swamp ACSC.

**Source:** City of Lakeland, Community Development Department, as revised, 2010.

# ILLUSTRATION II-19 TRANSIT ORIENTED CORRIDORS



Source: Lakeland Community Development Department, 2013



**Transit Oriented Corridors**

- Transit Oriented Corridors (TOC)
- Long Term Potential Transit Oriented Corridors
- 1/8 Mile TOC Buffer (on each side)
- 1/4 Mile TOC Buffer (on each side)

**Activity Centers**

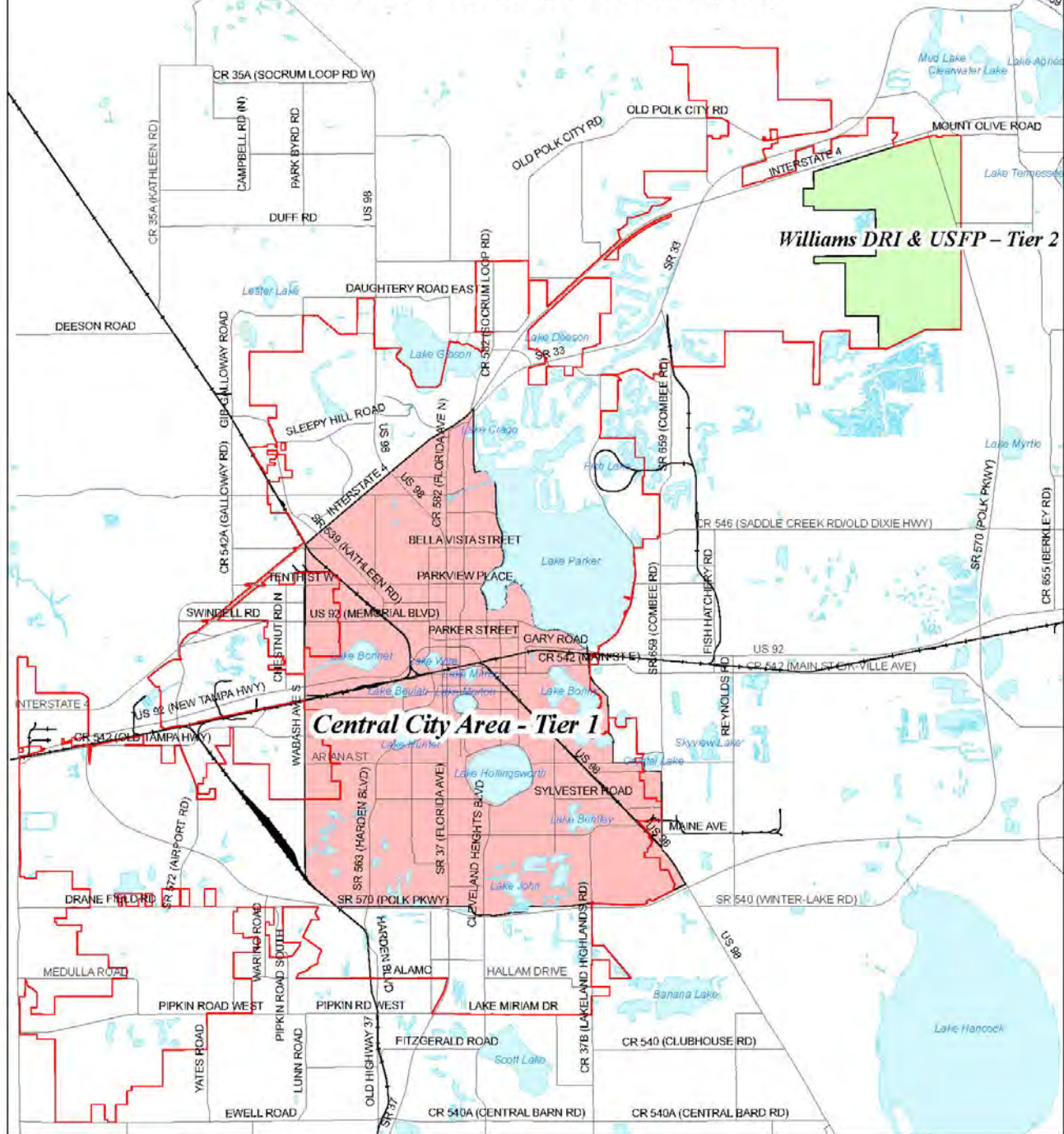
- Future
- Current
- DULA Area



Ordinance # 5374  
Adopted 05/20/13

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ILLUSTRATION II-20  
**ENERGY CONSERVATION AREAS**

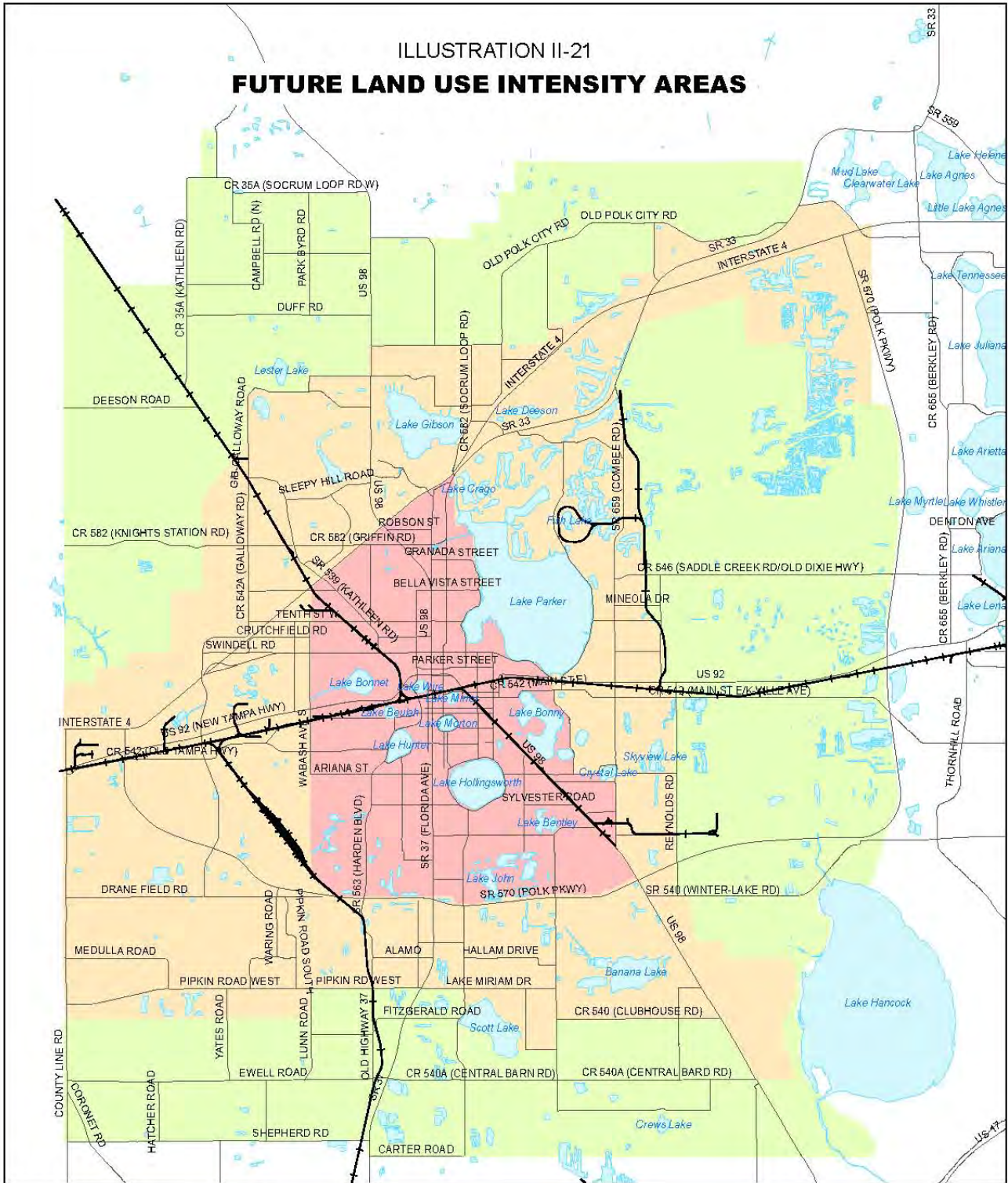


Source: Lakeland Community Development, 2010



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# ILLUSTRATION II-21 FUTURE LAND USE INTENSITY AREAS



Source: Lakeland Community Development Department, 2010

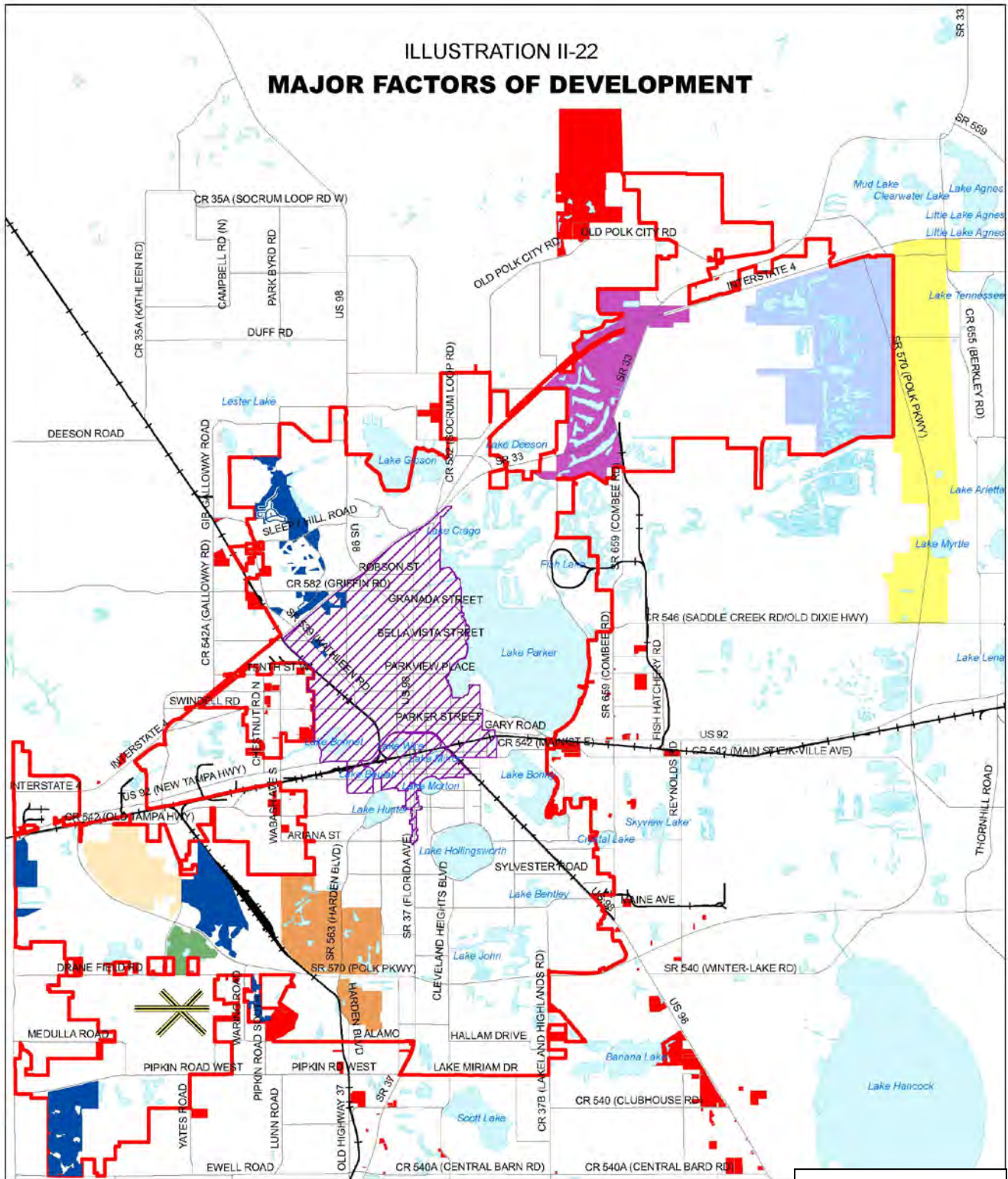


- Central City Transit Supportive Area
- Urban Development Area
- Suburban Area



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## ILLUSTRATION II-22 MAJOR FACTORS OF DEVELOPMENT



Source: Lakeland Community Development Department, 2010

### Development of Regional Impact

- Bridgewater
- Lakeland Central Park (aka Flagler)
- Oakbridge
- Publix Corp. Center
- Williams
- Polk Commerce Center (Unincorp.)
- City Limits
- Annexation Wastewater Agreement Parcels
- 3 Central City CRAs
- Undeveloped PUDs > 75 acres
- LAL Airport

Ordinance # 5243  
Adopted 06/06/11



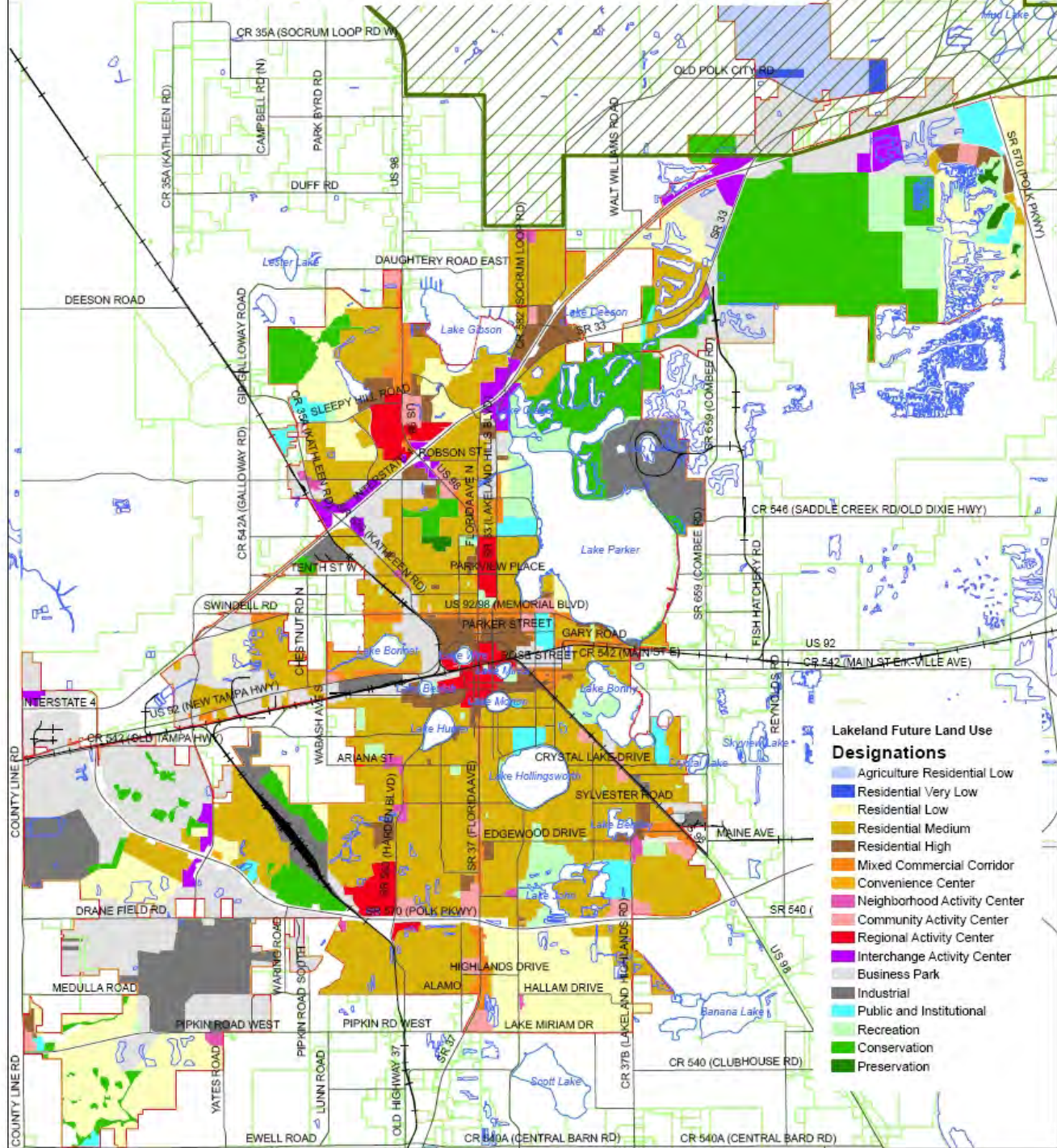
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ILLUSTRATION II-23

# 2020 OFFICIAL FUTURE LAND USE MAP



Source: Lakeland Community Development Department, 2013

Effective: March 7, 2013



- City Limits
- Area of Critical State Concern
- Polk County Future Land Use



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## HEALTHY COMMUNITIES FOR ALL AGES

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Communities across the nation are beginning to better understand the link between the built environment and human health. This issue and the techniques recommended to improve individual options for an active, healthy lifestyle, reaches across all age groups. In addition, the need to improve options for active lifestyles and subsequently reduce health costs, has implications for economic development, recruitment of young professionals interested in active lifestyles and the attractiveness of a place for people looking for a quality of life that is walkable, active and vibrant. Those looking to relocate to a community will include retirees given the demographic trend known as the baby boom, with over 10,000 people retiring each day as of 2012; the wave of retirees is expected to continue for at least the next two decades.

**Obesity:** A nation-wide health epidemic has grown over several decades of suburbanization of America's cities and is in part attributed to the way we design our communities. While advances in technology such as automobiles and computers have led to decreased levels of physical activity, the low density, single-use development patterns over large geographic areas has limited opportunities for regular physical activity and in some communities created a barrier to accessing healthy foods. The result was that in 2012 slightly more than 1 in 3 adults (35.7 percent) in the U.S. were considered obese according to the U.S. Center for Disease Control and Prevention (CDC).

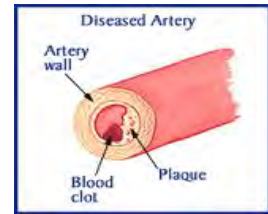


Additionally, U.S. suburban development patterns have led to longer distances between residences and other destinations like school, health care centers, employment or shopping. The suburban pattern often may mean that these groups live too far to walk or use a bicycle to their destination and often are not close to a transit stop. As a result, suburban populations such as the elderly, the disabled, those too young to drive and those who cannot afford a car may become part of the transportation disadvantaged population due to limited transportation options or means to get to the places they need to go and may increase their risk of becoming sedentary physically as well as less able to be engaged in their community. Senior citizens aged 65 and older are particularly at risk with many living in isolated suburban and rural enclaves with no means to get anywhere without a car. Extensive medical research has shown that sedentary lifestyles is linked to increased obesity which in turn is linked to chronic illnesses such as diabetes, heart disease, some cancers and asthma.



An article of a Gallup study (2012) evaluated Polk County (i.e., the Lakeland-Winter Haven Metro Area) as the "7th most obese" metropolitan area in the nation with an obesity rate of 33.5 percent. Numerous statistics from the Florida Department of Health support these findings. This level of obesity comes at an estimated \$279.3 million dollars in associated

medical costs, related costs to the local economy and a fairly negative public image, presenting quality of life challenges that in turn may make economic development/recruitment more difficult. Many efforts are underway to address this problem throughout Florida as well as locally. The Florida Department of Health issued a State Health Improvement Plan (SHIP) in April of 2012. Under the plan's Community Redevelopment and Partnerships section, the SHIP urges local governments to build and revitalize communities in a manner such that residents can live healthier, more active lives.



At the county-level, Polk Vision kicked off the “Building a Healthier Polk 2012 Initiative” in the summer of 2012 to unite community partners to work together towards the goal of reducing the obesity rate in Polk County. The coalition’s stated goal is to reduce the obesity rate in Polk County from 37.6 percent to 27.2 percent which was the 2012 State average. Realizing that this problem would soon be too great to ignore, Polk County Board of County Commissioners also adopted comprehensive plan policies to incorporate Healthy Community Design concepts that espouse:

- coordination between Polk County Office of Planning and Development and the Polk County Health Department;
- establishing key health indicators to monitor public health; and
- developing an incentivized “Healthy Community Design” standard to be incorporated in the Polk County Land Development Code.

In order to engage and assist the 17 local governments within Polk County as a means to begin to confront the obesity crisis, the Polk County Office of Development included Healthy Community Design as part of its *Livable Polk Initiative*. The Livable Polk Initiative is a partnership of private, public sector and non-profit entities supporting efforts to develop and implement a countywide, coordinated land use and transportation strategy that is based on best practices. In 2012, one of the coalition’s efforts resulted in a “Healthy Communities” Report summarizing research conducted to understand the emerging health crisis and what can be done to counter it as well as a summary of local efforts in Lakeland, Winter Haven and the County. The full version of the *2012 Livable Polk Healthy Communities Report* can be found in the Lakeland Comprehensive Plan’s Technical Support Document. Also in 2012, the coalition hosted an inaugural awards/recognition program for local projects that help create a more livable or sustainable community.



**Seniors:** Another concern related to community planning and public health is providing a built environment that is sensitive to the needs of an aging population. In the 2011-2012 time period, Lakeland Vision convened meetings of a newly created Lakeland Leadership on Senior’s Council (LLSC) to identify and discuss key livability issues for seniors. Subsequently, a report was produced identifying strategies and actions for the various



entities represented on the LLSC including the City, local transit agencies, retirement communities, non-profit service agencies for seniors, health officials and others. According to the American Communities Survey, in 2012, 21.1 percent of Lakeland’s population was age 65 or older and the next generation of retirees is expected to increase significantly in the coming years. Nationally, about 10,000 people retire per day due in part to what is referred to as the baby boomer age groups that were born between 1946 and 1964.

U.S. Census data shows Lakeland has a higher percentage of seniors age 65 and older than the County, State of Florida or the U.S. and a much higher percent of households of age 65+. Numerically, Polk County saw an increase of 42 percent for the population of 65 years and over between the 1990 and the 2010 census.

	Total Population	Age 65+	% Pop. 65+	Total Households	HH Age 65+	% HH 65+
<b>U.S.</b>	308,745,538	40,267,984	<b>13%</b>	116,716,292	10,995,689	<b>9%</b>
<b>Florida</b>	18,801,310	3,259,602	<b>17%</b>	7,420,802	824,389	<b>11%</b>
<b>Polk</b>	602,096	108,296	<b>18%</b>	227,485	24,928	<b>11%</b>
<b>Lakeland</b>	97,422	20,199	<b>21%</b>	40,758	14,163	<b>35%</b>

Source: U.S. Censuses 2010 Data

A key issue for seniors is the concept of aging-in-place. As defined by the CDC, aging-in-place means the ability to live (and remain) in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level. Transportation from the place of residence is a prevailing issue for seniors, impacting adequate access to health care, pharmacies, shopping/food, community recreation, employment, volunteering and learning. According to the American Community Survey data, about 58 percent of all seniors have a mobility issue and female seniors are 1.5 times as likely as males to have a mobility issue. Half of all veterans in the city were age 65 and over, with 72 percent of them having a disability. However, mobility can be a challenge for people of any age due to disability; thus addressing mobility for seniors can assist a wider group of residents in the community.



The LLSC identified several key issues for enhancing the opportunity for seniors to age in place in their homes, neighborhoods or community. These include:

1. Adequate transportation services and options;
  - Transportation services and options impacts a person’s mobility or ability to get to destinations such as medical and service appointments, parks/recreation, shopping, including for affordable food, education, community engagement or employment opportunities. Coordination of all relevant vehicular transportation services such as



public transit and non-profit or faith based transportation services, can help maximize use of available resources. In Polk County, a countywide Regional Mobility Call Center has been planned; the center is expected to be opened in 2013. Making a community more walk and bike friendly also assists in the provision of transportation options and can assist in reducing spending needed for personal vehicles.

**2. Accessibility for physical disabilities;**

- Streets and sidewalks, parks, all types of commercial/office and institutional buildings and homes/residences need to address accessibility for those who are physically less mobile or disabled.



Additionally, things like the timing of crossing signals need to be evaluated for whether a less able person (e.g., elder or disabled) can cross safely in the allotted time. The need to ensure accessibility external and internal to building sites or on the streets is at least in part addressed through compliance with the requirements of the

American for Disabilities Act however, all treatments must be well maintained to be effective and useful for users.

**3. Design of residences that can accommodate temporary or longer term disabilities as relate to an individual's mobility.**

- Residential design elements that address shower/bathroom access, home entranceways, hallway widths, and accessibility to various elements of kitchens and utilities within the home are sometimes addressed together under the term "Universal Design". Universal Design can help address a significant projected increase in the senior housing market as well as those of any other age who may incur a short term or long term disability, or where the primary resident of the home has a parent/regular visitor with mobility issues.



However, attractive design of the elements needed, can make the difference between an "institutional" look and feel to the design elements and a design that attracts other housing buyers in the market including those with aging parents or friends, disabled children or young adults.

**4. Sufficient and affordable housing options.**

- Housing costs for seniors or others in the community can be reduced through a number of means. One option is to allow small lot sizes and small unit (building) sizes. Another option is to encourage senior housing projects that have a low cost due to state or



federal tax or rent subsidies. Yet another option is to reduce transportation costs for seniors or others so more of their income can be available for housing, for example, providing public or private transit services and complete streets that provide options to reduce vehicle and gas use or can totally eliminate the need to own a personal vehicle.

- Accessory dwelling units, ADUs, are often known as granny flats, above garage units or similar small units that supplement and compliment the primary residence on a residential property; the ADU can serve any age group as an affordable option for living. In Lakeland, special regulations exist to help ensure ADUs will be good for the neighborhood while allowing a choice for seniors, young adults or others.



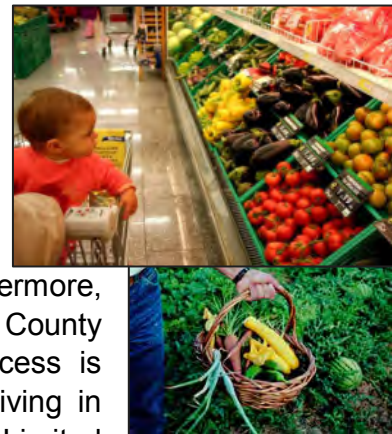
The U.S. Department of Health and Human Services recommends that adults should get a minimum of 160 minutes (2 hours and 40 minutes) of moderate aerobic activity per week and children should get at least 60 minutes a day. According to data (2007) from the



Florida Department of Health, Polk County as a whole is lagging behind the State average (34.6 percent) in adults who achieve regular, moderate physical activity (30.2 percent). To encourage Lakeland residents to get the daily recommended amount of moderate physical activity, the City is promoting walking and bicycling as a means of active transportation. As defined by the

Center for Disease Control and Prevention (CDC), active transportation includes modes of transportation that require physical activity such as walking, bicycling, and accessing public transportation. One example of the City's efforts is the 2012 designation as a bronze level bicycle friendly community as designated by the League of American Bicyclists. This national recognition demonstrates Lakeland's commitment to providing and enhancing a safe and attractive environment for residents of all abilities to ride their bikes for sport, recreation, leisure, and transportation.

**Nutrition:** Another crucial component to the health of a community is nutrition. The U.S. Food and Drug Administration recommends four and one-half cups (nine servings) of fruits and vegetables daily. 2007 data from the Florida Department of Health indicate that only 21 percent of adults in Polk County consume at least five servings of fruits and vegetables a day. As indicated by 2012 data from the County Health Ranking & Roadmap Project, funded by the Robert Wood Foundation, 46 percent of restaurants in Polk County are classified as fast food. Furthermore, the same source indicates that 19 percent of low income Polk County residents have limited access to healthy food. Limited access is defined as the proportion of the population who are both living in poverty and do not live within 1 mile of a grocery store. Limited



access to food with a high nutrient content and a high concentration of fast food restaurants may contribute substantially to the obesity crisis. In response, one policy strategy that is being explored and used by local governments around the state is to remove regulatory barriers that would inhibit and/or create incentives to encourage smaller, local grocery stores in underserved areas, additional farmer's markets, produce stands, and community gardens, where appropriate.

**Safety:** Public safety and the perception of personal safety enhances the willingness to walk, bike or otherwise be physically outdoors and active within neighborhoods and in areas of employment. National, state and local economic recessionary trends



brought many associated issues such as abandoned/foreclosed residential properties and an increase in the rental of formerly owner-occupied, now investor-owned homes. These issues are challenging neighborhood property values, stability and sense of safety from incidents of crime.

Thus, some new initiatives such as the City's Foreclosure Registration program and landlord rental management training programs have emerged as recommended strategies to help combat the adverse effects of the recession.

**Strategies:** As a result of the above and consistent with objectives of strategies espoused by Lakeland Vision, the City has developed a framework of policies related to healthy communities for all ages based on existing programs that the City implements as well as new initiatives and best practices found in other local governments across the state. Studies have shown that many of these types of strategies should assist in encouraging more active and healthy lifestyle choices. These strategies include:

- Provide access to quality public parks, open spaces and recreational services.
- Promote a wider range of housing types beyond the predominant single family detached home, in part to increase to the affordability of those options, offering smaller more compact dwelling units and accessory dwelling units.
- Support a mix of proximate land uses, particularly in the Central City Area where transit services, parks and a pedestrian network is most available.
- Foster revitalization of neighborhoods through infill and redevelopment and strategies that support neighborhood stabilization where trends in property values and/or crime are adverse.
- Enhance the City's multi-modal transportation system by improving road, bus, bike and pedestrian connectivity and convenient mass transit services. This includes improving public safety for all users of public right of ways: motorists, bicyclists, and pedestrians.
- Partner with the school district to provide safe ped/bike connectivity to schools.
- Continue to partner with the Polk County Health Department to evaluate health trends and needs in our community as relate to City services, policies and planning.

## GOALS, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to future land use issues. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the attainable and measurable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Future Land Use Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this plan and with the goals and policies of the *Central Florida Comprehensive Regional Policy Plan*.

**GOAL A:** To provide for the best possible organization of land uses to meet the physical, cultural and economic needs of the present and future population in a manner that will maintain or improve the quality of the natural and man-made environment.

**GOAL B:** To ensure a healthier, more walkable community for residents of all ages and abilities, to limit greenhouse gases, promote a high degree of mix of land uses and implement a well integrated transportation system with a high level of connectivity within the Central City and Urban Development Areas.

**Objective 1A:** A future land use classification system has been developed and used for locating uses on the Future Land Use Map projecting the publicly approved arrangement of land uses for a ten year period with a formal review and revision at least every seven years (or at time of Evaluation & Appraisal Report).

**Policy.1A1:** The City of Lakeland has designated a Central City Transit Supportive Area, an Urban Development Area, and a Suburban Area (remaining areas considered rural), as development intensity areas on the Future Land Use Map series in accordance with the generalized criteria found in the "Issues and Opportunities" section of this element. The generalized criteria are intended to serve as guidelines only and indicate typical ranges for such parameters as acreage, intensity and population served. Actual values may vary somewhat based upon specific site characteristics.

The Central City Transit Supportive Area (CCTSA) shall include provision of urban infrastructure and services necessary to support compact, energy efficient, walkable development patterns and as consistent with the policies of this Plan. Funding opportunities



for enhanced facilities or services shall include those reflected in the City's Capital Improvements Plan, adopted CRA Plans and/or per commitments from the private sector or other funding partners. The CCTSA will include a special focus on infill, redevelopment, energy efficiency and enhanced mobility. This will include promotion of a walkable community within the CCTSA and the City's Transit Oriented Corridors, supported by a mix of complimentary land uses that promote a compact work, live, shop and play environment and access to multiple modes of transportation including sidewalks, transit (bus and passenger rail service), and bicycle facilities. New and re-development in the CCTSA shall be of transit and pedestrian friendly design in terms of site layout and building orientation for non-residential and new, non-platted residential, and as governed by the City's land development regulations.

**Policy 1A2:** In further support of encouraging a palette of mixed uses, urban infill and energy efficiency within the Central City Transit Supportive Area, the City will consider assigning priority in its regular and CRA related capital planning to public infrastructure improvements needed to facilitate development projects that include a vertical or horizontal mix of two or more of the range of uses allowed in the future land use classifications.

**Policy 1A3:** In order to encourage the efficient concentration of high intensity land uses, and a compact development pattern and discourage commercial strip development patterns the City of Lakeland has designated existing and future Commercial Activity Centers and Corridors. Designation will be based on the generalized criteria outlining allowable uses and densities found in the "Issues and Opportunities" section of this element and such designations are located on the Future Land Use Map. Commercial centers and corridors land use categories utilized by the City will include:

- A. Commercial Activity Centers**
  - 1. Convenience Centers (CC)
  - 2. Neighborhood Activity Centers (NAC)
  - 3. Community Activity Centers (CAC)
  - 4. Interchange Activity Centers (IAC)
  - 5. Regional Activity Centers (RAC)
  - 6. Business Park Centers (BP)
  - 7. Office Centers (OC)
- B. Corridors**
  - 1. Mixed Commercial Corridors (MCC) (formerly LCC)
  - 2. Transit Oriented Corridors (TOC) Overlay

Activity Centers shall be spaced apart and developed per the intensities and densities listed in the generalized criteria in the "Issues and Opportunities" section of the Future Land Use Element. However, the spacing and other generalized criteria shall be considered along with the other goals and policies in this Plan when evaluating the acceptability of a proposal for a new or expanded activity center. Other Plan goals and policies which shall also be considered include those which address urban redevelopment, protecting or enhancing the viability of

public resources and facilities, and/or maximizing internal trip capture rates via mixed use developments. To encourage a balance and mix of uses in neighborhoods throughout the city that allows for shorter vehicle trips, commercial activity centers other than convenience centers may include a limited amount of medium and high density residential uses as per the generalized criteria outlined in the Issues and Opportunities section of this Element. For NAC and CACs, however, the maximum density shall be up to 22 dwelling units per acre where compatible; requests for higher densities in NAC or CAC land use will be subject to a conditional use approval.

**Policy.1B1:** Floor Area Ratio (FAR) shall be utilized to determine the largest potential non-residential and/or mixed use building structure that can be built on any given proposed development site.

Floor area ratio shall be defined as the sum of gross horizontal areas of several stories of a building or buildings measured from the exterior surface of the walls divided by the land area of the contiguous development site, excluding any area dedicated to exclusively residential uses. The floor area ratio in square feet of the building or buildings on the property shall determine the maximum non-residential and/or mixed use building size permitted calculated by gross floor area divided by total contiguous land area. Below grade floor areas, such as basements and underground parking, and the public parking component of any at grade or above ground parking structure shall be excluded from the gross floor area calculation. Floor area ratio shall not apply to any parcel, tract or phase of a development that is exclusively residential.

**Policy.1B2:** The maximum floor area ratio is determined for each future land use designation in accordance with the future land use intensity areas and the special districts such as the downtown district as cited in the following table:

FLU	MAXIMUM FLOOR AREA RATIO (NON-RESIDENTIAL &/OR MIXED USE)			
	CENTRAL CITY	UDA	SDA	DOWNTOWN DISTRICT*
RAC	3.00	2.50	N/A	5.00
IAC	3.00	2.00	1.50	N/A
CAC	1.50	1.00	N/A	N/A
NAC	1.00	0.75	0.50	N/A
BP	0.50	0.50	0.50	N/A
IND	0.50	0.75	0.50	N/A
OC	2.00	1.50	0.30	N/A
TOC**	1.50	1.00	0.75	N/A
MCC	0.50	0.50	0.30	N/A
CC	0.50	0.50	0.25	N/A
PI	2.00	1.50	0.70	N/A
RL	0.50	0.50	0.25	N/A

FLU	MAXIMUM FLOOR AREA RATIO (NON-RESIDENTIAL &/OR MIXED USE)			
RM	1.50	1.00	0.50	N/A
RH	2.00	1.50	N/A	2.50
R	0.50	0.50	0.25	N/A
CN	0.10	0.10	0.05	N/A
PRES	0.00005	0.00005	0.00005	N/A

\*Note: Downtown District here shall mean the Downtown CRA area.

\*\*The Transit Oriented Corridor (TOC) overlay FAR supercedes the FAR of some underlying future land use designations as per Policy 1B3 below.

**Policy 1B3:** The floor area ratios detailed in this Comprehensive Plan are the non-residential and mixed use intensity parameters potentially permitted in each future land use designation. These maximum floor area ratios are not an entitlement and are not achievable in all situations. The TOC overlay maximum floor area ratio (FAR) shall supercede the underlying future land use designations with a lower FAR as may apply to non-residential and mixed use structures. FARs may be limited by quantitative and qualitative criteria included in the Comprehensive Plan and *Land Development Regulations*, including but not limited to requirements for and/or issues involving the following: minimum open space; concurrency management and level of service standards (e.g. for transportation, parks and recreation, stormwater and other public facilities and services); off-street parking and internal circulation; landscaping; on-site and offsite improvements; and design amenities required to achieve land use compatibility. In addition, natural constraints such as the shape and natural features of a site may present obstacles to achieving maximum floor area ratio.

**Policy 1C:** The City of Lakeland has identified and mapped existing Mixed Commercial Corridors (MCC) exhibiting intense strip commercial development and will allow infilling and limited expansion of existing corridors only, with no creation of new corridors. Above ground floor residential uses and first floor residential that does not front directly on the main commercial corridor (roadway) shall be allowed in all MCCs except where industrially zoned. Maximum densities shall be equal to those allowed in the City's RM land use category, subject to compatibility with surrounding uses, development patterns and densities.

Requests to **expand** the depth or area of (not infill lot) an MCC along the corridor shall require:

- a. Compatibility with surrounding land uses and patterns – including adequate transitional site design techniques and/or buffering;
- b. Adequate infrastructure required to serve the proposed use;
- c. Ped/bike and transit friendly site design with appropriate cross access;
- d. The following minimum blend of uses will apply to the MCC expansion area, with limited variation as governed by the City's LDRs. These requirements, as interpreted by the Community Development Department, may be determined as met by adjacent complimentary land uses where appropriate, such as for small or urban infill properties.

	<b>I. Adjacent Uses</b>		<b>II. Adjacent Uses</b>	
	<b>Primary M-F &amp;/or NonRes</b>		<b>Primary S-F Resid</b>	
	Min.	Max.	Min.	Max.
1. Residential	10%	25%	75%	95%
2. Office & Institutional	10%	40%	0%	20%
3. Commercial	0%	45%	0%	20%
4. Green Space/Rec	5%	35%	5%	25%

Notes: the scale of proposed residential uses must be compatible with the surrounding neighborhood. M-F=multi-family; NonRes=Non-Residential; and S-F=Single Family. Compatibility of uses proposed within the MCC shall take precedence over density bonus allowances in TOCs as per Policies 2A and 3B. Primary use shall be interpreted to mean the majority of adjacent uses as determined by the Community Development Department.

**Policy 1D:** The City of Lakeland has designated sites for industrial uses on the Future Land Use Map based on the generalized criteria found in the "Issues and Opportunities" section of this element.

**Policy 1E:** In order to encourage a variety of housing types within well developed residential neighborhoods and otherwise manage residential land uses to provide an adequate quantity and overall land use compatibility the City of Lakeland has designated sites and densities for residential uses on the Future Land Use Map. Designation is based on the generalized criteria outlining allowable uses and densities found in the "Issues and Opportunities" section of this element. Residential land uses categories utilized by the City include:

- Residential Low Density (RL) up to 5.00 DU/Acre
- Residential Medium Density (RM) up to 12.00 DU/Acre
- Residential High Density (RH) 12.01\*DU/Acre to 75 DU/Acre

Residential High designations within the Central Business District will be allowed densities up to 175 dwelling units per acre in support of the City's efforts to eliminate urban sprawl, promote infill development, and maximize the use of public facilities and services within the central city. \*Lower densities than the minimum density requirement may be approved in areas designated for RH where the need and/or desire for single family infill housing is documented in a local neighborhood plan and/or an adopted Community Redevelopment Area (CRA) Plan and is supported by the Director of Community Development Department.

Residential densities should be increased in the CCTSA and UDA in order to support efficient transit services, compact and energy efficient land development and to achieve a higher average citywide density. Density increases beyond those normally allowed in the base future land use classification are described below in the criteria for Transit Oriented Corridors.

**Policy 1F:** The City of Lakeland has designated recreation, preservation and conservation sites on the Future Land Use Map. The Preservation category is confined to lands that are in public ownership and will be protected in their natural state for passive recreational use. Other than passive recreation, the only allowable use within the Conservation category will be Residential at a density of no more than one unit per ten acres.

**Policy 1G:** The City of Lakeland has designated City owned public buildings and grounds and other public, semi-public, and institutional land uses as "Public Institutional" (PI) on the future land use map based on the generalized criteria found in the "Issues and Opportunities" section of this element which includes a provision allowing public school uses as a permitted principal use in all land use categories except Conservation (C) and Preservation (P). Public schools are encouraged to locate near urban residential areas where the public facilities exist to support the new school. Also, new public institutional land uses such as parks, libraries, or community centers shall, to the maximum extent feasible, be collocated with new or existing public schools.

**Policy 1H:** The City of Lakeland has, on its Future Land Use Map, indicated areas where major public facilities needed to support future development can be located within the Public Buildings and Grounds and Institutional Uses PI future land use category so that suitable land is reserved and available. The location of public safety and security facilities such as fire/ambulance stations and community policing sites shall be allowed in all land use categories except Conservation, or Preservation, and shall be regulated by the City's land development regulations to ensure compatibility with surrounding land uses.

**Policy 1I:** The City shall utilize land development regulations such as increased minimum setbacks for structures and signs for proposed development to limit impacts from a roadway project listed in the current, adopted FDOT, County, or City 5-Year Work Plan/Capital Improvement Plan.

**Policy 1J:** The City of Lakeland will continue to pursue high wage employment as a key component of community and fiscal sustainability. An annual jobs-to-population ratio may be one measure used to assess the trend as reflected in the City's Certification Program and Measures.

**Policy 1K:** The City of Lakeland will continue to work in partnership with the Lakeland Economic Development Council, institutions of higher (post secondary) learning, local business stakeholders and other local, county, regional and state entities in order to attract high wage jobs including but not limited to the industrial, manufacturing, high tech assembly, medical, energy-related/"green" and research and technology sectors. This shall be part of the City's goal to improve the quality of life for all residents as it relates to community sustainability and ensuring a living wage for working residents.

**Policy 1L:** Development and redevelopment efforts shall strive to attain a mix of uses wherever possible. Employment, housing, institutional, medical, recreational, civic and

retail/commercial land uses shall be located within relative proximity to one another wherever possible and/or combined on-site in order to achieve a well-balanced land use mix and to connect such uses through various modes of the transportation network.

**Objective 2:** To achieve a higher level of mixed land uses within areas that are or are expected to be primarily residential and to strategically promote higher densities that support transit and walkable communities, support a variety of housing types, require minimum densities where appropriate and allow a higher mix of non-residential uses within Residential Medium and Residential High future land use classifications. Non-residential uses are typically a percentage of the total acres of the future land use area; land use area is as determined by the Community Development Department.

**Policy 2A:** The Residential Medium, RM land use shall allow densities of 0 to 12 units per gross acre with 5 to 7 dwelling units per gross acre as a typical targeted minimum for new or redevelopment, and up to 10% small office and commercial uses. Within Transit Oriented Corridors (TOC) this percentage of non-residential uses shall be increased up to 20% and shall be comprised of primarily non-auto oriented uses. Commercial uses in the RM land use shall require a Planned Unit Development or a Conditional Use, and generally be located on collector or higher functional classification of roadways.

The maximum percent of non-residential found to be appropriate for a given location within a RM area shall be determined on a case by case basis. Small scale office and commercial uses located in the RM land use designation shall be oriented to serve neighborhood level demands and address external, off site impacts, site and building design considerations appropriately to ensure compatibility with surrounding uses and development patterns. Transit-friendly site design is required within the Central City TSA, Urban Development Areas and within the TOC Overlay.

**Policy 2B:** Residential High, RH land uses shall be those between 12.1 and 75 dwelling units per gross acre except in the City's defined Downtown Central Business District where higher densities already exist and are allowed up to 175 du/ac. Allow 25% mix with office, institutional, recreational and/or commercial service/retail uses and address building and site design in a manner to ensure compatibility with surrounding uses and development patterns. The maximum percent of non-residential found to be appropriate for a given location within a RH area shall be determined on a case by case basis. Transit-friendly site design is required within the Central City TSA, Urban Development Areas and within the TOC.

**Objective 3:** As part of the future land use map series, delineate Transit-Oriented Corridors (TOC) Overlay to address existing and planned key fixed transit routes and to promote a wide range of uses within ¼ mile of these key transit corridors and ½ mile from transit activity centers including passenger rail stations. Create incentives and minimum requirements for new or re-development projects within these corridors.

**Policy 3A:** Transit-Oriented Corridors shall encourage a mix of complimentary land uses with medium to high residential densities along key designated existing or planned fixed route transit corridors. All new or redevelopment within a TOC shall be designed with pedestrian, bike and transit friendly site design. The City shall promote the following land uses in vertical or horizontal mixes within a TOC:

- Non-residential future land uses with residential uses above the first floor where appropriate, including Activity Center uses.
- Public & Institutional, PI Uses, including but not limited to government, place of worship, community, educational, daycare, recreational &/or medical/clinic uses;
- Residential Medium (RM) & Residential High (RH) uses;
- Recreational and open/green space appropriate for an urban setting.

**Policy 3B:** Minimum densities of new residential subdivisions and multi-family residential development within residential land use designations and located in the TOC shall be 7 du/acre within the 1/8 mile TOC buffer area and 5 du/acre within the ¼ mile TOC buffer area. Minimum densities are not intended for infill development within primarily single family neighborhoods nor do they apply to platted subdivisions. Maximum residential densities within such land use designations shall be allowed up to 22 dwelling units per acre within 1/8 mile of the TOC and 16 du/acre within ¼ mile of the TOC. Maximum densities are not guaranteed; they may be limited by site features, land use compatibility issues including those relating to scale and mass, other requirements of this Plan and/or other City regulations. To qualify for the density increase, transit service must be operational within the designated corridor or have committed funding in the first 3 years of an adopted CIP or work program. Corridor depth shall be approximate and measured from centerline of the applicable roadways. TOC density increases shall not apply to any Conservation or Preservation land use areas or in the Green Swamp Area of Critical State Concern. Owners with parcels that are located partially within a TOC and/or its density buffer area shall be subject to a determination by the Community Development Director or his designee as to whether a majority of the developable parcel (excludes jurisdictional wetlands) is located within the corridor(s) in which case the entire developable parcel may be deemed within the applicable corridor(s).

**Policy 3C:** Wherever possible the City's TOCs shall align and connect with the Polk County Transit Corridors & Centers Overlay.

**Policy 3D:** The City shall adopt and implement *Land Development Regulations* that include elements of a form-based code which emphasizes design standards including maximum building setbacks, open/green space requirements, street shading treatments, maximum block lengths, relationship of development to the street, and provisions that require "complete streets" and inter-modal connectivity as based upon the adopted roadway typologies in the Transportation Element of this Plan. Within the TOCs, compatibility of land uses shall be ensured primarily through appropriate building and site design standards which reflect a transit-oriented, urban form as well as other limits which may need to be

imposed such as transitioning of building mass and/or density/intensity of uses or other limits as appropriately applied through zoning and/or development plan review.

**Policy 3E:** All new and redevelopment within the TOC shall be designed with primary focus on safe, attractive and functional access for the pedestrian, with secondary focus on the vehicle. This primary focus shall be reinforced by the City's land development and building regulations which address urban form, energy efficiency and transportation including: flexible parking and parking maximums, limited driveway cuts, cross/shared access, green spaces, setbacks, block length, sun/rain pedestrian protection treatments, and bicycle and transit facilities.

**Policy 3F:** Geographically variable impact fees shall also be considered as a means to encourage redevelopment and infill. Impact fee ordinance changes may include offering a discount for redevelopment in the Central City TSA outside of the Core Improvement Area and/or a discount in the Transit Oriented Corridors where a mix of uses is proposed in new or re-development.

**Policy 3G:** Where a new passenger rail service station stop is located within the City, a small area land use plan shall be required for an area approximately ½ mile or more around the proposed station site. The plan shall address the proposed mix of uses needed, expected maximum and minimum densities/intensities, parking areas and/or associated off-site park and ride or transfer facilities, general range of scale/mass of buildings, compatibility with surrounding uses, any required public services or infrastructure improvements, and connectivity with other modes of transportation including bus, bike and pedestrian modes. Development plans shall reflect a transit oriented, pedestrian friendly design. At least one noticed workshop is recommended for general public and surrounding landowner input; the final plan shall require City Commission approval.

**Objective 4:** Location of future land uses on the Future Land Use Map has given consideration to natural land development limitations, and significant natural, archaeological, and historic resources will be protected from incompatible development through use of the Future Land Use Map and following the objectives and policies of this Comprehensive Plan.

**Policy 4A:** The City of Lakeland has identified generalized areas with development limitations necessitated by soil conditions, wetlands, hydrology or topography. When development is proposed, the developer will be required to provide specific information and assessments of environmental limitations as part of the project application and review. The City will strictly control development densities and intensities where such limitations are indicated.

**Policy 4B:** The City of Lakeland will require proposed developments to provide adequate information regarding soil suitability for the intended uses.



**Policy 4C:** The City of Lakeland will coordinate proposed development with the Conservation Element of this plan, including any future proposed sites for dredge disposal. Coordination with the various State environmental regulatory agencies shall continue as part of the City's normal development review process.

**Policy 4D:** The City of Lakeland has identified environmentally sensitive lands, preservation and conservation areas on the Future Land Use Map series and will protect such areas from the negative impacts of development.

**Policy 4E:** The City of Lakeland has designated potable water wellfields and high aquifer recharge areas on the Future Land Use Map series and will protect such areas from the negative impacts of development.

**Policy 4F:** The City of Lakeland will require the developer/owner of any site to be responsible for the on-site management of runoff in a manner which assures that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions. The City will use special setbacks and surface water management regulations to prevent deterioration of area waters.

**Policy 4G:** The City of Lakeland will continue to identify significant historic and archaeological resources which are in need of protection.

**Policy 4H:** The City of Lakeland will give priority to the sensitive adaptive reuse of historic structures over activities that would harm or destroy the historic value of such resources.

**Policy 4I:** The City of Lakeland will use the predictive archaeological model to re-evaluate impacts to potential archaeologically significant areas. This model shall be used when evaluating land use changes, capital projects, and other land-altering activities.

**Policy 4J:** The City of Lakeland will continue to require developers of new or expanded mobile home or recreational vehicle parks to provide adequate emergency shelter space to house the entire project population.

**Policy 4K:** Control development within that portion of the Green Swamp Area of Critical State Concern (ACSC) which is located within the City of Lakeland, in compliance with Chapter 380, Florida Statutes. Development of this land is protected by the following policies entitled Principles for Guiding Development:

- a. Any development within the said ACSC and City limits will be serviced with the City's central potable water and central wastewater system.
- b. Minimize the adverse impacts of developments on resources of the Floridan aquifer, wetlands and flood detention areas.

- c. Protect or improve the normal quantity, quality and flow of ground water and surface water which are necessary for the protection of resources of state and regional concern.
- d. Protect or improve the water available for aquifer recharge.
- e. Protect or improve the functions of the Green Swamp Potentiometric High of the Florida Aquifer.
- f. Protect or improve the normal supply of groundwater and surface water.
- g. Prevent further salt water intrusion into the Floridan aquifer.
- h. Protect or improve existing groundwater and surface water quality.
- i. Protect or improve the water retention capabilities of wetlands.
- j. Protect or improve the biological filtering capabilities of wetlands.
- k. Protect or improve the natural flow regime of drainage basins.
- l. Protect or improve the design capacity of flood-detention areas and the water management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.

**Policy 4L:** Urban green spaces shall be integrated wherever possible among other land uses as a means to allow for gathering places, recreation, buffering or transitioning between uses and to provide the pedestrian with relief from the built environment. These green spaces may be integrated into a single development, block and/or neighborhood as per the City’s LDRs. Green space credit may be increased for green areas that function as part of a bicycle trail and/or greenway network. Developers may include as “green” spaces portions of the property that function as stormwater treatment areas where those areas are safe, well-maintained, accessible and amenitized with features such as a pathway, benches, tot lot, open play area, and/or public art as feasible and per the City’s LDRs.

**Objective 5:** Location of future land uses on the Future Land Use Map will give consideration to and be dependent upon the availability of public facilities and services.

**Policy 5A:** The City of Lakeland will direct development to areas where public facilities and services are available or are projected to be available. High density, high intensity uses will be encouraged where the greatest level of public improvements exist. Lower intensities and densities will be encouraged where few public improvements or low public facility capacities exist.

**Policy 5B:** The City of Lakeland will condition development orders to locally established levels of service for public facilities and services and to the availability of required facilities and services concurrent with the impacts of development.

**Policy 5C:** Developers of projects significantly impacting failing transportation segments may elect to participate in the City’s proportionate fair-share mitigation program, if

the required mitigation measure will be fully-funded in the City's Capital Improvement Program. The required mitigation must be added to the first three years of the CIP.

**Objective 6:** Location of uses on the Future Land Use Map is based on existing and projected availability of adequate transportation facilities.

**Policy 6A:** Permitted future development will not result in the deterioration of levels of service for the traffic circulation system below an acceptable level as adopted through the Traffic Circulation Element of this comprehensive plan.

**Policy 6B:** The Future Traffic Circulation Map designates new facilities or improvements to existing facilities necessary to support uses proposed on the Future Land Use Map.

**Policy 6C:** Permitted future development will not result in the deterioration of levels of service for the traffic circulation system below an acceptable level as adopted through the Traffic Circulation Element of this comprehensive plan. Development will be granted "transportation concurrency" in accordance with the City's adopted Concurrency Management Ordinance and provisions under the following scenarios:

- a. Sufficient capacity already exists on the significantly-impacted transportation link(s) to accommodate the development, without causing it to operate at an unacceptable level-of-service;
- b. A project is already programmed in the first three years of the City's Capital Improvement Element (inclusive of projects contained in Florida Department of Transportation or Polk County Five-Year Work Programs) that provides enough capacity to accommodate the proposed development; or
- c. If the developer elects to participate in the City's Proportionate Fair-Share Program, resulting in the addition of a fully funded mitigation measure within the first three years of the City's Capital Improvement Element.

**Objective 7:** Programs for the redevelopment and renewal of neighborhoods including blighted areas will continue to be promoted.

**Policy 7A:** The City of Lakeland will continue to support downtown redevelopment plans and fund public improvements in accordance with such plans.

**Policy 7B:** The City of Lakeland will continue to promote investment and reinvestment in older neighborhoods by designating neighborhoods by geographic boundary, implementing design guidelines for preservation of contributing historic structures, developing a neighborhood plan for targeted neighborhoods if needed, and implementing the plan as part of an ongoing effort to prevent further deterioration and promote revitalization.

**Policy 7C:** The City of Lakeland will implement a Neighborhood Improvement Program to encourage reinvestment in central city neighborhoods in order to foster a viable central city and to promote a compact development pattern. Continued coordination between city departmental staff to implement objectives through a “team” approach will be emphasized and include but not be limited to the Community Development Department, the Public Works Department, the Lakeland Police Department, and the Parks and Recreation Department.

**Policy 7D:** The City of Lakeland will continue to actively identify, develop and implement programs for the redevelopment or renewal of blighted areas. Expansion of the Community Redevelopment Area for Lakeland shall be one tool utilized to implement redevelopment objectives; this shall include but not be limited to the area referred to as the “Mid-Town” redevelopment area.

**Objective 8:** Existing land uses and zoning designations inconsistent with the character or proposed future land use of the area will be reduced or eliminated. Inconsistencies with the locally adopted Hazard Mitigation Strategy shall also be reduced where financially feasible.

**Policy 8A:** The City of Lakeland will adhere to established standards and density guidelines found within the “Issues and Opportunities” section of this element for each land use category located on the Future Land Use Map.

**Policy 8B:** The City of Lakeland will identify, reevaluate, and work toward the elimination of existing land uses inconsistent with the City’s character and proposed future land use. Existing non-conforming land uses may remain, with normal maintenance, but will not be allowed to expand or redevelop.

**Policy 8C:** The City of Lakeland will identify, reevaluate, and eliminate zoning that is inconsistent with the Future Land Use Map or other policies within this comprehensive plan. Existing non-conforming land uses may remain, with normal maintenance, but will not be allowed to expand or redevelop.

**Policy 8D:** The City of Lakeland will, through revision of its land development regulations, establish criteria for ensuring compatibility between adjacent land uses. Such criteria will include, but not be limited to, landscaping requirements, buffering requirements, setbacks, signage, and other appropriate measures necessary to ensure compatibility between adjacent land uses.

**Objective 9:** Future growth and development will be managed through the preparation, adoption, implementation, and enforcement of land development regulations.

**Policy 9A:** The City of Lakeland will continue to enforce and periodically evaluate and update its land development regulations that contain specific and detailed provisions required to implement the adopted comprehensive plan and which, at a minimum:

1. Regulate the subdivision of land;

2. Regulate the use of land and water consistent with the Future Land Use Element, ensure the compatibility of adjacent land uses and provide for open space;
3. Protect lands designated for conservation on the Future Land Use Map and in the Conservation Element;
4. Regulate areas subject to seasonal and periodic flooding and provide for drainage and stormwater management;
5. Protect potable water wellfields and aquifer recharge areas;
6. Regulate signage;
7. Require noise walls or appropriate noise buffers for new residential developments locating near an existing or planned and funded portion of the Florida Turnpike Enterprise toll road system within the City;
8. Ensure safe and convenient onsite traffic flow and vehicle parking needs; and
9. Provide that development orders and permits will not be issued which result in a reduction of the level of service for the affected public facilities below the level of service standards adopted in the comprehensive plan.

**Policy 9B:** The City of Lakeland will continue to enforce and assess for consistency all land development regulations which address the location and characteristics of all land uses in accordance with the Future Land Use Map and the policies and descriptions of types, sizes, densities and intensities of land uses contained in this element.

**Policy 9C:** The City of Lakeland will, to the extent possible, coordinate its land development regulations with those of Polk County and will attempt to develop a uniform or similar future land use classification system to jointly address the organization of land uses in the common Lakeland Planning Area.

**Objective 10:** Urban sprawl will be prevented through adherence to the Future Land Use Map through the revision and enforcement of local land development regulations, by careful evaluation of all public service expansions, and through coordination with Polk County.

**Policy 10A:** The City of Lakeland will promote central city and infill development and redevelopment by implementing the designated uses and densities on its Future Land Use Map, encouraging downtown revitalization, historic designations and neighborhood redevelopment programs. New and expanded residential housing choices shall be pursued as a priority within the City's continuing downtown redevelopment plan.

**Policy 10B:** The City of Lakeland will continue to promote compact urban growth through the location of public facility expansions contiguous to existing service areas consistent with the policies and map within this Future Land Use Element.

**Policy 10C:** The City of Lakeland will continue to oppose development proposals which encourage an urban sprawl development pattern, constitute leap frog development or threaten to decentralize or disrupt the compact/linear development pattern which now exists in

the Lakeland Planning Area and is institutionalized in the adopted Future Land Use Map and, upon plan adoption, all public facility expansion decisions will be consistent with this plan and the Future Land Use Map.

**Policy 10D:** The City of Lakeland will continue to consider the impacts of utility extension decisions on encouraging or discouraging urban sprawl and will evaluate existing policies and potential strategies to discourage urban sprawl through formal review of development proposals, including, where necessary, the assessment of the thirteen indicators of sprawl as outlined in Rule 9J-5.006, F.A.C. Development proposals which mix land uses in a manner such as to maximize internal trip capture rates, enhance connectivity to surrounding development and/or emphasize a sense of “community” through appropriate site layout and/or use of design techniques shall be generally encouraged.

**Policy 10E:** The City of Lakeland will coordinate efforts to discourage urban sprawl, support a compact development pattern and maintain its utility service agreement with Polk County and adjacent cities through formal and informal intergovernmental coordination efforts. One mechanism for such coordination will include participation in the Land Use Transportation Forum sponsored by the Polk County Transportation Planning Organization.

**Policy 10F:** In order to promote new densities and redevelopment opportunities, in part as called for in the City’s Comprehensive Plan Certification Program, and as required to support the use of transit, the maximum allowable gross density shall be 120 percent of the maximum for RM for redevelopment on small urban infill lots and opportunities for infill on properties not to exceed 3 acres in size located within the Central City Transit Supportive Area. The proposed development must be approved as *Planned Unit Development* and must provide:

- cross access to any adjacent non-residential land use, where applicable;
- improved alleyway access, if applicable;
- transit friendly site design (build to the street) and transit amenities (at minimum, an on-site bike rack); and
- funding for a transit shelter if the project consists of at least 20 units; the shelter may be located on site or on a proximate transit route, as approved by the transit provider and per the local transit needs plan.

Nothing within this policy shall be interpreted to permit a variance from any City regulation, including required building setbacks, codes, historic design guidelines or other building requirements. Density shall continue to be one factor in the City’s land use decision, considering project scale, characteristics of the surrounding neighborhood scale, uses and land use trends.

**Objective 11:** Proposed land use activities will be coordinated with any appropriate resource planning and management plan prepared pursuant to Chapter 380, Florida Statutes.

**Policy 11A:** The City of Lakeland will review any applicable Chapter 380 plan when making land use decisions for areas addressed in this plan in an effort to reduce potential conflicts.

**Objective 12:** The Future Land Use Classification System will be reviewed on a regular basis during plan implementation in coordination with Polk County, other Polk County cities, and the Polk County School Board in order to encourage uniformity, resolve conflicts and increase cooperation and consistency in land use planning.

**Policy 12A:** The City of Lakeland will meet with Polk County to review future land use designations and utility service areas and make necessary changes to the locations of these areas and to the Future Land Use Classification System that have become necessary during the first years of plan implementation.

**Policy 12B:** The City of Lakeland will distribute all provisions contained in the Future Land Use Classification System to all local governments in Polk County who are participating in the development and refinement of a common Future Land Use Classification System.

**Policy 12C:** The City of Lakeland will work with Polk County to develop similar or common land development regulations whenever feasible and will encourage a greater level or uniformity in these regulations over time as regulations are reviewed and revised.

**Policy 12D:** New or expanded educational facility site review is subject to the provisions of the City's adopted Interlocal Agreement with the PCSB and Polk County BoCC.

**Policy 12E:** As per Ch. 235, Florida Statutes, the planning for new or expanded educational facilities must consider the effects of the location of public education facilities, including the feasibility of keeping central city facilities viable, in order to encourage central city redevelopment and the efficient use of infrastructure while discouraging uncontrolled urban sprawl.

**Policy 12F:** As per Ch. 235, Florida Statutes, if the proposed site for a new or expanded educational facility is consistent with the future land use policies and categories of the *Lakeland Comprehensive Plan*, the City may not deny an application for such a facility but may impose reasonable development standards and conditions which consider the site plan and its adequacy related to environmental concerns, health, safety and welfare, and effects on adjacent property.

**Objective 13:** The City of Lakeland will ensure availability of adequate future dredge disposal sites through the timely coordination of the City's Comprehensive Lakes Management Plan and all appropriate agencies.

**Policy.13A:** Once the need for additional dredge disposal sites has been verified, the City's Lakes Management Division shall coordinate with all appropriate City, State and/or Federal agencies and any affected landowners to determine the economic and environmental feasibility of proposed disposal sites. Site selection criteria shall include reasonable transportation costs and adequate land area for the dredge disposal as well as analysis of soil suitability to support the muck drying process.

**Policy.13B:** Dredge disposal site selection criteria shall ensure protection of the natural resources in conformance with the Conservation Element of this Plan.

**Objective 14:** Continue to seek to improve energy conservation citywide and, in designated Energy Conservation Areas, use a more focused application of appropriate land use and transportation strategies to promote a pattern of compact and complimentary mixed land uses that, when combined with urban design techniques and standards, produces a safe, walkable environment served by a well connected multi-modal transportation system.

**Policy.14A:** The City shall continue to support incentives for new and re-development within its traditional Community Redevelopment Areas of Downtown, Mid-Town and Dixieland as well as infill and transit oriented developments within the Central City Transit Supportive Area and increased residential densities within the TOC Overlay. *Land Development Regulations* shall include open space and landscaping standards for new development that provide relief from the built environment, provide street shade for the pedestrian and support energy efficiency for the built environment.

**Policy.14B:** The City will continue to employ access management and site circulation standards, maximum parking standards and multi-modal connectivity through its land development regulations which address and support the linkage to bus, bike and pedestrian systems and amenities. Vehicle mile trip and associated greenhouse gas reduction will be pursued through the implementation of the components of the city's land use strategies and the connectivity plan outlined in the Transportation Element including but not limited to enhancement of the transit services, prioritization of funding for pathways (bicycle and sidewalk) facilities, and demand management strategies, where applicable.

**Policy.14C:** The City will continue to pursue energy efficiency programs within its management of the Lakeland Electric utility including smart grid technology, solar water heating, solar energy, energy efficient construction standards consistent with the Florida Building Code, and *Land Development Regulations* incorporated incentives for pursuit of green building certifications.

**Policy.14D:** The City shall consider adopting *Land Development Regulations* that encourage and incentivize green building practices such as Leadership in Energy and Environmental Design (LEED) and/or Florida Green Building Coalition certified design by



2014. Weatherization and energy efficient site design shall be provided for public housing and city assisted housing where feasible under federal and state funded housing programs.

**Policy.14E:** The City shall consider recognition and other programs to encourage residential development that meets or exceeds the performance of U.S. EPA Energy Star-labeled homes.

**Policy.14F:** The City shall not prohibit the appropriate placement of photovoltaic (solar) panels or comparable technology. The City shall formulate and adopt standards and criteria for the appropriate placement of photovoltaic (solar) panels by 2014.

**Objective 15:** Develop and revitalize communities that enable residents to live active, healthy lives by providing convenient access to recreational opportunities, safe active transportation options, access to nutritious food choices and increasing aging-in-place opportunities.

**Policy.15A:** Continue to promote safe walking and bicycling for recreation, commuting to work and school, and as an alternative to driving for short trips near home or work.

**Policy.15B:** The City will work to improve upon its current recognition level as a League of American Bicyclists *Bicycle Friendly Community* when feasible. This will include efforts to eliminate gaps in City's Lake to Lake Greenway System and enhancing connectivity to the local and regional bike/trails system within the City's Pathways Plan.

**Policy.15C:** The City shall continue to apply traffic calming devices and access management techniques to roadway improvements and new or re-development as one means to improve the safety for bicyclist and pedestrians.

**Policy.15D:** The City will promote the infrastructure within and between neighborhoods that facilitate children walking and bicycling safely to school and will partner with the Polk County School Board to encourage walk to school initiatives.

**Policy.15E:** The City will explore working with the Polk TPO to develop a Bicycle Pedestrian Safety Action Plan to address safety issues, minimize traffic hazards and reduce crashes through the design of complete streets and other appropriate means.

**Policy.15F:** To promote walkability the City will apply to be recognized by the Walk Friendly Communities program by 2014, and will continue to invest in sidewalk/sidepath infrastructure.

**Policy.15G:** The City will work with community stake holders and coordinate with other agencies such as the Health Department and the Polk County Agricultural Extension Office to identify and establish incentives, guidelines and/or standards, and potential funding for the development of home and community gardens as well as edible landscaping (i.e., fruit trees and shrubs).

**Policy 15H:** The City shall research a process for permitting farm-to-market fruit and vegetable stands in appropriate areas in close proximity to residential neighborhoods by 2014.

**Policy 15I:** By 2015 explore how best to involve or coordinate with the Florida Department of Health in the review of large development projects.

**Policy 15J:** Coordinate with the Florida Department of Health, Polk Vision and other relevant entities that seek to develop appropriate area health indicators to monitor progress toward reducing the rate of obesity and related health problems such as diabetes and heart disease.

**Policy 15K:** Promote Aging in Place through a variety of means including:

1. encouraging application of the age and ability-friendly principles of Universal Design in residential development and re-development;
2. allowing a mix of housing types in neighborhoods including Accessory Dwelling Units;
3. supporting affordable housing options for seniors;
4. effectively addressing neighborhood crime and blight issues;
5. enhancing walk-ability throughout the city including establishing a safe and effective network of pedestrian ways (e.g., sidewalks) with age-friendly crosswalks, and using Form Based Code principles to ensure building entrances that are close to the street and/or can be safely accessed from parking lots or transit stops; and
6. supporting coordinated access to transportation service options including mass transit.

**Policy 15L:** The City will work with Lakeland Vision, Polk Vision and local builders, architects and others to establish criteria for a recognition award for Universal Design as used in building and site design.

**The following policies relate to the Green Swamp Area of Critical State Concern (ACSC):**

**Policy X1:** The following City of Lakeland future land use categories shall be allowed in the Green Swamp Area of Critical State Concern, ACSC, as per the provisions for each:

**Lakeland Future Land Uses Allowed in Green Swamp ACSC:**

- a. Agriculture Residential Low, ARL
- b. Residential Very Low, RVL
- c. Public Institutional, PI
- d. Business Park, BP
- e. Convenience Center, CC

- f. Recreation, R
- g. Conservation, C
- h. Preservation, P

All densities are gross densities. All land use categories shall be as defined already in the Future Land Use Element of the *Lakeland Comprehensive Plan* unless further or newly defined below in this Section. Adequate transportation access to serve development shall include paved roadway access and internal paved roads. Floodplain areas shall mean the 100 year floodplain areas as defined by the effective Federal Emergency Management Agency (FEMA) maps/panels.

**Policy X2: Agricultural Residential Low, ARL.**

This land use is intended specifically for the Green Swamp ACSC but may be applied in other areas as shown in the "suburban development area" as depicted in the Future Land Use Intensity Areas illustration. Allowed density and use:

- a. Agricultural uses and single family residential development of up to 1 unit per 10 acres without central water or wastewater, but with stabilized private road or paved public road access.
- b. Clustering to meet the open space, wetland and/or floodplain protection requirements for the ACSC may allow minimum 40,000 square foot lots in ARL land uses as long as the overall gross density for the property is not exceeded.

**Policy X3: Residential Very Low, RVL.**

This land use is intended specifically for the Green Swamp ACSC but may be applied in other areas as shown in the "suburban development area."

Allowed density and use:

- a. Single family residential development at a maximum density of 3 units/acre; central water, central wastewater and adequate transportation access are *required*.
- b. Agricultural activity such as crop production, silviculture, cattle grazing/pasture uses and aquaculture uses; however, feed lots, poultry farms and similar "noxious" uses shall be prohibited.

**Policy X4: Conservation, C, and Preservation, P, land uses.**

In the Green Swamp ACSC, Preservation (P) and Conservation (C) future land uses are intended primarily for passive recreation including trail uses as well as open space uses. As stated in other portions of the Future Land Use Element, the Preservation land use category is intended for publicly-owned sites whereas Conservation land uses may be privately held and both land use categories are intended to protect identified natural resources, including wetland, 100-year floodplain, creek and/or stream features as well as habitat areas (plant and/or animal). There is no underlying density allowed in Preservation.

In the Area of Critical State Concern, Conservation (C) future land use areas, a maximum density of one dwelling unit per 20 acres shall be allowed on upland areas (not floodplain or

wetland areas). A single primary access road where consistent with City policies and standards including for natural resource protection, and as approved by Public Works Engineering, will be allowed to access the uplands. Any impacts to wetlands for such an access road shall be made only as a last resort and must include proper mitigation measures as approved by applicable regional and state agencies. Level one utility and essential service facilities as defined by the City's land development regulations, Section 35.02.12 (August 2005), and as permitted by the City and applicable federal, state and/or regional agencies are allowed in Conservation land uses but shall not include any prohibited uses listed in this Plan for the Green Swamp ACSC. Any changes to City LDR Section 35.02.12 shall be subject to FDCA review for impacts to the ACSC.

**Policy X5: (Deleted/Reserved for numbering purposes)**

**Policy X6: Prohibited uses.**

In the Green Swamp ACSC within City of Lakeland, prohibited uses shall include the following as of the date of the adoption of these regulations:

- a. golf courses
- b. mining
- c. electric power generation facilities of any type
- d. hazardous substances or materials: no substances or materials shall be stored or used except as they would, in such quantity, be permissible for domestic or household purposes
- e. package wastewater treatment facilities, wastewater treatment residuals and the spreading of sludge from septic tanks
- f. new schools, private or public
- g. petroleum pipelines
- h. wholesale chemical operations
- i. dry cleaning plants
- j. chemical research operations
- k. petroleum related industries and fuel dealers (however, gas stations may be permitted)
- l. industrial activities as defined in the Federal EPA's National Pollution Discharge Elimination System (NPDES) for Stormwater Associated with Industrial Activity (Cha. 40, CFR, Part 122), with the *exception* of general construction activities

Prior to issuance of a City permit, the developer or their representative for a proposed development within the Critical Area of State Concern shall either provide evidence that the criteria within the permit requirements for all other state, regional or federal permits have been satisfied [including EPA NPDES, water management district stormwater criteria for preventing erosion and sediment from being discharged offsite (Rule 17-25.025(7)) and Pollution Source Control on Construction Sites requirements specified in Stormwater Best Management Practices 2.04 of Florida Development Manual] or provide written confirmation

of receipt of City notice that all such other permits must be obtained by the developer prior to commencement of development.

**Policy X7(a): Services to Non-residential land uses in the Green Swamp ACSC.**

All non-residential land uses in the ACSC must be served with central water, adequate transportation access and central wastewater service.

**Policy X7(b): Septic Systems in the ACSC.**

Within the ACSC, any necessary septic system permits shall be obtained prior to beginning site development. Septic systems shall be setback a minimum of 75 feet from designated wetlands, 100 feet from the high water line of water bodies and outside the 100-year floodplain. Land uses which seek to expand utilizing previously approved septic tank systems may do so only where central wastewater is not currently available as per Ch. 381.0065 F.S., and where permissible by the Polk County Health Department. The City endorses and will adopt a supporting resolution to continue to enforce the Polk County Health Department's septic tank inspection program for properties located within the Green Swamp ACSC on any lands annexed by the City of Lakeland which are within the ACSC; the referenced inspection program is that which was prescribed by Polk County Ordinance 98-31, An Ordinance Providing For The Inspection And Maintenance Of Septic Tanks Located In The Green Swamp Area of Critical State Concern.

Upon extension of City wastewater service such that it becomes available to serve an area within the ACSC of the City of Lakeland, then septic system use shall be terminated and connection to the City's centralized wastewater system required; the timing of such connection shall be as directed by the City's Director of Water Utilities and any applicable laws governing this issue.

**Policy X8: Transit District Inclusion Requirement.**

In order to allow for future transit services and to limit the need for new roadways to properties located in the Green Swamp ACSC, all such properties located near and along the Interstate 4, SR 33 roadways and at the intersection with Tomkow Rd, shall submit a voluntary petition for inclusion into the Lakeland Area Mass Transit District (LAMTD) or its future equivalent under the auspices of a regional transportation authority. Also, such petition shall be required prior to issuance of final development plan approval by the City (commercial site plan, subdivision plat, or building permit), for any BP or IAC future land use, or for a residential subdivision of 10 acres or more. It shall be the transit district or authority's option to refuse such petition and to provide regular (fixed route) transit services only when adequate funding allows such services.

**Policy X9:** To assist in the provision of transit services, land and funding for at least one park and ride lot shall be established within the Williams DRI. Funds for development of the park and ride lot shall be made available via the CRA trust fund but may include use as a match to any FDOT or other lot development grant. Funding for maintenance of the park

and ride lot shall be considered by the Williams I-4 CRA and/or an owners association for the Williams DRI through expiration of the CRA or DRI.

**Policy X10: Open Space and Impervious Surface Areas.**

Open space lands in ACSC shall protect habitat, shall be permanent with 100% of the area as pervious surface and include wetland, floodplain and/or surface water areas on a property. Plats or site plans shall indicate the portion of land reserved for open space and state that *no clearing and no structures of any kind are allowed in the open space area*. In the ACSC, no variances or waivers shall be granted for open space provisions. Clustering of residential units is encouraged as a means to meet the open space set aside requirements found below.

- a. Residential developments in ARL shall provide a minimum of 80% open space.
- b. Residential developments in RVL shall provide a minimum of 30% open space.

And, impervious surfaces shall be limited as follows:

- a. Single family lots in the Residential Very Low land use category shall not exceed an impervious surface ratio of 50% unless the lots are within a planned unit development that maintains an overall impervious surface ratio of 50% and the required set-aside for open space.
- b. Commercial development shall not exceed an impervious surface ratio of 60% (i.e., at least 40% of the total property shall remain pervious).
- c. Development within a BP land use shall not exceed an impervious surface ratio of 70%.

**Policy X11: Wetland Areas and Transfer Densities.**

No development is allowed in jurisdictional or other wetlands, except where allowed by the applicable federal, state or regional permitting agencies, Rule 28-27 Florida Administrative Code, and as specified below and within Article 27 of the City's *Land Development Regulations*.

- a. All development shall develop in the non-wetland portion of a property. Platted development within non-jurisdictional wetland areas shall be allowed a transfer density of *up to one (1) dwelling unit per 20 acres* transferred to contiguous non-wetland areas on the same property. Gross densities on the property may not exceed the maximum for the land use category. Open space and impervious surface limits as per this Section shall also be maintained. Lot sizes shall be as governed by the assigned City zoning and as per the adopted Lakeland *Land Development Regulations*. Transfers of density shall be noted on the face of the final plat as a restrictive covenant.
- b. Wetland areas in the Green Swamp ACSC shall be shown as environmental set-aside areas on all final site plans or subdivision plats.
- c. No new lots or parcels shall be created which are entirely within a wetland area in the ACSC unless such would result in a taking of private property. If so, one (1) unit will be allowed but shall be required to mitigate wetland impacts.

- d. Lots or parcels created prior to December 1, 1992 and which are 100 percent wetland areas, shall be allowed up to one dwelling unit with required wetland mitigation measures as approved by state and regional regulatory agencies.
- e. No disturbance of wetlands within the Green Swamp ACSC is allowed unless authorized or exempted from the regulation by the Florida Department of Environmental Protection, the U.S. Army Corps of Engineers, and the applicable water management district. The appropriate permit or exemption shall be required prior to commencement of development.
- f. Where impacts to wetlands cannot be avoided, all permits for an agency with jurisdiction shall be obtained prior to the development commencing. An "intent to issue a final development order" may be issued in writing prior to the issuance of said order if pre-approval is required by an agency with jurisdiction.

Consideration of wetland impacts shall include, but not necessarily be limited to, the following circumstances where no reasonable alternative exists:

1. To provide access to the site;
2. To provide necessary internal traffic circulation;
3. To provide necessary utility lines;
4. To provide necessary pre-treated stormwater management;
5. For purposes of public safety;
6. To avoid precluding all beneficial use of the property.

#### **Policy X12: Floodplain Areas and Transfer Densities.**

- a. Development shall cluster in the non-floodplain portion of a property. Transfer of densities shall be allowed for up to one (1) dwelling unit per 20 acres to contiguous non-floodplain areas under the same ownership or control. Transfers of density shall be noted on the face of the final plat as a restrictive covenant. Gross maximum densities on the property shall not exceed the maximum per acre and open space and impervious surface limits shall be maintained. Lot sizes shall be as governed by the assigned City zoning and as per the adopted Lakeland *Land Development Regulations*. Floodplain compensation shall be only as allowed by State environmental review agencies with all agency permits obtained prior to commencement of development.
- b. No new lots or parcels which are totally within the 100 year floodplain shall be created in the Green Swamp ACSC. If a parcel existing prior to December 1, 1992 has no land outside the 100-year floodplain, then up to 1 dwelling unit per 20 acres shall be allowed and development will be required to provide compensatory storage for flood water displaced from the floodplain.
- c. A detailed flood insurance study shall be performed for all subdivision proposals and other proposed development with five (5) or more acres of the 100-year floodplain. The study shall be performed in accordance with the Flood Insurance Study Guidelines and Specifications for Flood Contractors (FEMA Publication 37).

Phases of a larger development, if the larger development meets the five (5) acre impact criterion, are not exempt from this requirement. If existing subdivisions are proposed for re-platting, the re-platted portion shall be required to comply with this requirement if the re-platted portion meets the five (5) acre impact criterion.

Subdivisions which contain 10 lots or less shall be exempt from these requirements. The construction of a single-family residence on a parcel of land containing five (5) or more acres of 100 year floodplain which is not part of a subdivision or which is part of a subdivision in existence on the effective date of this Section is exempt from this requirement.

**Policy X13:** Xeriscaping, as a landscaping technique, shall be the preferred technique in the area of the City within the Green Swamp ACSC and shall be included in landscape plans for new or redevelopment to reduce water consumption. Xeriscaping is a method of landscaping that conserves water by clustering plants according to similar sunlight and water needs, creating landscape “zones” and minimizing irrigation needs. Where possible, irrigation systems should use stormwater runoff to irrigate landscaped areas and should preserve existing on-site vegetation.

**Policy X14: Stormwater Management.**

Stormwater management shall be done consistent with the City’s established level of service policies found in the Infrastructure Element of this Plan. Stormwater management facilities shall not cause a reduction in the flood storage capacity of the 100 year floodplain, shall be designed to accommodate access for maintenance equipment, and shall facilitate regular operational maintenance including under-drain replacement, unclogging filters, sediment removal, mowing and vegetation control. Prior to final plat or site plan approval, the developer shall ensure that a designated responsible entity, approved by the City for the maintenance of the stormwater management system has been established and is listed on the plat or final site plan.

Monitoring and operational requirements in the Green Swamp ACSC shall include the following:

- a. Periodic inspections of the system with a written inspection report to the appropriate water management district and a copy sent to the City of Lakeland Engineering Division (preferably an electronic copy to the City) to ensure that the system is functioning as designed and permitted.
- b. Inspection reports will be submitted 1 year after construction and every year thereafter to the relevant water management district.
- c. A registered professional engineer must sign and seal the report certifying the stormwater management system is operational as designed and maintained adequately for that design.
- d. Pollution abatement requirements shall be the first 1 inch (or 2.5 inches times the impervious area) of runoff for the developed site, or as per the regulations of SWFWMD, with this volume being recovered within 72 hours.



- e. Recharge Standard: Projects or portions of projects in Most Effective Recharge Areas must retain three inches of runoff from directly connected impervious areas within the project. Applicants may instead demonstrate that the-post-development recharge will be equal to or greater than the pre-development recharge. Most Effective Recharge Areas are those areas with soils classified by the Soil Conservation Service as Type "A" Hydrologic Soil Group. Directly connected impervious areas are those impervious areas which are connected to the surface water management system by a drainage improvement such as a ditch, storm sewer, paved channel, or other man-made conveyance. Stormwater that is retained must be infiltrated into the soil or evaporated such that the storage volume is recovered within 14 days following a storm event.

**Policy X15:** The Lakeland Planning and Zoning Board review shall be required for approval of all site plans and all residential subdivision plans for compliance with the City's rules regarding development in the Green Swamp ACSC.

**Policy X16: Protection Of Listed Species**

To protect listed species which includes fauna and flora identified by the U.S. Fish and Wildlife Service (USFWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC) literally "listed" by these agencies as being endangered, threatened, and/or species of special concern, the City shall require the following:

- a. Any residential development consisting of 100 acres or more, more than 10 lots, or any non-residential development in excess of five (5) acres, shall be required to conduct a study for listed species. If it is determined that listed species are located on the site, a habitat management plan must be prepared using guidelines and protocols of the FWC and/or USFWS. Prior to commencement of development, the City must receive a letter from FWC stating that the proposed Management Plan meets the standards placed on Management Plans by the FWC.
- b. Protected habitat, for the purpose of this Management Plan, shall be defined as habitat for endangered, threatened, and/or species of special concern, and in most cases, the specific boundaries of these areas may not be determined until site-specific field inspections are conducted to verify those boundaries. It shall be the responsibility of the owner and/or developer to submit documentation, exhibits, studies, etc., for the purpose of establishing that properties should *not* be classified as protected habitat for such species *or* for notifying the FWC and/or the USFWS of proposed development which affects protected habitat.
- c. Those properties identified as containing protected habitat shall comply with the following requirements:
  - 1. Development shall be required to locate on the non-protected habitat portions of a development site. Transfer of residential densities shall be permitted from protected habitat areas to contiguous non-protected habitat areas within the same subdivision, subject to the following:

- a. Residential densities shall be transferred from protected habitat areas to non-protected habitat areas at the underlying density and shall be clustered to the greatest extent possible to protect habitat. Any transfer of density to facilitate clustering shall not result in lot sizes, or areas per dwelling unit less than that required by the City's *Land Development Regulations* (the minimum lot/area size shall be exclusive of the wetland area); for lots utilizing septic tanks, the area shall not be less than 40,000 square feet. Portions of lots may be platted into habitat areas and shall not be construed as having disturbed the habitat area for a density-transfer provision so long as that portion of the lot does not include any fill, construction, improvements, or other development, and a restriction is placed upon the plat to prohibit such future actions within habitat areas.
- b. All such transfers of density shall be to contiguous property under the same ownership or control and shall only be permitted within a subdivision platted and developed in accordance with the City's *Land Development Regulations*. Such transfers shall be noted on the face of the final plat as a restrictive covenant.
- c. Commercial and industrial development shall locate on the non-protected habitat portion of a development site.

**Policy X17:** All development, as defined in Section 380.04, FS, with the exception of a single-family dwelling unit and accessory uses, shall submit to the City a project narrative describing the proposed development. This narrative shall also address how their development supports the following State objectives in the Green Swamp Area of Critical State Concern:

- a. Minimize the adverse impacts of development on resources of the Floridan Aquifer, wetlands, and flood-detention areas.
- b. Protect or improve the normal quantity, quality and flow of ground water and surface water which are necessary for the protection of resources of state and regional concern.
- c. Protect or improve the water available for aquifer recharge.
- d. Protect or improve the functions of the Green Swamp Potentiometric High of the Floridan Aquifer.
- e. Protect or improve the normal supply of ground and surface water.
- f. Prevent further salt-water intrusion into the Floridan Aquifer.
- g. Protect or improve existing ground and surface-water quality.
- h. Protect or improve the water-retention capabilities of wetlands.
- i. Protect or improve the biological-filtering capabilities of wetlands.
- j. Protect or improve the natural flow regime of drainage basins.
- k. Protect or improve the design capacity of flood-detention areas and the water-management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.

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**APPENDIX II-ONE  
CONCURRENCY MANAGEMENT SYSTEM**

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## CONCURRENCY MANAGEMENT SYSTEM

The Growth Management Act, and all local government comprehensive plans prepared in conformance with the Act, require that public facilities and services necessary to support proposed development occur concurrent with the impacts of such development. Policies throughout this comprehensive plan require that the issuance of development orders be contingent upon the availability of adequate public facilities at acceptable levels of service, however, successful implementation of such policies will be dependent upon review and monitoring procedures established by the City. The land use classifications of the adopted Plan shall be the controlling document in review of proposed development, supported by the Lakeland *Land Development Regulations*.

### PURPOSE AND OVERVIEW

In response to the need to review all proposed development and monitor capacity and level of service for all public facilities and services to ensure that concurrency is maintained, the City of Lakeland has established a personal computer based concurrency management system. A Concurrency Management System Guide has been developed to assist developers and other interested parties in understanding the process for requesting concurrency determinations or obtaining concurrency certificates. The key elements of this guide are outlined within this section of the Future Land Use Element. These administrative procedures along with the computer based monitoring system will ensure that policies relating to concurrency are successfully implemented.

The City of Lakeland, like all other local governments in the State of Florida, must ensure that certain public facilities and services needed to support development are available at the time the impacts of development occur. It is the Concurrency Management System which will ensure that the impact of development will not degrade the levels of service adopted in the *Lakeland Comprehensive Plan: 2000-2010* for public facilities and services.

The City, therefore, requires a concurrency review be made with applications for development approvals and a Certificate of Concurrency issued prior to development commencing. If the application is deemed concurrent, a Certificate of Concurrency will be issued by the Community Development Department. If the project requires any other development permit, a copy of the Certificate of Concurrency will be included with any future application for a development permit. A separate concurrency review will not be required for each development permit for the same project. Concurrency review addresses only the availability of facilities and capacity of services and a Certificate of Concurrency does not represent overall development approval.

If the application for development is not concurrent, the applicant will be notified that a Certificate cannot be issued. The burden of showing compliance with the adopted levels of service and meeting the concurrency test will be upon the applicant. The Community Development Department will direct the applicant to the appropriate staff to assist in the preparation of the necessary documentation and information.

The City of Lakeland, Community Development Department will review applications for development and a development approval will be issued only if the proposed development does not lower the existing level of service (LOS) of public facilities and services below the adopted level of service in this Plan. In the event that the LOS of a significantly-impacted transportation facility is failing, or is determined to fail as a result of a proposed development, the developer may choose to fund required mitigation measures through the proportionate fair-share mitigation program as per the City's adopted Concurrency Management Ordinance and provisions. When the proportionate fair-share mitigation program is pursued to achieve concurrency, the necessary improvement(s) must be fully-funded or added to the first three years of the City's five-year Capital Improvement Program. Projects requiring a public schools Mitigation Agreement to meet adopted school level of service standards shall follow the process as outlined in the Interlocal Agreement on Educational Facilities Planning as adopted by the City of Lakeland, Polk County and the Polk County School Board. A project will be deemed concurrent if the following standards are met:

1. The necessary facilities and services are in place at the time a development permit is issued;
2. The development permit is issued subject to the condition that the necessary facilities and services will be in place concurrent with the impacts of development;
3. The necessary public facilities and services are guaranteed in an enforceable development agreement to be in place concurrent with the impacts of development.

In addition to 1. through 3., above, roadways and mass transit facilities will be deemed concurrent based on the adopted five-year Capital Improvements Program as outlined below:

4. The five-year Capital Improvements Program and the Capital Improvements Element of the *Lakeland Comprehensive Plan* are financially feasible. As permitted by Section 9J-5.055 (2)(c)1., Florida Administrative Code, concurrency determinations will include transportation projects included in the first three years of the Florida Department of Transportation Five-Year Work Program and Polk County Capital Improvement Program.
5. The five-year Capital Improvements Program includes improvements necessary to correct any identified facility deficiencies and maintain adopted levels of service for existing and permitted development.
6. The five-year Capital Improvements Program is a realistic, financially feasible program based on currently available revenue sources and development orders will only be issued if the public facilities necessary to serve the development are available or included in the five-year schedule of capital improvements.
7. The five-year Capital Improvements Program identifies whether funding is for design, engineering, consultant fees, or construction and indicates, by funded year, how the dollars will be allocated.
8. The five-year Capital Improvements Program identifies the year in which actual construction of roadway or mass transit projects will occur and only those projects

scheduled for construction within the first three years of the City of Lakeland or Florida Department of Transportation five-year programs will be utilized for concurrency determination.

9. A plan amendment will be required in order to eliminate, defer or delay construction of any roadway or mass transit facility or service which is needed to maintain the adopted level of service standard.
10. The City of Lakeland will continue to maintain a computer based monitoring system in place to support the adopted Concurrency Management System enabling the City to determine whether adopted levels of service and scheduled capital improvements are being adhered to and ensuring acceptable monitoring of the availability of public facilities and services.
11. The *Lakeland Comprehensive Plan* clearly identifies all facilities and services to be provided by the City of Lakeland with public funds in accordance with the adopted five-year Capital Improvements Program.

A concurrency test will be made of the following public facilities and services for which level of service standards have been established in this plan:

- (1) Roadways/Transportation
- (2) Potable Water
- (3) Wastewater
- (4) Solid Waste
- (5) Drainage
- (6) Parks and Recreation
- (7) Public Schools, as applicable.

The concurrency test for all public facilities and services will be determined by comparing the available capacity of a facility or service to the demand created by the proposed project. Available capacity will be determined by adding together the total excess capacity of existing facilities and the total capacity of any new facilities which meet the previously defined concurrency standards and subtracting any capacity committed through concurrency reservations or previously approved development orders.

## **CONCURRENCY DETERMINATION PROCEDURES**

An applicant may wish to determine quickly if there is sufficient capacity to accommodate their project. The Community Development Department staff will make an informal non-binding determination of whether there appears to be sufficient capacity in the public facilities and services to satisfy the demands of the proposed project. The staff will then make a determination of what public facilities or services would be deficient if the development were approved.

There are certain development actions which are ineligible to receive a concurrency reservation because they are too conceptual and, consequently, do not allow an accurate

assessment of public facility impacts. These development actions include land use amendments to the comprehensive plan and rezoning requests. Development actions of this type will receive a non-binding concurrency determination as part of the project review process.

Any concurrency determination, whether requested as part of an application for development action or without an application for development action, is a non-binding determination of what public facilities and services are available at the date of inquiry. The specific procedures for receiving a concurrency determination for each level of service facility are outlined below.

### **Concurrency Determination - Roadways and Transportation**

- 1.** The City of Lakeland will provide level of service information provided by the *Polk* Transportation Planning Organization as set forth in the adopted *Lakeland Comprehensive Plan*. The local transit provider and/or the Polk TPO shall provide relevant bus route, shelter data or other current transit data as necessary. The level-of-service information must be utilized in any “major traffic analysis” required for proposed developments generating at least 750 daily trips. The impact area to be evaluated must consist of any collector or arterial roadway segment where the development project is expected to consume five percent or more of the adopted peak-hour, peak season, peak directional service volume. If the preliminary level of service information indicates a level of service failure, the developer has two alternatives:
  - a.** Accept the level of service information as set forth in the comprehensive plan;
  - b.** Prepare a more detailed Highway Capacity Analysis as outlined in the most current edition of the Highway Capacity Manual, Special Report 209 or using updated methodologies approved by the City. Also prepare a Speed and Delay study following the procedures outlined by the Florida Department of Transportation, Traffic Engineering Office in its Manual for Uniform Traffic Studies.
  - c.** Per the City’s 2006 Memorandum of Understanding regarding administration of Proportionate Fair Share Programs, the Polk TPO Roadway Network Database shall be utilized and recognized as the official source for purposes of establishing the generalized existing level of service on network segments including recognizing segments that have a failing level of service. Repeated detailed segment studies shall not be utilized to “debate” what the TPO Director and County staff recognize as a failing level of service where at least one or more detailed segment study has already been performed for said segment.
- 2.** If the developer chooses to do a more detailed analysis, the following procedure will be followed:
  - a.** Planning staff will provide the developer with the acceptable methodology for preparing the alternative analysis.
  - b.** The developer will submit the completed alternative analysis to planning staff for review.



- c. Planning staff will review the alternative analysis for accuracy and appropriate application of the methodology.
- 3. If the alternative methodology, after review and acceptance by the Planning staff, indicates an acceptable level of service where the comprehensive plan indicates a level of service failure, the alternative methodology will be used.
- 4. If the developer is at the application stage for the project, this alternative methodology can be used to obtain a Concurrency Determination - Roadways. This Concurrency Determination - Roadways is a non-binding determination that, at the date of application, adequate roadway facility capacity and levels of service are available.
- 5. If the developer is at the final approval stage for the project, this alternative methodology can be used to obtain a Certificate of Concurrency, the specifics of which are set forth in the Concurrency Management System Ordinance.
- 6. Any proposed development generating more than 750 trips a day will be required to provide a trip distribution model in addition to the requirements outlined above.

#### **Concurrency Determination - Potable Water**

- 1. The City of Lakeland will provide level of service information as set forth in the adopted *Lakeland Comprehensive Plan*. Requests for potable water may also need to be reviewed and approved by the City's Water Committee as regards the City's Water Use Permit, committed and available capacity data and City Commission-approved water allocation priorities.
- 2. If the level of service information indicates that the proposed project would not result in a level of service failure and/or a violation of the City's Water Use Permit, the concurrency determination would be that adequate facility capacity at acceptable levels of service was available at the date of application or inquiry.
- 3. If the level of service information indicates that the proposed project would result in a level of service failure and/or that the development does not meet approved water allocation priorities as regards available water capacity through the City's Water Use Permit, the concurrency determination would be that adequate facility capacity at acceptable levels of service was not available at the date of application or inquiry.

#### **Concurrency Determination - Wastewater**

- 1. The City of Lakeland will provide level of service information as set forth in the adopted *Lakeland Comprehensive Plan*.
- 2. If the level of service information indicates that the proposed project would not result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was available at the date of application or inquiry. Adequate capacity must be available in regard to both transmission lines and permitted treatment plant capacity.

3. If the level of service information indicates that the proposed project would result in a level of service failure or that there is inadequate capacity, the concurrency determination would be that adequate facility capacity at acceptable levels of service was not available at the date of application or inquiry.

#### **Concurrency Determination - Solid Waste**

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1. The City of Lakeland will provide level of service information as set forth in the adopted *Lakeland Comprehensive Plan*.
2. If the level of service information indicates that the proposed project would not result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was available at the date of application or inquiry.
3. If the level of service information indicates that the proposed project would result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was not available at the date of application or inquiry.

#### **Concurrency Determination - Drainage**

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1. The City of Lakeland will provide level of service information as set forth in the adopted *Lakeland Comprehensive Plan*.
2. If the level of service information indicates that the proposed project would not result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was available at the date of application or inquiry.
3. If the level of service information indicates that the proposed project would result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was not available at the date of application or inquiry.

#### **Concurrency Determination - Parks And Recreation**

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1. The City of Lakeland will provide level of service information as set forth in the adopted *Lakeland Comprehensive Plan*.
2. If the level of service information indicates that the proposed project would not result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was available at the date of application or inquiry.
3. If the level of service information indicates that the proposed project would result in a level of service failure, the concurrency determination would be that adequate facility

capacity at acceptable levels of service was not available at the date of application or inquiry.

### **Concurrency Determination - Public Schools**

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1. The City of Lakeland will provide level of service information as set forth in the adopted *Lakeland Comprehensive Plan*. The Polk County School Board shall provide school capacity data, as necessary. Preliminary school capacity data will be made available for non-binding concurrency requests. A formal school capacity determination shall be issued by the School Board for binding concurrency requests.
2. If the level of service information indicates that the proposed project would not result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was available at the date of application or inquiry.
3. If the level of service information indicates that the proposed project would result in a level of service failure, the concurrency determination would be that adequate facility capacity at acceptable levels of service was not available at the date of application or inquiry unless adequate capacity will be provided for per a school mitigation agreement approved by the Polk County School Board, City of Lakeland and the applicant.

### **CERTIFICATE OF CONCURRENCY**

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A Certificate of Concurrency will only be issued upon final development approval and indicates that concurrency will be met for all monitored facilities and services. The Certificate of Concurrency will remain in effect for the same period of time as the development order with which it was issued. If the development approval does not have an expiration date, the Certificate of Concurrency will be valid for twelve months from the date of issuance.

# TRANSPORTATION ELEMENT

## INTRODUCTION

The City of Lakeland has a history of placing a high priority on transportation issues and improvements. This includes conceiving of, coordinating on and funding roadway improvements, trail systems, sidewalks, and bike lanes, and coordination with the local transit provider. The City adopted the first impact fee ordinance in Polk County in the year 1988 as a means to provide private dollar revenues to support public transportation network improvements. In the City's 2000-2010 Comprehensive Plan update, the City shifted its traditional level of service approach focused upon roadways to a more multi-modal focus with a simple level of service standards matrix linking bus transit frequency and presence of sidewalk systems with roadway minimum levels of service needed. In the 2010-2020 Plan Update, the City seeks to further evolve that multi-modal level of service approach, and to stress alternative modes like transit (bus and rail), the need to enhance ped/bike systems, and the overall importance of the transportation system's connectivity within our community.

The Lakeland Vision (2009 update) document, discussed in the Future Land Use Element, adopted several goals and strategies related to Transportation as the excerpt below indicates. These strategies were identified by the community and then prioritized; the outcomes reinforced the findings of a September 2008 online Growth Management Survey the City conducted regarding which issues to focus upon for Lakeland's 2009 Evaluation and Appraisal Report (EAR).

### K. TRANSPORTATION

The topic Transportation has been divided into the following three subtopics: *Public Transit*, *Walking and Biking*, and *Roadways and Traffic Movement*.

#### 1. Public Transit

##### **Goal**

Public transportation improvements in Lakeland provide convenient, modern, safe, and efficient alternatives to driving that enhance livability and improve connections throughout the region.

##### **Strategies**

1. Encourage regional rail service connection Lakeland to Tampa, Orlando and, if possible, points beyond.
2. Secure local, state, and federal funding for expanded transit services demonstrating economic benefits to the community.
3. Expand bus service with improved schedules, extended hours, routes, and equipment.
4. Educate the public on the benefit of public transportation as an alternative to the use of private vehicles for daily or special event trips.
5. Pursue land use and development patterns that support public transportation.

The second goal area of the Lakeland Vision Document was walking and biking, and relates well to the City's historic and future emphasis on "walkability." A more walkable community can allow pedestrians to safely traverse and enjoy neighborhood and downtown areas as well as transit oriented corridors in our city. Good urban design for buildings, street trees/shade treatments and compact building form are all essential associated elements of a walkable community and on the transportation side, include a vision of a street as a place belonging to the public, the walker, the bicyclists, the transit user, and not only the car and truck.

## **2. Walking and Biking**

### ***Goal***

Lakeland citizens walk and bike throughout their city using a comprehensive, expansive, and well-connected network of sidewalks, bike lanes, and trails that integrate safety with roadways.

### ***Strategies***

1. Develop a system of safe, clearly marked, and well-connected bike lanes, trails, and shared roadways.
2. Expand, connect, and improve the safety of a citywide sidewalk and bike network that is integrated with public parking and public transit.
3. Encourage local businesses to offer incentives for employees and/or customers who use alternative transportation such as walking and biking.
4. Develop a map of bike lanes and multi-use trails and promote activities such as "car-free days" to encourage more biking and walking.

The next focus was in keeping the roadway system well maintained and managed, to increase mobility.

## **3. Roadways and Traffic Movement**

### ***Goal***

Excellent street conditions, traffic management, and a highly connected road system help to increase roadway capacity and improve overall mobility throughout Lakeland.

### ***Strategies***

1. Develop and implement fully integrated ATMS (Automated Traffic Management System) to reduce congestion and improve traffic flow.
2. Assess Lakeland streets, complete needed improvements, and conduct targeted upgrades of key roads.
3. Increase capacity of roadways to improve connections throughout Lakeland, promote more efficient cross-town travel, and maximize the use of acquired rights-of-way.

Overall, our city seeks to attain a world class transportation system. Funding for improvements is always a challenge. Limited resources will require a willingness to seek efficiencies through intersection upgrades, intelligent systems projects, road diet projects and other creative means of stretching the proverbial dollar. Also, future improvements will seek to balance what can aid the flow of freight and vehicular traffic as well as meet the needs of pedestrians, bicyclists and/or transit users.

## SUMMARY OF FINDINGS

### TRAFFIC CIRCULATION

#### EXISTING CONDITIONS & ANALYSIS

This section of the transportation element addresses the local road network and the motorized and non-motorized vehicles which use that network.

#### ROAD SYSTEM

The road network within the City of Lakeland and Lakeland Planning Area is comprised of the State of Florida highway system, the Polk County collector system and City of Lakeland streets. Each roadway is assigned a functional classification based on the jurisdiction that is responsible for its maintenance (jurisdictional) and the characteristics of the traffic it serves (operational). Occasionally, a jurisdiction will have assigned a functional classification to a roadway which differs from how it now functions relative to other roadways on the network. A brief discussion of how these differing functional classifications are accounted for in the Traffic Circulation section is provided below.

#### FUNCTIONAL CLASSIFICATION

##### Maintenance Jurisdiction

The State's functional classification system can be found in the Florida Transportation Code (Chapter 334, *Florida Statutes*), which is intended "to establish the responsibilities of the State, the counties, and municipalities in the planning and development of transportation systems serving the people of the State and to assure the development of an integrated, balanced statewide transportation system." In this context, functional classifications are used as a basis for assigning maintenance responsibility and do not necessarily reflect the capacity or operating characteristics of those roads.

**State Highway System:** The Interstate system of highways is classified by the U.S. Department of Transportation and maintained by the Florida Department of Transportation (FDOT). Limited Access State Road 570 (Polk Parkway) is operated by FDOT's Turnpike Enterprise. As of 2010, the FDOT maintained approximately 157 miles of principal arterial roadways (including Interstate 4 and the Polk Parkway) and 92 miles of minor arterial roadways within the Lakeland Planning Area

**County Road System:** The County road system consists of all collector roads in the unincorporated areas, all extensions of such collector roads into and through any incorporated areas, and all local roads in the unincorporated areas.

Within the Lakeland Planning Area, Polk County maintains 205 miles of collector roads, and all local roads outside of Lakeland's Corporate Limits. It should be noted that Polk County has not identified any of its roads as arterials.

**City Street System:** The City street system consists of all local roads within the municipality and all collector roads within the municipality that are not on the County road system. The City of Lakeland Public Works Department is responsible for maintaining approximately 89 centerline miles of urban collector roads. Each time the City annexes land, the local roads in that area become the responsibility of the City. As of March 2010, the City maintained 390 miles of streets and alleys serving residential, commercial and industrial areas.

FDOT has the responsibility to classify all major roadways in the State. Although this used to be required at least once every five years, it now is done on an as needed or as requested basis. The exact time at which an individual road goes from one jurisdiction's maintenance responsibility to another's, such as from State to City, is determined through an agreement between the jurisdictions. Illustration III-1 depicts the jurisdictional responsibility of the major road network within the Lakeland Urban Area.

### **Operational Functional Classification**

The "operational" functional classification of a roadway is the most important consideration from an analysis standpoint. It provides a more meaningful indication of the trip characteristics on that road and the capacities that determine the amount of traffic it can carry—it's not just an artificial classification assigned by a maintaining jurisdiction. In fact, the existing and future level-of-service analyses that are contained in this section reflect each roadway's operational functional classification. Illustration III-2 depicts the operating functional classification of this network.

The following defines the functional classifications that are used in the Lakeland Planning Area:

**Arterial Roads:** Chapter 334, *Florida Statutes*, defines an arterial as "a route providing service that is relatively continuous and of relatively high traffic volume, long average trip length, high operating speed, and high mobility importance. In addition, every United States (U.S.) numbered highway is an arterial road." Arterial roadways are given the highest capacities since they are designed to carry the greatest amount of through traffic while generally providing a lower amount of access to adjacent land uses. Within the Lakeland Planning Area, arterial roadways are further classified as principal or minor.

**Principal Arterial Roads:** Routes which generally serve the major centers of activity of an urban area, the highest traffic volume corridors, and the longest trip purpose and carry a high proportion of the total urban area travel, on a minimum of mileage. The routes are integrated, both internally and between major rural connections. Principal arterial roads

give the greatest emphasis to the through movement of vehicles, and the least amount of access to adjacent land uses. For purposes of this plan, all principal arterial roadways are maintained by FDOT.

Freeways and expressways, such as Interstate 4 and State Road 570 (Polk Parkway) are classified as principal arterials. Such limited access facilities are solely intended to provide for the through movement of traffic, with no direct access to adjacent land uses; access to intersecting streets is permitted only at grade-separated interchanges.

The Florida Intrastate Highway System (FIHS) roadways in the Lakeland Area include Interstate 4 and the Polk Parkway, limited access roadways, and US 98 south of the Polk Parkway to Bartow. US 98 is considered to be a controlled-access roadway, subject to the requirements contained in the adopted US 98 Corridor Access Management Plan (CAMP). While FIHS highways are intended to serve longer, regional trips, access to intersecting roads can be provided at a controlled number of at-grade intersections. Access to adjacent properties is strictly controlled in order to allow for the continued safety movement of relatively high-speed traffic.

**Minor Arterial Roads:** Routes which generally interconnect with, and augment urban principal arterial routes and provide service to trips of shorter length and a lower level of travel mobility. Such routes include all arterials not classified as principal and contain facilities that place more emphasis on land access than the principal arterials. Examples in the Lakeland area include State Road 37 (South Florida Avenue) and SR 33 (Lakeland Hills Boulevard). For the purposes of this plan, minor arterials may be maintained by either state or a local government.

**Collector Roads:** Routes which generally are maintained by counties or cities and “provide service which is of moderately average traffic volume, moderately average trip length, and moderately average operating speed. Such a route also collects and distributes traffic between local roads or arterial roads and serves as a linkage between land access and mobility needs” (Chapter 334, F.S.). Most collector roads in the Lakeland Area have been identified as “major collectors”.

**“Other” Collectors:** A few collector roads in the Lakeland Area were given this classification to show that, while they are still collectors, they tend to have lower traffic volumes and lower typical travel speeds. These are streets on which the City would generally not encourage through-traffic movements and would generally not make capacity improvements. A good example of this type of collector is Success Avenue. This street serves as an important connection between Lake Hollingsworth Drive and Lake Morton Drive; however, it only traverses a residential area, has a relatively low amount of traffic and slow travel speeds. The City of Lakeland has even included Success Avenue in its traffic calming program.



**Local Roads:** Chapter 334, F.S., defines local roads as “a route providing service which is of relatively low average traffic volume, short average trip length or minimal through-traffic movements, and high land access for abutting property”. In short, local roads provide the greatest amount of access to adjacent properties and have the lowest vehicle capacities.

### Roadway Typologies

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Most jurisdictions that assign functional classification designations to their roadway network have traditionally focused on the type of traffic using the roadway and destinations served at the end of the route, with little consideration being given to the land development and types of transportation modes along the route. Publication of FHWA’s *Flexibility in Highway Design* led to the understanding that linking transportation and land use and considering a community’s character and urban form are instrumental to designing roadways. Several communities around the nation have adopted this approach and developed their own set of criteria for defining functional classification, considered to be part of the Context Sensitive Design (CSD) movement. The City of Lakeland adopted a supplementary functional classification system similar to those recently established for communities such as Charlotte, North Carolina and has termed them “roadway typologies” to avoid confusion with traditional functional classification terminology.

Roadway typologies, as shown on Illustration III-3 do not replace officially adopted operational functional classification designations or nomenclature used by local governments and FDOT since funding and engineering standards are tied to arterial, collector and local street designations. This is particularly true with regard to Federal-Aid designations that are developed in cooperation with the Polk TPO and approved by the FDOT and Federal Highway Administration. Lakeland’s roadway typologies will be critical in determining the most appropriate multi-modal roadway cross-sections for a particular roadway segment; access management classification is enforced by the City’s *Land Development Regulations*.

As of 2009, the City of Lakeland embarked on the creation of a form-based land development code, which will supplement and/or replace existing *Land Development Regulations* to achieve design standards appropriate to the various development patterns found in urban/central city, suburban or rural area types throughout the Lakeland Planning Area. The roadway typologies identified by the City of Lakeland are intended to relate to these development patterns and area types. As a preliminary step to formulating citywide form based design standards, four primary development pattern types were identified, including:

- *Neighborhoods* (concentrated residential uses);
- *Districts* (single-use places such as the medical corridor around Lakeland Regional Medical Center or industrial uses around the Publix Industrial Complex on US 92 West);

- *Centers* (mixed or multi-use places such as Downtown Lakeland and Lakeside Village); and
- *Corridors* (linear concentrations of development such as Memorial Boulevard, South Florida Avenue and US 98 North).

In support of the on-going nationwide “complete streets” movement and the move towards multi-modal transportation concurrency requirements in Florida, the roadway typologies adopted by the City of Lakeland recognize the importance of all transportation modes by identifying specific facilities that must be considered for inclusion in the design of all public and private road projects and adjacent development. A description of each typology is included below, with associated cross-sections being shown in Illustrations III-4A and III-4B. It is critical to note that while the cross-sections shown are desired for new or improved roadways; the specific final design of a roadway segment approved by the City, County and FDOT will depend on placement of utilities, right-of-way and environmental constraints, available funding and permitting requirements.

### Typology Descriptions

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**Freeways/Expressways:** High-speed, limited access thoroughfares with only grade separated interchanges and no pedestrian access. Includes toll ways. May include limited landscaping on each side and/or median.

- Comparable Functional Classification: *Principal Arterial*
- Likely Ownership/Maintenance: *State*
- Relationship to Design Districts: *N/A*
- Existing/Planned Transit: *Inter-county Bus or Rail, as contained in master plans for Interstate 4 in Polk County and the Tampa Bay Regional Transportation Authority.*
- Key Roadways in Classification: *Interstate 4 and SR 570 (Polk Parkway)*

**Type I:** Primary function is moving through traffic, including significant freight to/from intermodal facilities. Design speeds are typically 45 mph or greater. Also provide connectivity between urban core and freeways/expressways. Typically four to six lanes with shoulders, these roadways have wide landscaped medians, separate bike and pedestrian systems, and controlled access. Access management techniques such as cross-connections, services roads or improvements to parallel corridors with lower classifications will be required as part of new development or re-development activities in these corridors. Bus pull-outs should be constructed at all new or retrofitted stop locations on Type I roadways.

- Comparable Functional Classification: *Principal Arterial, Minor Arterial*
- Likely Ownership/Maintenance: *State/County*

- Relationship to Design Districts: *Provides high-capacity connections to Centers and between Districts*
- Existing/Planned Transit: *Premium - Bus Rapid Transit, Express Bus, Service Enhancements (Reduced Headways, Special Service Hours, etc.), Regular Fixed-Route Bus.*
- Key Roadways in Classification: *US 98, SR 33 (North of Granada), County Line Road, SR 563 (Harden Boulevard, south of Ariana Street), West Pipkin Road (west of planned SR 563 Extension) and SR 546 (Memorial Boulevard, west of Wabash Avenue)*

**Type II:** Emphasizes development placed away from streets and driveways that are semi-controlled. Design speeds are typically between 35 mph and 55 mph. These streets are typically four lanes (existing or planned) with sidewalks, bike lanes, and wide landscaped medians.

- Comparable Functional Classification: *Principal Arterial, Minor Arterial, Urban/Rural Major Collector*
- Likely Ownership/Maintenance: *State/County/City*
- Relationship to Design Districts: *Service within Corridors and Neighborhoods*
- Existing/Planned Transit: *Express Bus, Service Enhancements, Regular Fixed-Route Bus*
- Key Roadways in Classification: *SR 37 (South Florida Avenue, south of Ariana), SR 539 (Kathleen Road), George Jenkins Boulevard (west of Sloan), SR 572 and CR 37B (Lakeland Highlands Road).*

**Type III:** Designed to encourage transit use, enhance pedestrian circulation and provide access to adjoining properties. Design speeds are typically between 30 mph and 45 mph. The streets are typically two to four lanes with sidewalks, bike lanes, planting strips and frequent bus stops. On-street parking is possible in conjunction with re-development at strategic locations in the urban core. In the urban core, roadway capacity is constrained and buildings are placed close to the street. In suburban areas, these roadways are typically two lanes wide with a mix of residential and non-residential uses. Suburban non-residential uses typically contain a small area or single aisle of parking between the principal building and street instead of on-street parking.

- Comparable Functional Classification: *Minor Arterial, Urban/Rural Major Collector*
- Likely Ownership/Maintenance: *City/County*
- Relationship to Design Districts: *Provides connections to Neighborhood areas.*
- Existing/Planned Transit: *Regular Fixed-Route*

- Key Roadways in Classification: *SR 37 (South Florida Avenue in Downtown and Dixieland Districts), Edgewood Drive (east of Lakeland Highlands Road), Cleveland Heights Boulevard/Scott Lake Road (south of Westover Street).*

### **Special Sub-Categories of Type III:**

**Type III-a (Main Streets):** Designed with focus on pedestrian circulation and comfort. Buildings are placed close to the street; parking is on-street or placed at the back of the building and roadway capacity is constrained. Design speeds are approximately 30 mph. Design elements may include two travel lanes, wide sidewalks, extensive amenities, closely spaced bus stops, and pedestrian level lighting. These streets typically occur downtown or in highly walkable mixed use town center districts.

- Comparable Functional Classification: *Urban Collector, Local*
- Likely Ownership/Maintenance: *City*
- Relationship to Design Districts: *Within Centers*
- Existing/Planned Transit: *Regular Fixed-Route, Circulator Service*
- Key Roadways in Classification: *Main Street (west of US 98), Massachusetts Avenue (south of US 98), Orange Street, Kentucky Avenue*

**Type III-b (Community Streets):** Tend to link the numerous lakes, community centers and parks in Lakeland. These streets should be the most complete in order to accommodate all modes of transportation. Design speeds are typically between 30 mph and 40 mph. Design elements would include on-street parking (urban core, only), wide sidewalks, pedestrian crossings/refuge islands, bike lanes, significant canopy landscaping and other amenities supportive of transit. Within the urban core, this street type is typically identified as a component of the City’s Lake-to-Lake Greenway Connector Network. These streets could be identified as scenic byways, should the City of Lakeland or Polk County develop such a program in the future.

- Key Roadways in Classification: *Success Avenue, Lemon Street, Lake Hollingsworth Drive, West Lake Parker Avenue, Dr. Martin Luther King Avenue, East Main Street, Longfellow Boulevard, Parker Street*

**Suburban Canopy Roads:** This designation is intended to preserve the character of roadways located within suburban or rural areas that are subject to development pressure. This designation, as integrated into the LDRs, will protect tree canopy within right-of-way and will, prohibit widening beyond operational and safety improvements. Parallel corridors are planned to accommodate automobile travel demand.

- Key Roadways in Classification: *Medulla Road, Yates Road, South Pipkin/Pipkin Creek Road*

**Local Streets:** Primarily neighborhood streets intended to provide the highest accessibility to local land uses, with special emphasis on bicycle/pedestrian movements. Design speeds are typically between 20 mph and 30 mph. The required minimum roadway width is 20-feet with on-street parking being allowed if managed to allow one open lane of travel at any given point for emergency and service vehicle access. This street type coincides with the existing local street type designation.

- Likely Ownership/Maintenance: *City/County*
- Relationship to Design Districts: *Within any District.*
- Existing/Planned Transit: Bicycle/Pedestrian connections to transit services.

### **TRAFFIC CIRCULATION SYSTEM (USED FOR LEVEL-OF-SERVICE ANALYSES)**

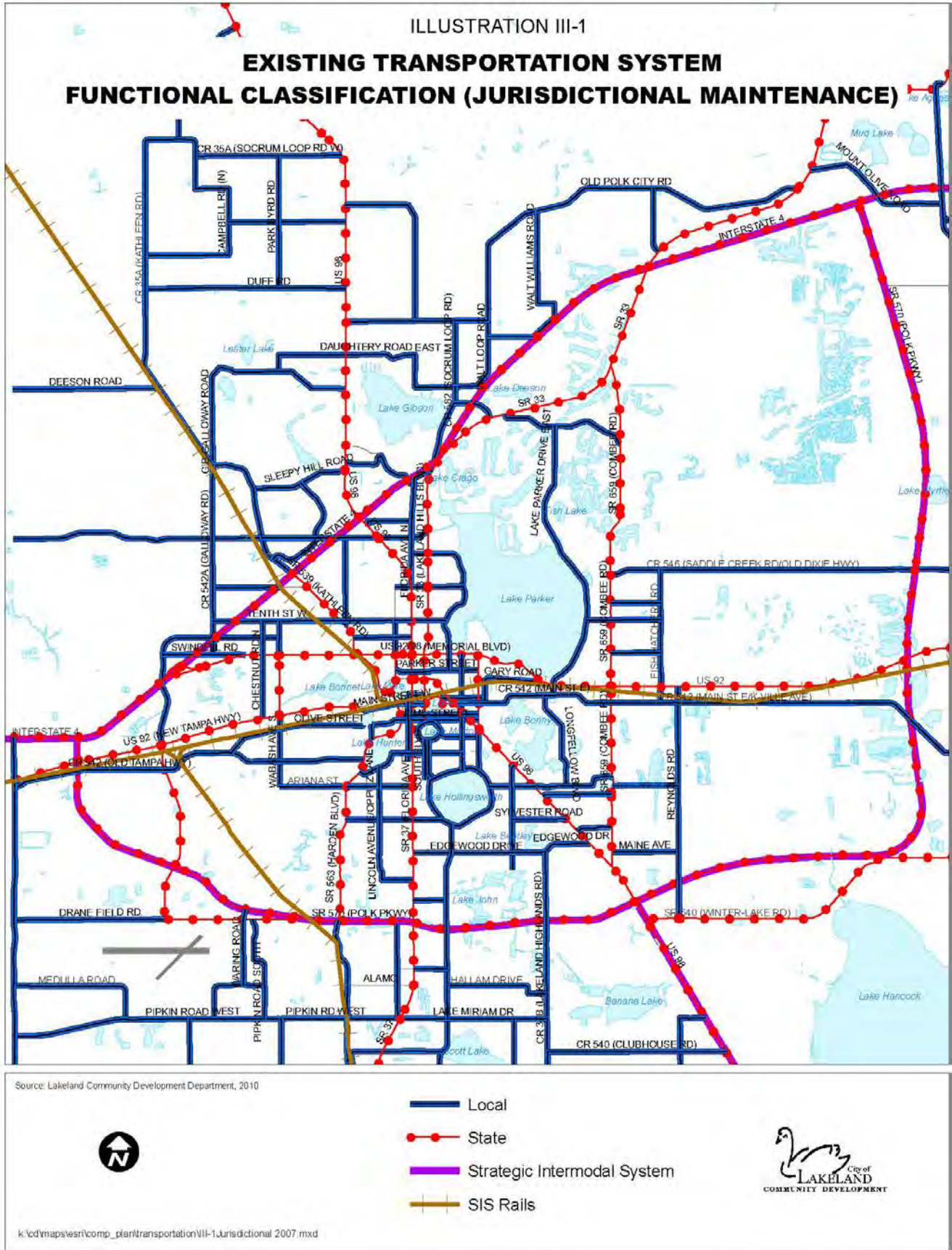
The traffic circulation system is comprised of 338 directional roadway links or segments. The City, per Rule 9J-5, FAC, must evaluate peak hour level of service standards which requires analysis of volume on each direction on a north-south or east-west segment. The State maintains 108 directional roadway links classified as minor and principal arterials, including limited access expressways such as Interstate 4 and SR 570 (Polk Parkway).

Polk County maintains 130 directional roadway links, classified as “urban collectors”.

The City maintains 100 directional roadway links. For the purpose of this plan, they are primarily classified as “urban collectors”.

### **NUMBER OF LANES**

Illustration III-5 shows the number of lanes on the existing traffic circulation network. Most of the State maintained roadways in Lakeland are four lane roadways, with short six-lane sections that are considered auxiliary lanes for the current and future-year level-of-service analyses. Florida DOT operates two eight-lane roadway sections in Lakeland, including US 98 (Interstate 4 to Sleepy Hill Road) and Interstate 4 (County Line Road to Polk Parkway). Polk County’s roadway network primarily consists of two-lane facilities, with significant recent expenditures in four-lane improvements such as those on Kathleen Road, Griffin Road and Lakeland Highlands Road. The City of Lakeland also operates primarily two-lane facilities, with recent expenditures in strategic four-lane improvements on Sleepy Hill Road, Griffin Road, West Pipkin Road and Lakeland Highlands Road.



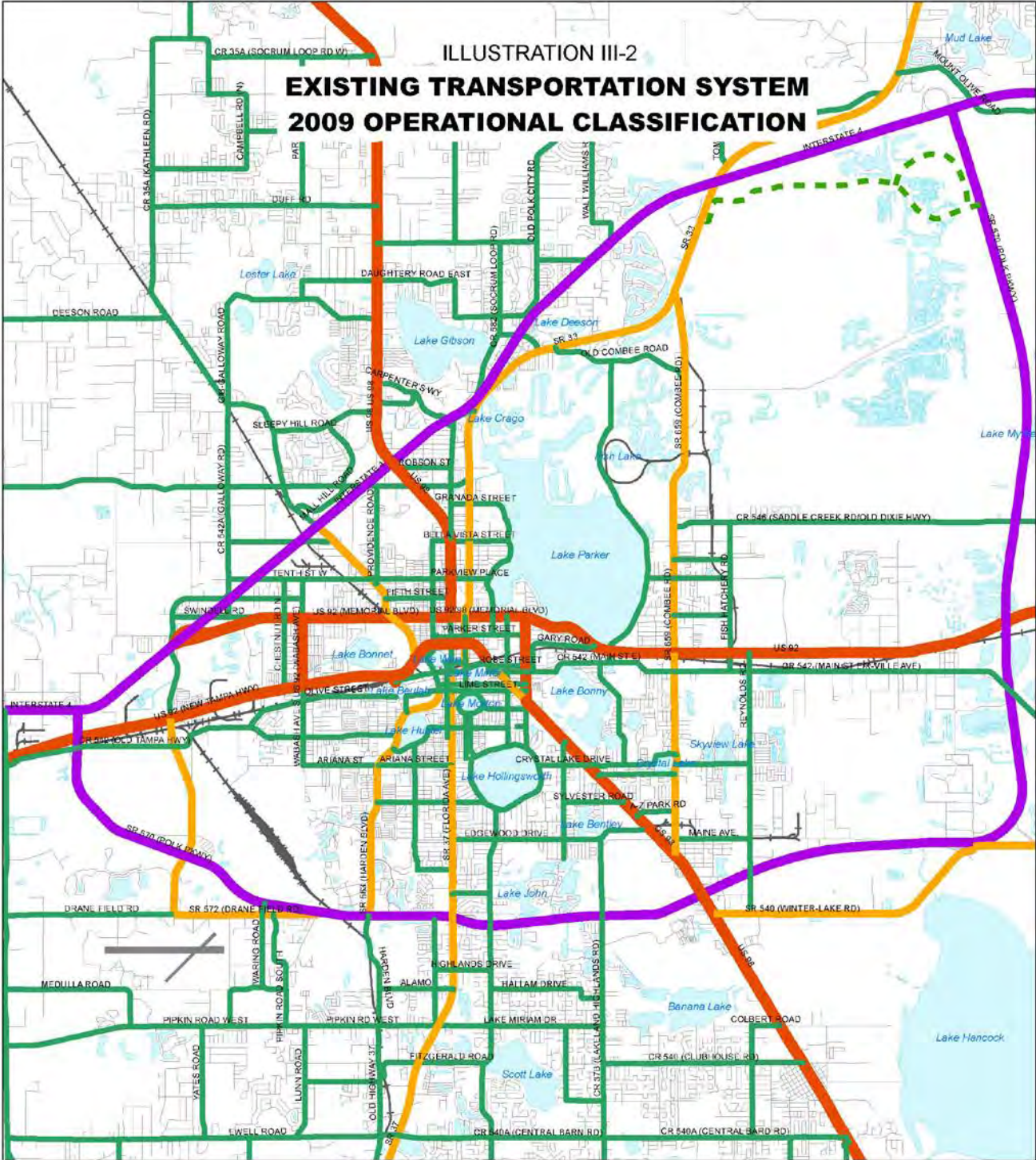


ILLUSTRATION III-2  
**EXISTING TRANSPORTATION SYSTEM  
 2009 OPERATIONAL CLASSIFICATION**

Source: Lakeland Community Development Department, 2010 and Renaissance Planning Group, 2007

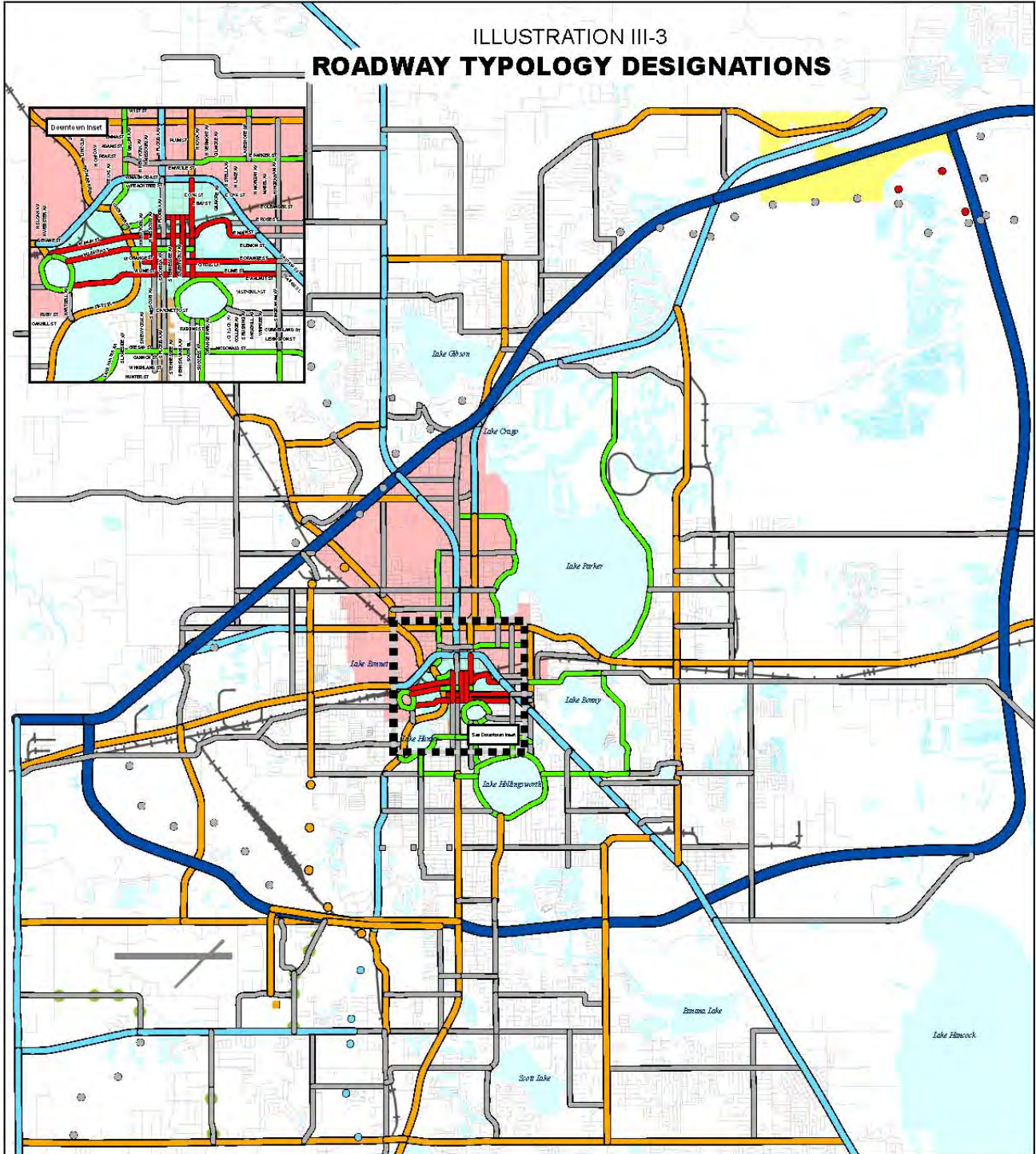


- PRINCIPAL ARTERIAL
- MINOR ARTERIAL
- URBAN COLLECTOR
- LIMITED ACCESS ARTERIAL
- PROPOSED URBAN COLLECTOR
- LOCAL



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### ILLUSTRATION III-3 ROADWAY TYPOLOGY DESIGNATIONS



Source: Lakeland Community Development Department, 2010 and Renaissance Planning Group, 2007



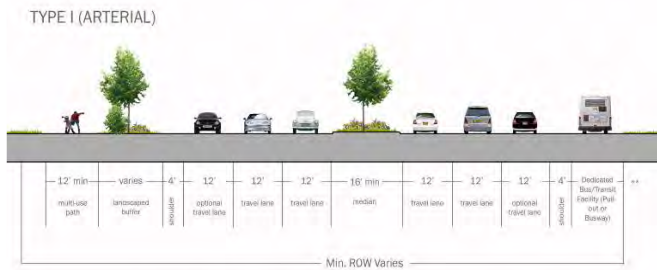
- |                  |                    |                      |                      |
|------------------|--------------------|----------------------|----------------------|
| Freeway          | Committed Type II  | Main Street          | Downtown CRA         |
| Type I           | Planned Type II    | Planned Main Street  | Dixieland CRA        |
| Committed Type I | Type III           | Community Street     | Midtown CRA          |
| Planned Type I   | Committed Type III | Suburban Canopy Road | Current Williams CRA |
| Type II          | Planned Type III   | Roadway Network      |                      |



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# ILLUSTRATION III-4A 2009 ROADWAY TYPOLOGY CROSS-SECTIONS



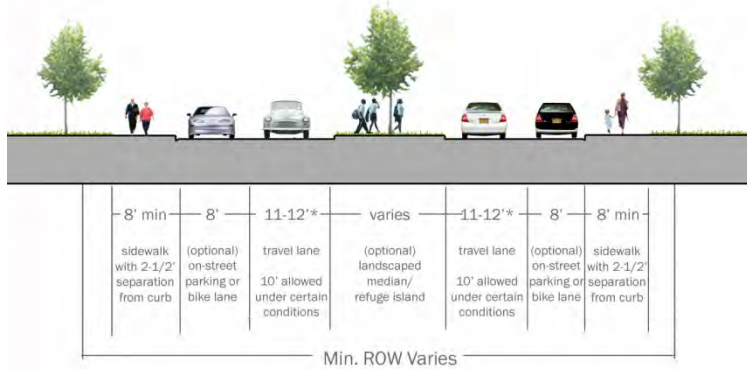
\*\* Cross-Section and/or Service Based on Adjacent Properties



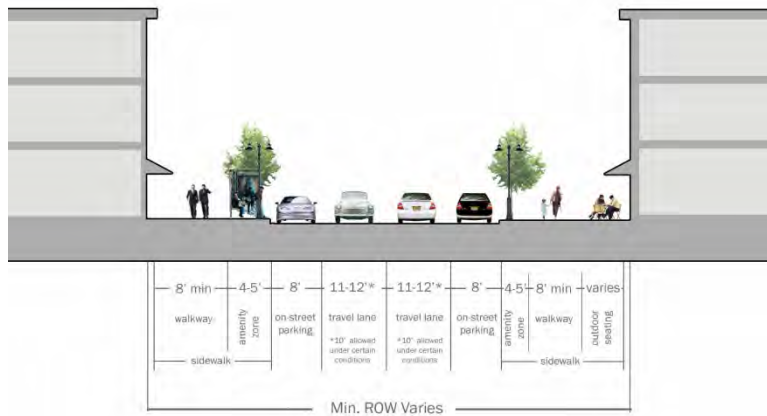
Source: Renaissance Planning Group, 2009.

# ILLUSTRATION III-4B 2009 ROADWAY TYPOLOGY CROSS-SECTIONS

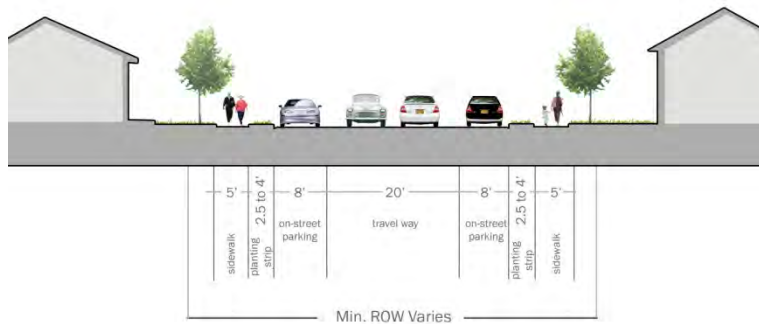
## COMMUNITY STREET



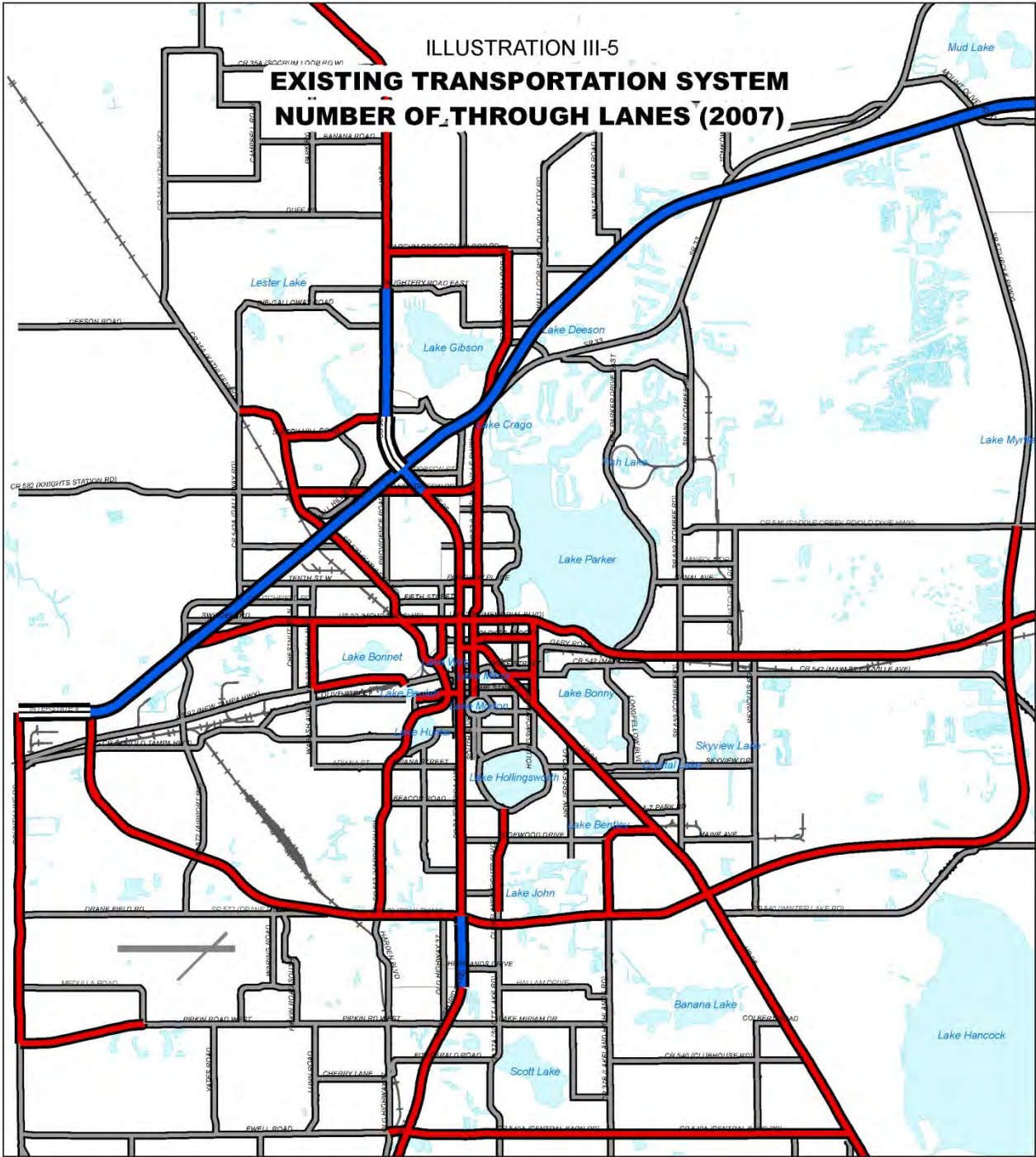
## MAIN STREET



## LOCAL STREET



Source: Renaissance Planning Group, 2009.



Source: Lakeland Community Development Department, 2010 and Renaissance Planning Group, 2007



— Two Lane Roadway

— Four Lane Roadway

— Six Lane Roadway

— Eight Lane Roadway



\*Note: Lanes shown include those that are Existing and "Committed" in 2007

k:\cd\maps\esri\Comp\_Plan\TransIII-5 NumLanes 2007.mxd

## LEVEL OF SERVICE STANDARDS

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Traditionally, the maintenance of acceptable levels of service on roadways has been viewed as an essential component of the effort to preserve and enhance interregional and interstate mobility, increase transportation efficiency, and coordinate transportation and land development. Historically, roadway levels of service (LOS) were qualitative measures describing operating conditions of highways and given designations from A through F, with A representing the best operating conditions of highways and F, the worst. Definitions of each level are as follows:

- A = represents free flow.
- B = is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable.
- C = is in the range of stable flow, but marks the beginning of the range of flow in which the operation of users becomes significantly affected by interactions with other users in the traffic stream.
- D = represents high-density, but stable flow.
- E = represents operating conditions at or near the capacity level with flows often breaking down resulting in significant delays.
- F = represents forced or breakdown flow of traffic with regular delays.

Level of service standards are used to determine deficiencies, backlogs and State-wide minimums that help guide and assist the development of urban area long-range transportation plans and to help determine project priorities. Time delay and very slow speeds are predictors of failing levels of service.

The FDOT has adopted level of service standards for the Strategic Intermodal System (SIS) and Florida Intrastate Highway System (FIHS) related to number of lanes and type of area (urban, transitioning, or rural) as listed in Table III-1. The level of service standards in Table III-1 only apply to those roads which are maintained by FDOT, and typically represent the minimum acceptable to the State. These standards are not strictly applicable to Dense Urban Land Use Area (DULA) municipalities designated through the 2009 Community Renewal Act, such as the City of Lakeland, which have been declared to be Transportation Concurrency Exception Areas (TCEAs).

**TABLE III-1  
STATEWIDE MINIMUM LEVEL OF SERVICE STANDARDS  
FOR THE STATE HIGHWAY SYSTEM<sup>1</sup>**

ROADWAY TYPE	SIS AND FIHS FACILITIES		TRIP FUNDED FACILITIES AND OTHER STATE ROADS	
	Limited Access Highway (Freeway)	Controlled Access Highway	Other Multi-Lane	Two-Lane
Rural Areas	B	B <sup>1</sup>	B	C
Transitioning Urbanized Areas, Urban Areas or Communities <sup>2</sup>	C	C	C	C
Urbanized Areas under 500,000 <sup>3</sup>	C(D)	C	D	D
Urbanized Areas over 500,000 <sup>3</sup>	D(E)	D	D	D
Roadways parallel to exclusive transit facilities	E	E	E	E
Inside TCMAs	D(E) <sup>4</sup>	E <sup>4</sup>	- <sup>4</sup>	- <sup>4</sup>
Inside TCEAs and MMTDs	- <sup>4</sup>	- <sup>4</sup>	- <sup>4</sup>	- <sup>4</sup>

**Source:** Florida Department of Transportation, 2009 Quality/Level of Service Handbook. The full State level of service standards table and all explanatory notes are included as TSD III-Three of the *Technical Support Document*.

Note: Level of service standards inside of parentheses apply to general use lanes only when exclusive thru lanes exist.

<sup>1</sup>For rural two-lane facilities, the standard is C.

<sup>2</sup>Transitioning urbanized areas are the areas outside urbanized areas that are planned to be included within the urbanized areas within the next 20 years based primarily on the U.S. Bureau of Census urbanized criteria of a population density of at least 1,000 people per square mile.

<sup>3</sup>Urbanized areas are the urbanized areas designated by the U.S. Bureau of Census as well as the surrounding geographical areas as agreed upon by the FDOT, Metropolitan Planning Organization (MPO), and Federal Highway Administration (FHWA), commonly called FHWA Urbanized Area Boundaries. The over or under 500,000 classifications distinguish urbanized areas with a population over or under 500,000 based on U.S. Census.

<sup>4</sup>Means the Florida DOT must be consulted as provided by Section 163.3180(5), (7), or (15), Florida Statutes, regarding level of service standards set on SIS or TRIP facilities impacted by TCMAs, MMTDs, or TCEAs respectively.

Level of service standards reflect only minimum acceptable levels of service; actual conditions and/or local preferences may reflect or favor better levels of service. Typically levels of service are set higher in rural areas than in urban and urbanizing areas in order to

promote the efficient interregional movement of people and goods while allowing for higher densities and intensities in urban areas.

Table III-2 presents level of service standards for roadways as part of a multi-modal network within the City. These standards were developed initially by the Polk TPO in the update of the *Polk County 2025 Long-Range Transportation Plan* adopted in December 2000. The standards allowed for a lower level of service for roadway segments where transit service (and buses with bike racks) was present on an hourly or 30-minute frequency and where there were sidewalks. The Lakeland bus system incorporates bike racks on the front of most buses operating inside the City. In 2009, approximately 44,000 bicycles were transported on buses operated by LAMTD. All new Type I transit shelters include bicycle parking in the event that a bus' racks are full at the time of passenger pick-up. The City of Lakeland is fortunate to have an extensive sidewalk and bicycle facility network within the downtown and the Central City area of the City to complement the use of transit. Thus, Lakeland also adopted the multi-modal level of service standards shown in the following table.

**TABLE III-2  
2000-2010 (FORMER) MULTI-MODAL TRANSPORTATION LEVEL OF SERVICE STANDARDS**

Area		Minimum Standard (Peak Hour/Dir)			
Urban Transit Service Area		LOS "D"			
<b>Multi-Modal Transportation Districts</b>					
The Multi-Modal Transportation Districts, located within the Urban Transit Service Area, coincide with the service area of the identified fixed-route transit service.					
Standard	Highway		Transit	Pedestrian	Bicycle
	Minimum Standard	Duration			
M1	LOS "D" peak direction	Average of two highest peak hours	60 minute headway (Category II)	Sidewalk access to transit route	Bike racks on buses
M2	LOS "E" peak direction	Average of two highest peak hours	30 minute headway (Category I), with transit signage, shelters or benches	Sidewalk access generally within ¼ mile of transit routes or stops	Bike racks on buses  Bicycle facilities on roadways, preferably within ½ mile of project*

M3**	Volume/ Capacity ratio is < 1.25 in peak hour, peak direction	Peak hour	30 minute headway (Category I), with transit signage, shelters or benches	Extensive sidewalk network within ¼ mile of 30-minute transit service, and direct sidewalk connection to transit stop	Bike racks on buses  Bicycle facilities on roadways preferably within ½ mile of project.  Bike rack at transit stop and/or project.
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**Source:** Polk County TPO, adopted December 7, 2000.

\* Bicycle facilities may mean paved shoulders on roadways and/or designated bike routes such as and including the City's Lake-to-Lake Greenway Connector, and/or multi-use pathways for pedestrian and bicycle use.

\*\* Application of M3 Standard is conditioned upon several additional factors discussed below.

\*\*\* Volume/Capacity ratio shall be based on service volumes and adopted highway LOS standard as given in the Polk TPO's Roadway Network Database.

### **EXISTING LEVELS OF SERVICE – 2007 ROADWAY NETWORK DATABASE**

Roads with levels of service A, B, C or D are considered to be operating at an acceptable level of service. Historically, roads operating at level of service E and F were considered to be operating at unacceptable levels of service. The multi-modal level of service standards allow alternative modes of transportation to be emphasized where the multi-modal network is most integrated, such as the Central Business District, and alleviates the level of service concerns on some roadway links which would otherwise be shown as “failing.”

Existing levels of service were determined by using 2007 Roadway Network Database (RND) produced the Polk Transportation Planning Organization (TPO), the Metropolitan Planning Organization for the Lakeland and Winter Haven Urbanized Areas in Polk County. The RND contains information such as the roadway segment name, functional classification, segment length, peak- and directional-conversion factors used to convert annual average daily traffic (AADT) values to peak-hour/peak-direction values used for concurrency purposes, the segment's service volume (policy capacity) and its highway and multi-modal level-of-service standard. The RND also includes standard annual growth rates for State and Non-State roadway segments and uses that information to project segment failures within the next five years. Sources for current average daily traffic counts include: the Florida Department of Transportation; the Polk TPO and its project consultant; and the City of Lakeland Public Works Department. Most of the generalized level-of-service service volumes used in the RND are obtained from the Florida DOT and are applied to similar roadway types (signal spacing, urbanized/transitioning or rural area, State or Non-State facility). Some service volumes are derived from more detailed segment analyses prepared for private development projects and approved by the Polk TPO staff. It should be noted that concurrency determinations within multi-modal level-of-service districts are based on a comparison of the two highest peak-hours to the adopted service volume for a particular segment.

The Lakeland Planning Area roadway network is comprised of 338 “directional links” (see discussion under “Functional Classification”). The State system of 108 directional roadway links had two links operating at the minimum level of service (LOS) standard in 2007. Three links were operating below the adopted highway LOS standard; however only one link was considered “failing” based on the adopted multi-modal LOS standard that recognizes the extensive bicycle/pedestrian network and 30-minute transit service. The County system of 130 directional roadway links had three links operating at the minimum level of service in 2007 and four links falling below the adopted highway LOS standard. Only two links were considered “failing” once the multi-modal level of service standard was applied to those segments. The City system of 100 directional roadway links had one link operating at the minimum level of service in 2007. Four links operated below the adopted highway LOS standard, but only one segment was considered as failing once the multi-modal level of service standard was applied. It is important to monitor roadways which are at the minimum LOS standard, since they may quickly deteriorate below acceptable LOS. Levels of service on the existing traffic circulation system (for 2007) are shown on Illustration III-6.

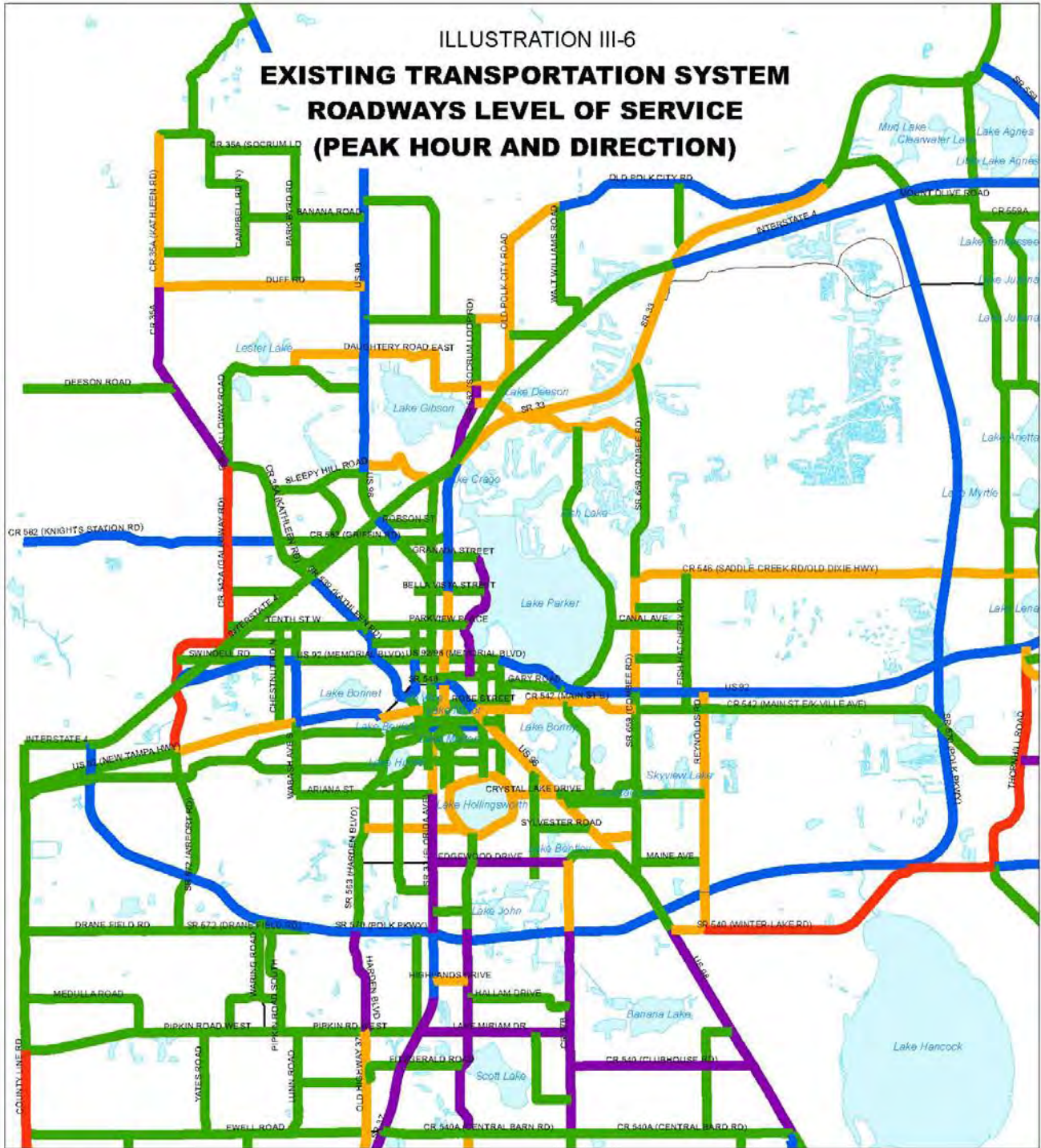
Within the Lakeland Planning Area as of 2007, several arterial routes were experiencing congestion during the P.M. Peak Hour, (typically afternoon between 4 p.m. and 6 p.m.). In this category, SR 37 (South Florida Avenue), North Socrum Loop Road, CR 37B (Lakeland Highlands Road) and the Cleveland Heights/Scott Lake Road corridor operated below an acceptable level of service. Numerous improvements completed since 2000 or advanced to construction in 2010, including the four-laning of CR 540A and extension to Ewell Road, SR 548 (In-Town Bypass), four-laning of Lakeland Highlands Road and four-laning of CR 35A (Kathleen Road) have improved conditions for motorists, bicyclists and pedestrians. Multi-modal level-of-service standards and associated service volumes have also been increased on facilities such as North Socrum Loop Road and SR 37 (South Florida Avenue) to reflect significant sidewalk and transit investments in those corridors, including intersecting streets, since 2000.

Florida Avenue (SR 37, SR 35, and US 98N) is the primary north to south route dividing Lakeland into east and west. This vital arterial road connects Downtown Lakeland with the “medical corridor” employment center within the Mid-Town Community Redevelopment Area (CRA), regional shopping centers such as Lakeland Square Mall and Merchant’s Walk and suburban residential areas on each end of the City. While congestion is still significant in the Florida Avenue corridor, the opening of Lakeside Village in 2005 has caused a shift in shopping trips to the SR 563 (Harden Boulevard) corridor that runs parallel to Florida Avenue. The proliferation of driveways along Florida Avenue has contributed to congestion in this corridor; however, the City and Florida DOT have used the City’s access management regulations to eliminate non-conforming driveways as part of development and re-development projects in the corridor. The access management regulations and multi-modal level-of-service standards have also been instrumental in improving transit facilities, internal pedestrian circulation and bicycle parking amenities through the development and concurrency review processes, especially for retail center expansion projects at Wal-Mart (at Imperial Boulevard) and Southgate Shopping Center. Improving or



stabilizing the level of service on Florida Avenue will also require enhanced transit services and new north-south arterials, such as the Wabash Avenue extension.

A listing of levels of service for all arterial and collector road links in the City and selected road links outside the Year 2010 City limits is included as TSD III-One in the *Technical Support Document*.



Source: Community Development Department, 2010  
2007 LOS per RPG



- |  |   |   |
|--|---|---|
| <span style="color: blue;">—</span> A or B | <span style="color: orange;">—</span> D | <span style="color: purple;">—</span> F |
| <span style="color: green;">—</span> C     | <span style="color: red;">—</span> E    |   |



k:\cd\map\esr\comp plan\trans\III-6 Exist Peak Hour.mxd

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## **FUTURE LEVELS OF SERVICE**

Future levels of service in the Lakeland Planning Area have been determined by projecting existing traffic volumes to Years 2010, 2015 and 2020 using the Polk County Standard Transportation Model distributed by Florida DOT District One and the Polk TPO. Population, employment and other socioeconomic data from the *Polk 2060 Transportation Vision Plan* were used to estimate future travel demand. In addition to projected traffic volumes, anticipated road improvements were used to determine probable future levels of service. Since it is impossible to correct all road deficiencies, select roads must be chosen for improvement.

The City analyzed level of service for Year 2020 with and without capacity improvements contained in the Short-Range Component of the Polk 2030 Long-Range Transportation Plan. Improvements considered for the 2010 and 2015 analysis years were derived from Five-Year Work Programs adopted by the City of Lakeland, Polk County and Florida DOT and are “committed” for implementation. As would be expected, the analysis indicated many more network level of service failures if no improvements were funded and implemented. That analysis is contained in TSD III-Two of the *Technical Support Document*, showing which roadway links are projected to be at or below minimum level of service standards in 2020 without future roadway improvements. The analysis of roadway level of service projections with roadway improvements implemented is discussed below.

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## **2010 LEVELS OF SERVICE WITH EXISTING AND COMMITTED IMPROVEMENTS**

The Year 2010 level-of-service analysis identified several roadway segments as operating at the adopted standard, including Interstate 4 (Hillsborough County Line to SR 559), SR 37 (South Florida Avenue, between the Polk Parkway and Ariana Street), Ewell Road and Old Combee Road. Segments operating below the adopted level-of-service standard (i.e., “failing”) include SR 37 (Shepherd Road to Alamo Drive), US 92 (Memorial Boulevard, between North Florida Avenue and Lake Parker Avenue), US 98 (Memorial Boulevard to Griffin Road) and Polk County roadway segments in the southern Lakeland area including Scott Lake Road and Clubhouse Road. City-operated segments estimated to fail in Year 2010 include Edgewood Drive (west of Lakeland Highlands Road) and a section of Cleveland Heights Boulevard. A full listing of those roadway segments operating at or below the adopted level-of-service standard in 2010 can be found in Table III-3.


**TABLE III-3  
2010 LEVEL OF SERVICE**


Road Segment	From	To	Laneage and Type	Est. 2010 PKHR VOL.	2010 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
<b>STATE ROAD</b>								
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	4,644	C	6,030	C	SIS
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	5,191	C	6,030	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	3,782	C	4,180	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	3,383	C	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	3,977	C	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	3,558	C	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	3,628	C	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	3,245	C	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	3,709	C	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	3,318	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	3,636	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	3,253	C	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	3,452	C	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	3,088	C	4,180	C	SIS
SR 33	I-4	OLD POLK CITY RD	2B	506	D	870	D	D
SR 33	I-4	OLD POLK CITY RD	2B	626	D	870	D	D
SR 37	SHEPHERD RD	PIPKIN RD W	4D	1,332	B	1,860	E	M2
SR 37	SHEPHERD RD	PIPKIN RD W	4D	2,006	F	1,860	E	M2
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	2023	F	1,860	E	M3
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	1636	C	1,860	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,396	D	1,800	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,727	E	1,800	E	M3
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	1,975	F	1,860	E	M3
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	1,334	B	1,860	E	M3
US 98	CR 540A	SR 540	4D	1,865	F	1,810	C	SIS
US 98	CR 540A	SR 540	4D	1,508	B	1,810	C	SIS
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	2,259	F	1,860	E	M3
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	1,499	B	1,860	E	M3
<b>COUNTY ROAD</b>								
A-Z PARK RD (Commerce Point)	US 98	SR 659	2U	858	F	810	E	M2

Road Segment	From	To	Laneage and Type	Est. 2010 PKHR VOL.	2010 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
A-Z PARK RD (Commerce Point)	US 98	SR 659	2U	694	D	810	E	M2
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	860	F	790	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	695	C	790	D	D
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,232	D	1,620	D	M1
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	987	C	1,620	D	M1
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	535	B	890	D	D
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	1,131	F	890	D	D
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	514	D	650	D	D
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	418	D	650	D	D
ET DAUGHERTY RD	US 98	CR 582 (SOCRUM LOOP RD)	2U	381	C	760	D	M2
ET DAUGHERTY RD	US 98	CR 582 (SOCRUM LOOP RD)	2U	487	D	760	D	M2
EWELL RD	COUNTY LINE RD	OLD HIGHWAY 37	2U	404	C	760	D	D
EWELL RD	COUNTY LINE RD	OLD HIGHWAY 37	2U	499	D	760	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,597	D	1,620	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,291	D	1,620	D	D
LAKE MIRIAM DR	SR 37	CR 37B	2U	854	D	940	D	M1
LAKE MIRIAM DR	SR 37	CR 37B	2U	691	D	940	D	M1
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	417	C	760	D	M2
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	516	D	760	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	638	D	900	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	788	D	900	D	M2
OLD POLK CITY RD	CR 582	WALT WILLIAMS RD	2U	554	D	760	D	D
OLD POLK CITY RD	CR 582	WALT WILLIAMS RD	2U	421	C	760	D	D
REYNOLDS RD	SR 540	US 92	2U	490	D	760	D	M1
REYNOLDS RD	SR 540	US 92	2U	606	D	760	D	M1
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	516	D	760	D	M2
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	404	C	760	D	M2
WARING ROAD	W PIPKIN RD	SR 570 (POLK PARKWAY)	2U	697	D	760	D	M1
WARING ROAD	SR 570 (POLK PARKWAY)	W PIPKIN RD	2U	564	D	760	D	M1
CITY ROAD								
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	671	D	760	D	M2
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	858	F	760	D	M2
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2O	878	F	851	E	M3
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2O	686	D	851	E	M3

Road Segment	From	To	Laneage and Type	Est. 2010 PKHR VOL.	2010 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	604	D	810	E	M3
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	747	D	810	E	M3
MALL HILL DR	CR 582 (GRIFFIN RD)	LAKELAND SQUARE MALL RD	2U	578	D	760	D	M2
MALL HILL DR	CR 582 (GRIFFIN RD)	LAKELAND SQUARE MALL RD	2U	468	C	760	D	M2

**Source:** Renaissance Planning Group, Inc., 2010; Polk County Roadway Network Database, Polk TPO, 2006 and 2010.

 = operating at level of service standard during peak hour and peak direction

 = operating at, or expected to operate at, failing level of service standard during peak hour and peak direction

## **2015 LEVELS OF SERVICE WITH COMMITTED IMPROVEMENTS**

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The Year 2015 level-of-service analysis identified several roadway segments as operating at the adopted standard, including SR 572 (Airport Road), US 92 (New Tampa Highway from County Line Road and Airport Road), Lakeland Highlands Road, and County Line Road north of Drane Field Road. Segments operating below the adopted level-of-service standard (i.e., “failing”) include Interstate 4 between the Polk Parkway and Kathleen Road, US 92 (New Tampa Highway, between Airport Road and Wabash Avenue), US 98 between Interstate 4 and Sleepy Hill Road, and CR 655 (Berkley Road, SR 33 to Pace Road). A full listing of those roadway segments operating at or below the adopted level-of-service standard in 2015 can be found in Table III-4.

**TABLE III-4  
2015 LEVEL OF SERVICE**

Road Segment	From	To	Laneage and Type	Est. 2015 PKHR VOL.	2015 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
STATE ROAD								
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	5,368	C	6,030	C	SIS
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	6,001	C	6,030	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	4,260	D	4,180	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	3,811	C	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	4,482	D	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	4,010	C	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	4,000	C	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	3,579	C	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	4,046	C	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	3,620	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	3,821	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	3,419	C	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	3,865	C	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	3,458	C	4,180	C	SIS
SR 33/MASSACHUSETTS AVE)	US 92/MEMORIAL BLVD	GRIFFIN RD	4U	1,317	D	1,577	E	M3
SR 33/MASSACHUSETTS AVE)	US 92/MEMORIAL BLVD	GRIFFIN RD	4U	1,628	F	1,577	E	M3
SR 33	I-4 @ SOCRUM LOOP RD	I-4	2B	821	E	960	E	M2
SR 33	I-4 @ SOCRUM LOOP RD	I-4	2B	812	E	960	E	M2
SR 33	I-4	OLD POLK CITY RD	2U	557	C	870	D	D
SR 33	I-4	OLD POLK CITY RD	2U	689	D	870	D	D
SR 35 (FLORIDA AVE N)	MAIN ST	MEMORIAL BLVD	4D	1,752	E	1,800	E	M3
SR 35 (FLORIDA AVE N)	MAIN ST	MEMORIAL BLVD	4D	1,417	D	1,800	E	M3
SR 37	SHEPHERD RD	PIPKIN RD W	4D	1,351	B	1,860	E	M2
SR 37	SHEPHERD RD	PIPKIN RD W	4D	2,035	F	1,860	E	M2
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	2,063	F	1,860	E	M3
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	1,669	C	1,860	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,396	D	1,800	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,727	E	1,800	E	M3

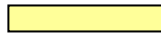


Road Segment	From	To	Laneage and Type	Est. 2015 PKHR VOL.	2015 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
SR 570 (POLK PKWY)	CR 546	PACE ROAD	2F	1,249	E	950	D	SIS
SR 570 (POLK PKWY)	CR 546	PACE ROAD	2F	834	D	950	D	SIS
SR 572 (AIRPORT RD)	US 92	DRANE FIELD RD	2U	620	C	860	D	M1
SR 572 (AIRPORT RD)	US 92	DRANE FIELD RD	2U	780	D	860	D	M1
US 92 (NEW TAMPA HWY)	COUNTY LINE RD	SR 572	2U	531	C	860	D	M1
US 92 (NEW TAMPA HWY)	COUNTY LINE RD	SR 572	2U	787	D	860	D	M1
US 92 (NEW TAMPA HWY)	SR 572	WABASH AVE	2U	1,036	F	890	E	M2
US 92 (NEW TAMPA HWY)	SR 572	WABASH AVE	2U	700	C	890	E	M2
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	1,955	F	1,860	E	M3
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	1,321	B	1,860	E	M3
US 98	LYLE PKWY	CR 540A	4D	2,592	D	2,300	C	SIS
US 98	LYLE PKWY	CR 540A	4D	1,713	C	2,300	C	SIS
US 98	CR 540A	SR 540	4D	1,938	F	1,810	C	SIS
US 98	CR 540A	SR 540	4D	1,567	C	1,810	C	SIS
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	2,463	F	1,860	E	M3
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	1,635	C	1,860	E	M3
US 98	I-4	SLEEPY HILL RD	8D	2,412	C	3,500	E	M2
US 98	I-4	SLEEPY HILL RD	8D	3,637	F	3,500	E	M2
COUNTY ROAD								
A-Z PARK RD	US 98	SR 659	2U	873	F	810	E	M2
A-Z PARK RD	US 98	SR 659	2U	706	D	810	E	M2
COUNTY LINE RD	DRANE FIELD RD	I-4	4D	1,339	D	1,620	D	D
COUNTY LINE RD	DRANE FIELD RD	I-4	4D	1,083	C	1,620	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	844	F	790	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	682	C	790	D	D
CR 37B (LAKELAND HIGHLANDS RD)	CR 540A	POLK PARKWAY	4D	1,262	D	1,620	D	D
CR 37B (LAKELAND HIGHLANDS RD)	CR 540A	POLK PARKWAY	4D	1,572	D	1,620	D	D
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,500	D	1,620	D	M1
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,200	D	1,620	D	M1
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	578	B	890	D	D
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	1,221	F	890	D	D
CR 540A (CENTRAL BARN RD)	SR 37	CR 37B	5U	1,202	D	1,701	D	D
CR 540A (CENTRAL BARN RD)	SR 37	CR 37B	5U	1,319	D	1,701	D	D
CR 542A (GALLOWAY RD)	10TH ST	CR 35A	2U	649	D	810	E	M2
CR 542A (GALLOWAY RD)	10TH ST	CR 35A	2U	802	E	810	E	M2

Road Segment	From	To	Laneage and Type	Est. 2015 PKHR VOL.	2015 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	526	D	650	D	D
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	429	D	650	D	D
CR 655 (BERKLEY RD)	SR 33	PACE ROAD	2U	773	E	760	D	D
CR 655 (BERKLEY RD)	SR 33	PACE ROAD	2U	625	D	760	D	D
ET DAUGHERTY RD	US 98	CR 582 (SOCRUM LOOP RD)	2U	434	C	760	D	M2
ET DAUGHERTY RD	US 98	CR 582 (SOCRUM LOOP RD)	2U	555	D	760	D	M2
EWELL RD	COUNTY LINE RD	OLD HIGHWAY 37	2U	475	C	760	D	D
EWELL RD	COUNTY LINE RD	OLD HIGHWAY 37	2U	588	D	760	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,887	F	1,620	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,526	D	1,620	D	D
HALLAM DR	CLEVELAND HEIGHTS BLVD	CR 37B (LAKELAND HIGHLANDS RD)	2U	557	D	760	D	M1
HALLAM DR	CLEVELAND HEIGHTS BLVD	CR 37B (LAKELAND HIGHLANDS RD)	2U	713	D	760	D	M1
HARDEN BLVD.	PIPKIN RD	SR 570 (POLK PARKWAY)	2U	1,018	F	971	E	M2
HARDEN BLVD.	PIPKIN RD	SR 570 (POLK PARKWAY)	2U	1,259	F	971	E	M2
LAKE MIRIAM DR	SR 37	CR 37B	2U	891	D	940	D	M1
LAKE MIRIAM DR	SR 37	CR 37B	2U	721	D	940	D	M1
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	448	C	760	D	M2
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	554	D	760	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	731	D	900	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	904	E	900	D	M2
OLD POLK CITY RD	CR 582	WALT WILLIAMS RD	2U	544	D	760	D	D
OLD POLK CITY RD	CR 582	WALT WILLIAMS RD	2U	413	C	760	D	D
REYNOLDS RD	SR 540	US 92	2U	505	D	760	D	M1
REYNOLDS RD	SR 540	US 92	2U	624	D	760	D	M1
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	524	D	760	D	M2
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	411	C	760	D	M2
WARING ROAD	W PIPKIN RD	SR 570 (POLK PARKWAY)	2U	771	E	760	D	M1
WARING ROAD	SR 570 (POLK PARKWAY)	W PIPKIN RD	2U	623	D	760	D	M1
CITY ROAD								
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	730	D	810	E	M2
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	934	F	810	E	M2
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2U	1,025	F	810	E	M3
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2U	801	E	810	E	M3
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	621	D	810	E	M3
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	769	E	810	E	M3

Road Segment	From	To	Laneage and Type	Est. 2015 PKHR VOL.	2015 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
MALL HILL DR	CR 582 (GRIFFIN RD)	LAKELAND SQUARE MALL RD	2U	677	D	760	D	M2
MALL HILL DR	CR 582 (GRIFFIN RD)	LAKELAND SQUARE MALL RD	2U	547	D	760	D	M2

**Source:** Renaissance Planning Group, Inc., 2010; Polk County Roadway Network Database, Polk TPO, 2006 and 2010.



= operating at level of service standard during peak hour and peak direction



= operating at, or expected to operate at, failing level of service standard during peak hour and peak direction

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### **FUTURE FUNCTIONAL CLASSIFICATION – 2020**

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Illustrations III-7 and III-8 depict the 2020 functional classification of the roadway network for purposes of maintenance and operating characteristics respectively.

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### **FUTURE NUMBER OF LANES – 2020**

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Illustration III-9 depicts the expected number of lanes on the 2020 traffic circulation network.

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### **2020 LEVELS OF SERVICE WITH AND WITHOUT PLANNED IMPROVEMENTS**

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Illustration III-10A depicts the expected levels of service on most roadway links in Year 2020 with planned improvements, while Illustration III-10B depicts them without planned improvements contained in the Polk TPO's Long-Range Transportation Plan (LRTP) Short-Range Component. The LRTP Short-Range Component contains those roadway projects that are determined to be cost-feasible by 2020. The level of service analyses assume the four-laning of State Road 33 north of State Road 659 and south of Old Combee Road/Deeson Point and the deferral of the West Pipkin Road four-laning project to the 2015-2020 time period.

If improvements are made to the existing roadway network, the number of failing roadways are still expected to increase. Tables III-5 and III-6 explicitly list each roadway segment that is expected to operate at or below the adopted level-of-service standard with and without the planned improvements contained in the LRTP respectively. It should be noted that, even with the construction of the planned improvements in the LRTP, level of service failures can still be expected on much of South Florida Avenue and US 98 North – even the existing 8-lane section north of Interstate 4.

**TABLE III-5  
2020 LEVEL OF SERVICE WITH PLANNED IMPROVEMENTS**

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
STATE ROAD								
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	5,894	C	6,030	C	SIS
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	6,588	D	6,030	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	4,656	D	4,180	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	4,165	C	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	4,763	D	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	4,262	D	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	4,374	D	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	3,913	C	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	4,437	D	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	3,969	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	4,064	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	3,636	C	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	4,454	D	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	3,985	C	4,180	C	SIS
SR 33/(MASSACHUSETTS AVE)	US 92/MEMORIAL BLVD	GRIFFIN RD	4U	1,454	D	1,577	E	M3
SR 33/(MASSACHUSETTS AVE)	US 92/MEMORIAL BLVD	GRIFFIN RD	4U	1,797	F	1,577	E	M3
SR 33	I-4 @ SOCRUM LOOP RD	I-4	2B	1,064	F	960	E	M2
SR 33	I-4 @ SOCRUM LOOP RD	I-4	2B	995	F	960	E	M2
SR 33	I-4	OLD POLK CITY RD	2U	505	C	870	D	D
SR 33	I-4	OLD POLK CITY RD	2U	660	D	870	D	D
SR 37	SHEPHERD RD	PIPKIN RD W	4D	1,422	B	1,860	E	M2
SR 37	SHEPHERD RD	PIPKIN RD W	4D	2,142	F	1,860	E	M2

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	2,141	F	1,860	E	M3
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	1,421	B	1,860	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,465	D	1,800	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,812	F	1,800	E	M3
SR 548 (BARTOW RD)	SR 35 (FLORIDA AVE)	MAIN ST	4D	2,043	F	1,860	E	M3
SR 548 (BARTOW RD)	SR 35 (FLORIDA AVE)	MAIN ST	4D	1,652	C	1,860	E	M3
SR 572 (AIRPORT RD)	US 92	DRANE FIELD RD	2U	792	D	860	D	M1
SR 572 (AIRPORT RD)	US 92	DRANE FIELD RD	2U	986	F	860	D	M1
SR 659 (COMBEE RD)	US 92	CR 546	2U	775	D	860	D	M1
SR 659 (COMBEE RD)	US 92	CR 546	2U	627	C	860	D	M1
SR 659 (COMBEE RD)	CR 546	SR 33	2U	729	D	860	D	M1
SR 659 (COMBEE RD)	CR 546	SR 33	2U	590	C	860	D	M1
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	2,009	F	1,860	E	M3
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	1,357	B	1,860	E	M3
US 98	LYLE PKWY	CR 540A	6D	3,550	D	3,460	C	SIS
US 98	LYLE PKWY	CR 540A	6D	2,360	B	3,460	C	SIS
US 98	CR 540A	SR 540	6D	2,778	D	2,720	C	SIS
US 98	CR 540A	SR 540	6D	2,247	B	2,720	C	SIS
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	2,439	F	1,860	E	M3
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	1,619	C	1,860	E	M3
US 98	I-4	SLEEPY HILL RD	8D	2,435	C	3,500	E	M2
US 98	I-4	SLEEPY HILL RD	8D	3,684	F	3,500	E	M2
COUNTY ROAD								
A-Z PARK RD	US 98	SR 659	2U	890	F	810	E	M2
A-Z PARK RD	US 98	SR 659	2U	720	D	810	E	M2
COUNTY LINE RD	SR 60	DRANE FIELD RD	4D	1,141	D	1,620	D	D
COUNTY LINE RD	SR 60	DRANE FIELD RD	4D	923	C	1,620	D	D

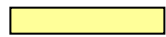
Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
COUNTY LINE RD	DRANE FIELD RD	I-4	4D	1,696	E	1,620	D	D
COUNTY LINE RD	DRANE FIELD RD	I-4	4D	1,371	D	1,620	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	847	F	790	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	685	C	790	D	D
CR 37B (LAKELAND HIGHLANDS RD)	CR 540A	POLK PARKWAY	4D	1,303	D	1,620	D	D
CR 37B (LAKELAND HIGHLANDS RD)	CR 540A	POLK PARKWAY	4D	1,619	D	1,620	D	D
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,652	E	1,620	D	M1
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,319	D	1,620	D	M1
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	567	B	890	D	D
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	1,199	F	890	D	D
CR 540A (CENTRAL BARN RD)	SR 37	CR 37B	5U	1,311	D	1,701	D	D
CR 540A (CENTRAL BARN RD)	SR 37	CR 37B	5U	1,439	D	1,701	D	D
CR 540A (CENTRAL BARN RD)	CR 37B	US 98	5U	873	C	1,701	D	D
CR 540A (CENTRAL BARN RD)	CR 37B	US 98	5U	1,193	D	1,701	D	D
CR 542A (GALLOWAY RD)	US 92	10TH ST	2U	851	F	810	E	M2
CR 542A (GALLOWAY RD)	US 92	10TH ST	2U	689	D	810	E	M2
CR 542A (GALLOWAY RD)	10TH ST	CR 35A	2U	688	D	810	E	M2
CR 542A (GALLOWAY RD)	10TH ST	CR 35A	2U	850	F	810	E	M2
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	454	D	650	D	D
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	364	C	650	D	D
CR 582 (SOCRUM LOOP RD)	SR 33	DAUGHTERY RD E	4D	810	C	1,800	E	M2
CR 582 (SOCRUM LOOP RD)	SR 33	DAUGHTERY RD E	4D	1,741	E	1,800	E	M2
CR 655 (BERKLEY RD)	PACE ROAD	CR 546	4D	1,423	D	1,620	D	D
CR 655 (BERKLEY RD)	PACE ROAD	CR 546	4D	1,151	D	1,620	D	D
CR 655 (BERKLEY RD)	SR 33	PACE ROAD	2U	1,147	F	760	D	D
CR 655 (BERKLEY RD)	SR 33	PACE ROAD	2U	927	F	760	D	D
ET DAUGHERTY RD	US 98	CR 582 (SOCRUM LOOP RD)	2U	530	D	760	D	M2
ET DAUGHERTY RD	US 98	CR 582 (SOCRUM LOOP RD)	2U	677	D	760	D	M2

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
EWELL RD	OLD HIGHWAY 37	SR 37	4D	2,217	F	1,620	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,793	F	1,620	D	D
HALLAM DR	CLEVELAND HEIGHTS BLVD	CR 37B (LAKELAND HIGHLANDS RD)	2U	608	D	760	D	M1
HALLAM DR	CLEVELAND HEIGHTS BLVD	CR 37B (LAKELAND HIGHLANDS RD)	2U	779	E	760	D	M1
LAKE MIRIAM DR	SR 37	CR 37B	2U	930	D	940	D	M1
LAKE MIRIAM DR	SR 37	CR 37B	2U	752	D	940	D	M1
LUNN RD	EWELL RD	W PIPKIN RD	2U	440	C	760	D	D
LUNN RD	EWELL RD	W PIPKIN RD	2U	544	D	760	D	D
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	456	C	760	D	M2
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	564	D	760	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	839	D	900	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	1,038	E	900	D	M2
PIPKIN RD W	PIPKIN RD S	SR 37	2U	863	C	971	E	M2
PIPKIN RD W	PIPKIN RD S	SR 37	2U	1,067	F	971	E	M2
REYNOLDS RD	SR 540	US 92	2U	505	D	760	D	M1
REYNOLDS RD	SR 540	US 92	2U	624	D	760	D	M1
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	521	D	760	D	M2
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	408	C	760	D	M2
WARING ROAD	W PIPKIN RD	SR 570 (POLK PARKWAY)	2U	638	D	760	D	M1
WARING ROAD	SR 570 (POLK PARKWAY)	W PIPKIN RD	2U	516	D	760	D	M1
CITY ROAD								
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	755	D	810	E	M2
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	965	F	810	E	M2
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2U	1,167	F	810	E	M3
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2U	911	F	810	E	M3
HIGHLAND DR	S. FLORIDA AVE	CLEVELAND HEIGHTS BLVD	2U	597	D	810	E	M3
HIGHLAND DR	S. FLORIDA AVE	CLEVELAND HEIGHTS BLVD	2U	764	E	810	E	M3



Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	670	D	810	E	M3
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	829	F	810	E	M3

**Source:** Renaissance Planning Group, Inc., 2010; Polk County Roadway Network Database, Polk TPO, 2006 and 2010.



= operating at level of service standard during peak hour and peak direction



= operating at, or expected to operate at, failing level of service standard during peak hour and peak direction

**TABLE III-6  
2020 LEVEL OF SERVICE WITHOUT PLANNED IMPROVEMENTS**

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
STATE ROAD								
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	5,923	C	6,030	C	SIS
INTERSTATE 4	HILLSBOROUGH COUNTY LINE	SR 570	8F	6,620	D	6,030	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	4,685	D	4,180	C	SIS
INTERSTATE 4	SR 570	SR 546	6F	4,191	D	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	4,877	D	4,180	C	SIS
INTERSTATE 4	SR 546	SR 539	6F	4,364	D	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	4,293	D	4,180	C	SIS
INTERSTATE 4	SR 539	US 98	6F	3,841	C	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	4,367	D	4,180	C	SIS
INTERSTATE 4	US 98	SOCRUM LOOP RD	6F	3,907	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	4,012	C	4,180	C	SIS
INTERSTATE 4	SOCRUM LOOP RD	SR 33	6F	3,590	C	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	4,418	D	4,180	C	SIS
INTERSTATE 4	SR 33	SR 559	6F	3,952	C	4,180	C	SIS
SR 33/MASSACHUSETTS AVE)	US 92/MEMORIAL BLVD	GRIFFIN RD	4U	1,449	D	1,577	E	M3
SR 33/MASSACHUSETTS AVE)	US 92/MEMORIAL BLVD	GRIFFIN RD	4U	1,791	F	1,577	E	M3
SR 33	I-4 @ SOCRUM LOOP RD	I-4	2B	1,131	F	960	E	M2
SR 33	I-4 @ SOCRUM LOOP RD	I-4	2B	1,056	F	960	E	M2
SR 33	I-4	OLD POLK CITY RD	2U	622	D	870	D	D
SR 33	I-4	OLD POLK CITY RD	2U	812	D	870	D	D
SR 35 (FLORIDA AVE N)	MAIN ST	MEMORIAL BLVD	4D	1,719	E	1,800	E	M3
SR 35 (FLORIDA AVE N)	MAIN ST	MEMORIAL BLVD	4D	1,390	D	1,800	E	M3
SR 37	SHEPHERD RD	PIPKIN RD W	4D	1,418	B	1,860	E	M2
SR 37	SHEPHERD RD	PIPKIN RD W	4D	2,136	F	1,860	E	M2
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	2,192	F	1,860	E	M3
SR 37 (FLORIDA AVE)	PIPKIN RD W	ALAMO DR	4D	1,455	B	1,860	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,532	D	1,800	E	M3
SR 37 (FLORIDA AVE)	SR 570	ARIANA ST	4D	1,895	F	1,800	E	M3

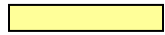
Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
SR 563 (HARDEN BLVD/SIKES BLVD)	SR 570 (POLK PARKWAY)	SR 539 (KATHLEEN BLVD)	4D	1,957	F	1,860	E	M2
SR 563 (HARDEN BLVD/SIKES BLVD)	SR 570 (POLK PARKWAY)	SR 539 (KATHLEEN BLVD)	4D	1,582	C	1,860	E	M2
SR 570 (POLK PKWY)	CR 546	PACE ROAD	2F	1,772	F	950	D	SIS
SR 570 (POLK PKWY)	CR 546	PACE ROAD	2F	1,184	E	950	D	SIS
SR 572 (AIRPORT RD)	US 92	DRANE FIELD RD	2U	794	D	860	D	M1
SR 572 (AIRPORT RD)	US 92	DRANE FIELD RD	2U	992	F	860	D	M1
SR 659 (COMBEE RD)	US 92	CR 546	2U	786	D	860	D	M1
SR 659 (COMBEE RD)	US 92	CR 546	2U	636	C	860	D	M1
SR 659 (COMBEE RD)	CR 546	SR 33	2U	777	D	860	D	M1
SR 659 (COMBEE RD)	CR 546	SR 33	2U	628	C	860	D	M1
US 92 (NEW TAMPA HWY)	COUNTY LINE RD	SR 572	2U	639	C	860	D	M1
US 92 (NEW TAMPA HWY)	COUNTY LINE RD	SR 572	2U	945	F	860	D	M1
US 92 (NEW TAMPA HWY)	SR 572	WABASH AVE	2U	1,207	F	890	E	M2
US 92 (NEW TAMPA HWY)	SR 572	WABASH AVE	2U	815	D	890	E	M2
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	2,060	F	1,860	E	M3
US 92/98 (MEMORIAL BLVD)	FLORIDA AVE	LAKE PARKER AVE	4D	1,391	B	1,860	E	M3
US 98	LYLE PKWY	CR 540A	4D	2,491	D	2,300	C	SIS
US 98	LYLE PKWY	CR 540A	4D	1,648	C	2,300	C	SIS
US 98	CR 540A	SR 540	4D	2,039	F	1,810	C	SIS
US 98	CR 540A	SR 540	4D	1,649	C	1,810	C	SIS
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	2,363	F	1,860	E	M3
US 98	MEMORIAL BLVD	GRIFFIN RD	4D	1,569	C	1,860	E	M3
US 98	I-4	SLEEPY HILL RD	8D	2,429	C	3,500	E	M2
US 98	I-4	SLEEPY HILL RD	8D	3,684	F	3,500	E	M2
COUNTY ROAD								
A-Z PARK RD (COMMERCE POINT DR)	US 98	SR 659	2U	879	F	810	E	M2
A-Z PARK RD (COMMERCE POINT DR)	US 98	SR 659	2U	710	D	810	E	M2
COUNTY LINE RD	SR 60	DRANE FIELD RD	4D	1,206	D	1,620	D	D
COUNTY LINE RD	SR 60	DRANE FIELD RD	4D	975	C	1,620	D	D
COUNTY LINE RD	DRANE FIELD RD	I-4	4D	1,784	F	1,620	D	D
COUNTY LINE RD	DRANE FIELD RD	I-4	4D	1,443	D	1,620	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	934	F	790	D	D
CR 37A (SCOTT LAKE RD)	CR 540A	HALLAM DR	2U	756	D	790	D	D

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
CR 37B (LAKELAND HIGHLANDS RD)	CR 540A	POLK PARKWAY	4D	1,420	D	1,620	D	D
CR 37B (LAKELAND HIGHLANDS RD)	CR 540A	POLK PARKWAY	4D	1,765	F	1,620	D	D
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,753	F	1,620	D	M1
CR 37B (LAKELAND HIGHLANDS RD)	POLK PARKWAY	EDGEWOOD DR	4D	1,402	D	1,620	D	M1
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	612	B	890	D	D
CR 540 (CLUBHOUSE RD)	CR 37B	US 98	2U	1,294	F	890	D	D
<i>CR 540A (CENTRAL BARN RD)</i>	<i>SR 37</i>	<i>CR 37B</i>	<i>5U</i>	<i>1,318</i>	<i>D</i>	<i>1,701</i>	<i>D</i>	<i>D</i>
<i>CR 540A (CENTRAL BARN RD)</i>	<i>SR 37</i>	<i>CR 37B</i>	<i>5U</i>	<i>1,446</i>	<i>D</i>	<i>1,701</i>	<i>D</i>	<i>D</i>
<i>CR 540A (CENTRAL BARN RD)</i>	<i>CR 37B</i>	<i>US 98</i>	<i>5U</i>	<i>942</i>	<i>C</i>	<i>1,701</i>	<i>D</i>	<i>D</i>
<i>CR 540A (CENTRAL BARD RD)</i>	<i>CR 37B</i>	<i>US 98</i>	<i>5U</i>	<i>1,286</i>	<i>D</i>	<i>1,701</i>	<i>D</i>	<i>D</i>
CR 542A (GALLOWAY RD)	US 92	10TH ST	2U	914	F	810	E	M2
CR 542A (GALLOWAY RD)	US 92	10TH ST	2U	739	D	810	E	M2
CR 542A (GALLOWAY RD)	10TH ST	CR 35A	2U	737	D	810	E	M2
CR 542A (GALLOWAY RD)	10TH ST	CR 35A	2U	912	F	810	E	M2
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	539	D	650	D	D
CR 546 (SADDLE CR RD/OLD DIXIE HWY)	SR 659	LAKE ARIANA BLVD	2U	431	D	650	D	D
CR 582 (SOCRUM LOOP RD)	SR 33	DAUGHTERY RD E	4D	807	C	1,800	E	M2
CR 582 (SOCRUM LOOP RD)	SR 33	DAUGHTERY RD E	4D	1,735	E	1,800	E	M2
CR 655 (BERKLEY RD)	SR 33	PACE ROAD	2U	1,079	F	760	D	D
CR 655 (BERKLEY RD)	SR 33	PACE ROAD	2U	872	F	760	D	D
DRANE FIELD RD	COUNTY LINE RD	SR 572	2U	487	D	760	D	D
DRANE FIELD RD	COUNTY LINE RD	SR 572	2U	381	C	760	D	D
<i>ET DAUGHERTY RD</i>	<i>US 98</i>	<i>CR 582 (SOCRUM LOOP RD)</i>	<i>2U</i>	<i>521</i>	<i>D</i>	<i>760</i>	<i>D</i>	<i>M2</i>
<i>ET DAUGHERTY RD</i>	<i>US 98</i>	<i>CR 582 (SOCRUM LOOP RD)</i>	<i>2U</i>	<i>666</i>	<i>D</i>	<i>760</i>	<i>D</i>	<i>M2</i>
EWELL RD	COUNTY LINE RD	OLD HIGHWAY 37	2U	599	D	760	D	D
EWELL RD	COUNTY LINE RD	OLD HIGHWAY 37	2U	741	D	760	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,944	F	1,620	D	D
EWELL RD	OLD HIGHWAY 37	SR 37	4D	1,572	D	1,620	D	D
HALLAM DR	CLEVELAND HEIGHTS BLVD	CR 37B (LAKELAND HIGHLANDS RD)	2U	779	E	760	D	M1
HALLAM DR	CLEVELAND HEIGHTS BLVD	CR 37B (LAKELAND HIGHLANDS RD)	2U	998	F	760	D	M1
HARDEN BLVD.	PIPKIN RD	SR 570 (POLK PARKWAY)	2U	1,104	F	971	E	M2
HARDEN BLVD.	PIPKIN RD	SR 570 (POLK PARKWAY)	2U	1,365	F	971	E	M2

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
LAKE MIRIAM DR	SR 37	CR 37B	2U	940	E	940	D	M1
LAKE MIRIAM DR	SR 37	CR 37B	2U	760	D	940	D	M1
LUNN RD	EWELL RD	W PIPKIN RD	2U	480	D	760	D	D
LUNN RD	EWELL RD	W PIPKIN RD	2U	594	D	760	D	D
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	504	D	760	D	M2
OLD COMBEE RD	SR 33	SR 659 (COMBEE RD)	2U	624	D	760	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	875	D	900	D	M2
OLD COMBEE RD	CR 582 (SOCRUM LOOP RD)	SR 33	2U	1,082	E	900	D	M2
OLD POLK CITY RD	CR 582	WALT WILLIAMS RD	2U	624	D	760	D	D
OLD POLK CITY RD	CR 582	WALT WILLIAMS RD	2U	474	C	760	D	D
PIPKIN RD W	MEDULLA RD	PIPKIN RD S	2U	818	D	1,010	D	M2
PIPKIN RD W	MEDULLA RD	PIPKIN RD S	2U	662	C	1,010	D	M2
REYNOLDS RD	SR 540	US 92	2U	622	D	760	D	M1
REYNOLDS RD	SR 540	US 92	2U	770	E	760	D	M1
SWINDELL RD	CR 542A	SR 546	2U	623	D	810	E	M2
SWINDELL RD	CR 542A	SR 546	2U	771	E	810	E	M2
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	517	D	760	D	M2
WALT LOOP RD	CR 582 (SOCRUM LOOP RD)	OLD POLK CITY RD	2U	405	C	760	D	M2
WARING ROAD	W PIPKIN RD	SR 570 (POLK PARKWAY)	2U	816	F	760	D	M1
WARING ROAD	SR 570 (POLK PARKWAY)	W PIPKIN RD	2U	660	D	760	D	M1
CITY ROAD								
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	823	F	810	E	M2
CLEVELAND HEIGHTS BLVD	HALLAM DR	WESTOVER ST	2U	1,052	F	810	E	M2
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2U	1,137	F	810	E	M3
EDGEWOOD DR	SR 37 (FLORIDA AVE)	CR 37B (LAKELAND HIGHLANDS RD)	2U	888	F	810	E	M3
HIGHLAND DR	S. FLORIDA AVE	CLEVELAND HEIGHTS BLVD	2U	659	D	810	E	M3
HIGHLAND DR	S. FLORIDA AVE	CLEVELAND HEIGHTS BLVD	2U	844	F	810	E	M3
LAKE HOLLINGSWORTH DR (S)	BELMAR ST	CRYSTAL LAKE DR	2U	787	E	810	E	M3
LAKE HOLLINGSWORTH DR (S)	BELMAR ST	CRYSTAL LAKE DR	2U	787	E	810	E	M3
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	661	D	810	E	M3
MAIN ST	SR 37 (FLORIDA AVE)	US 98 (LAKE PARKER AVE)	2U	818	F	810	E	M3
MALL HILL DR	CR 582 (GRIFFIN RD)	LAKELAND SQUARE MALL RD	2U	747	D	760	E	M2
MALL HILL DR	CR 582 (GRIFFIN RD)	LAKELAND SQUARE MALL RD	2U	604	D	760	E	M2

Road Segment	From	To	Laneage and Type	Est. 2020 PKHR VOL.	2020 PKHR DIR. LOS	PKHR DIR. CAP.	Roadway LOS Stand.	M-M LOS Stand.
PROVIDENCE RD	SR 539 (KATHLEEN RD)	CR 582 (GRIFFIN RD)	2U	847	F	810	E	M3
PROVIDENCE RD	SR 539 (KATHLEEN RD)	CR 582 (GRIFFIN RD)	2U	685	D	810	E	M3

**Source:** Renaissance Planning Group, Inc., 2010; Polk County Roadway Network Database, Polk TPO, 2006 and 2010.

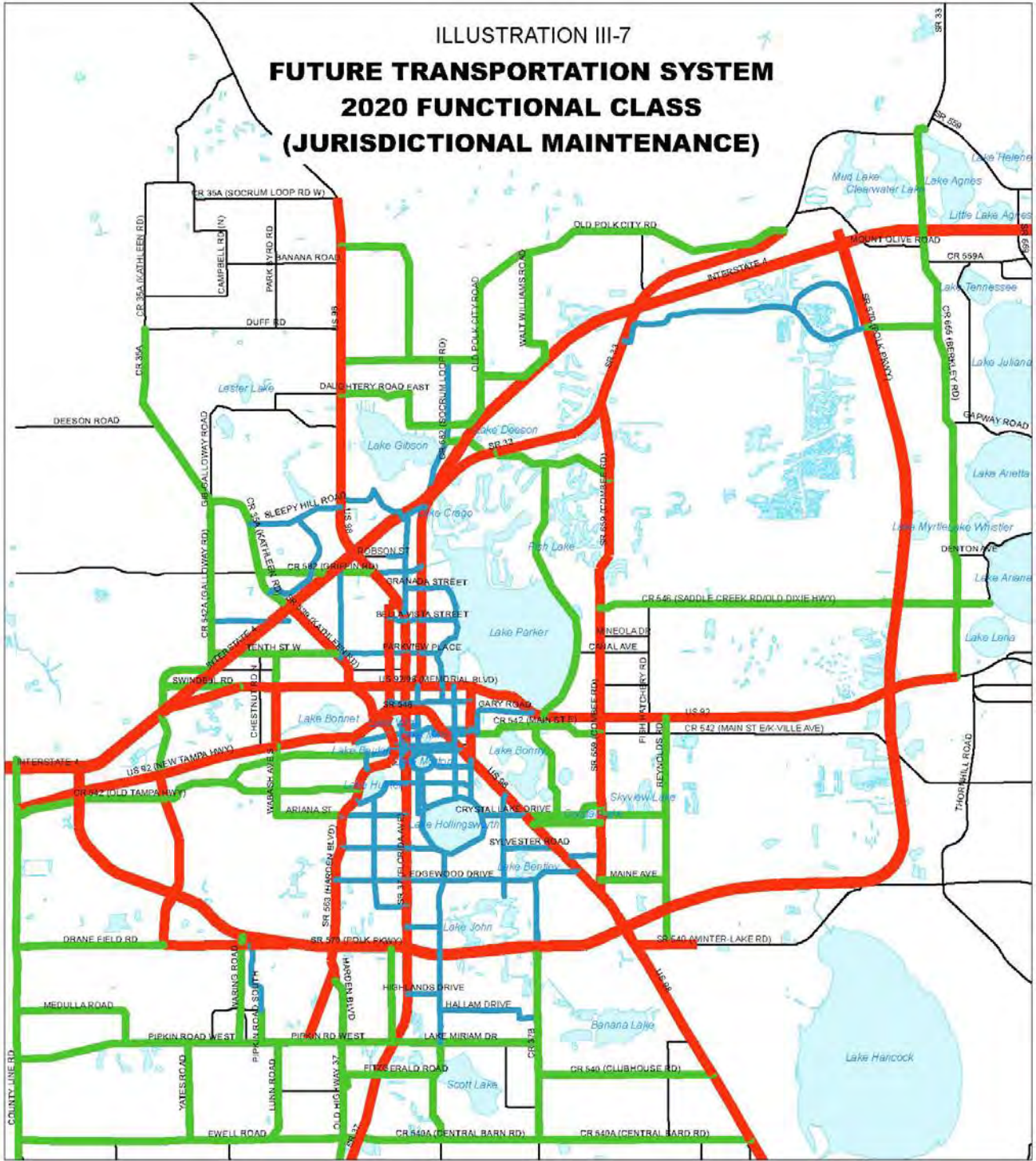


= operating at level of service standard during peak hour and peak direction



= operating at, or expected to operate at, failing level of service standard during peak hour and peak direction

ILLUSTRATION III-7  
**FUTURE TRANSPORTATION SYSTEM  
 2020 FUNCTIONAL CLASS  
 (JURISDICTIONAL MAINTENANCE)**



Source: Lakeland and community development, 2010  
 and Renaissance Planning Group, 2007

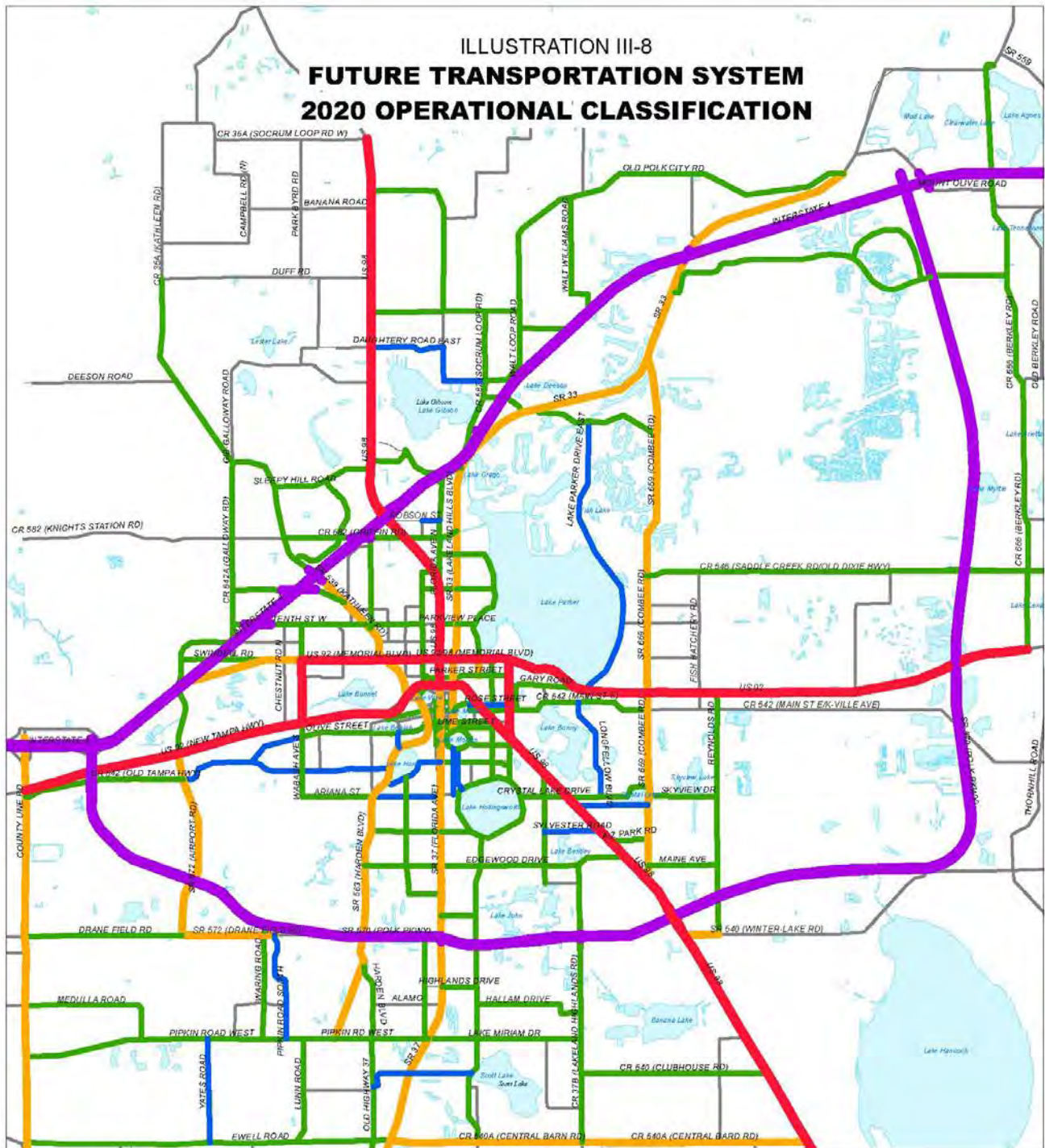


- Jurisdictional Maintenance
- State of Florida
  - Polk County
  - City of Lakeland



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# ILLUSTRATION III-8 FUTURE TRANSPORTATION SYSTEM 2020 OPERATIONAL CLASSIFICATION



Source: Lakeland Community Development Department, 2010 and Renaissance Planning Group, 2007



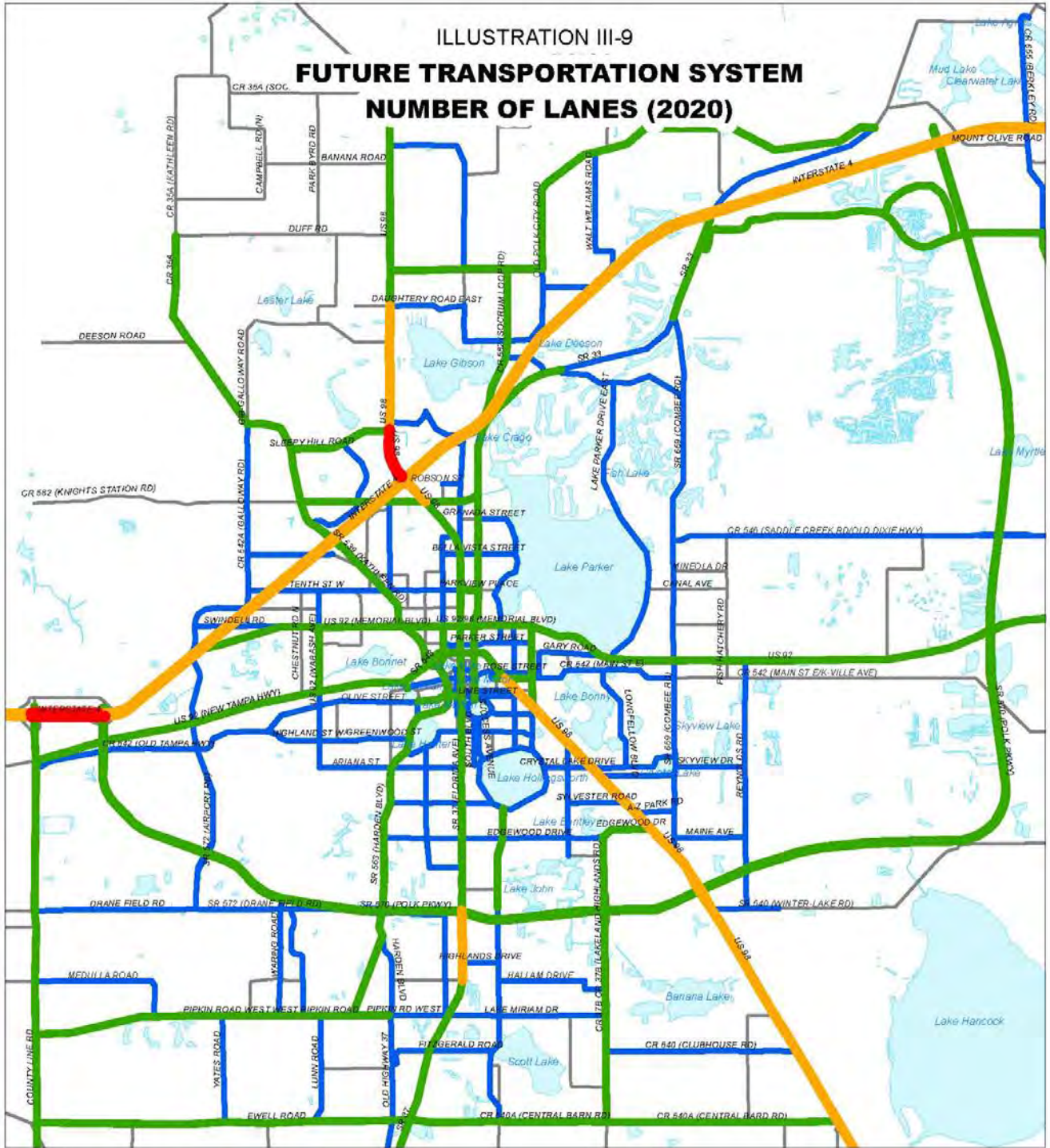
- Principal Arterial
- Limited Access Arterial
- Minor Arterial
- Urban Collector
- Other Collector



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# ILLUSTRATION III-9 FUTURE TRANSPORTATION SYSTEM NUMBER OF LANES (2020)



Source: Lakeland Community Development, 2010  
and Renaissance Planning Group, 2007

**Number of Lanes**

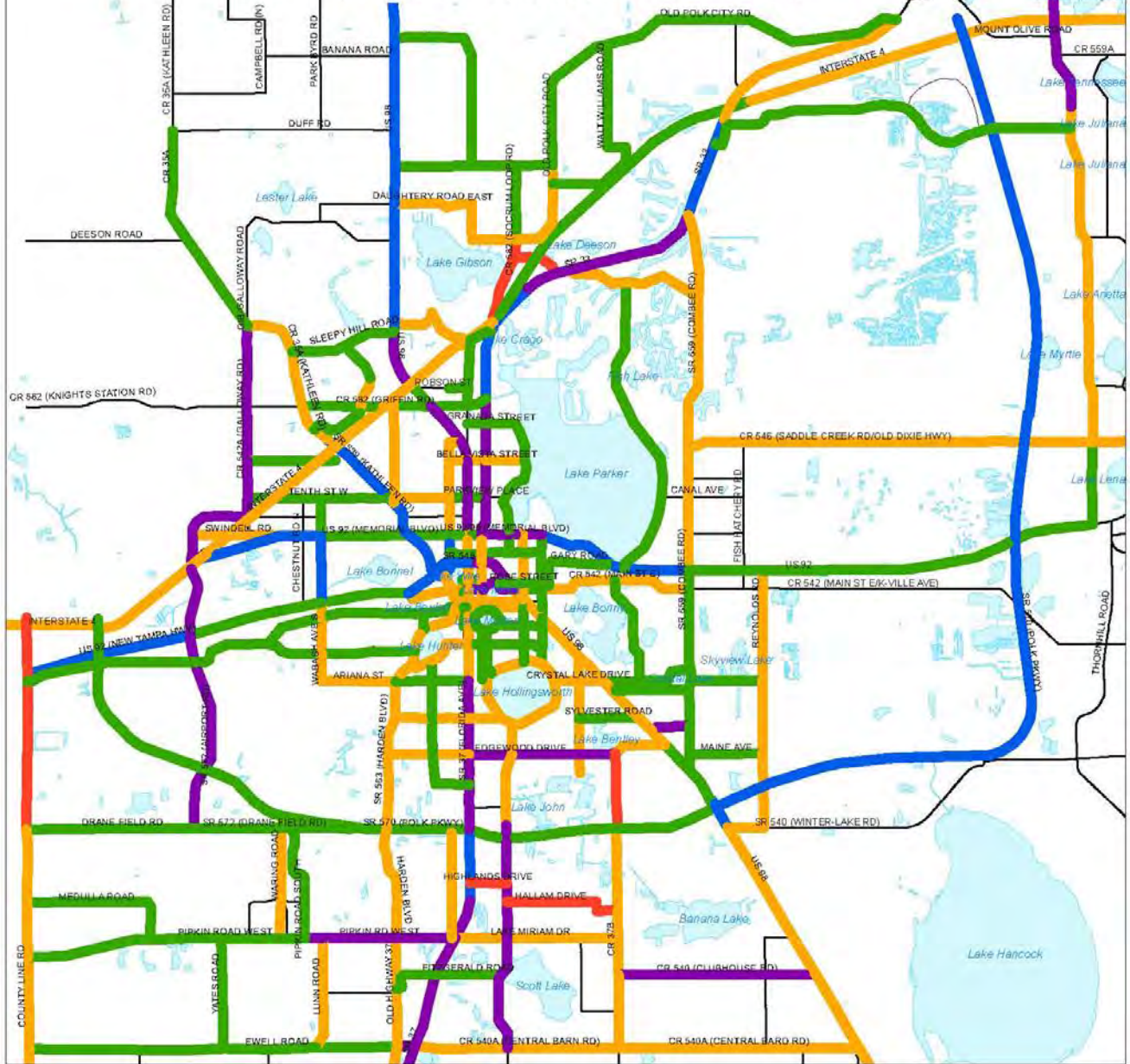
- 2
- 4
- 6
- 8

— Other Model Links



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ILLUSTRATION III-10A  
**FUTURE TRANSPORTATION SYSTEM  
 2020 ROADWAYS LEVEL OF SERVICE WITH IMPROVEMENTS  
 (PEAK HOUR AND DIRECTION)**



Source: Community Development Department, 2010  
 and Renaissance Planning Group, 2007

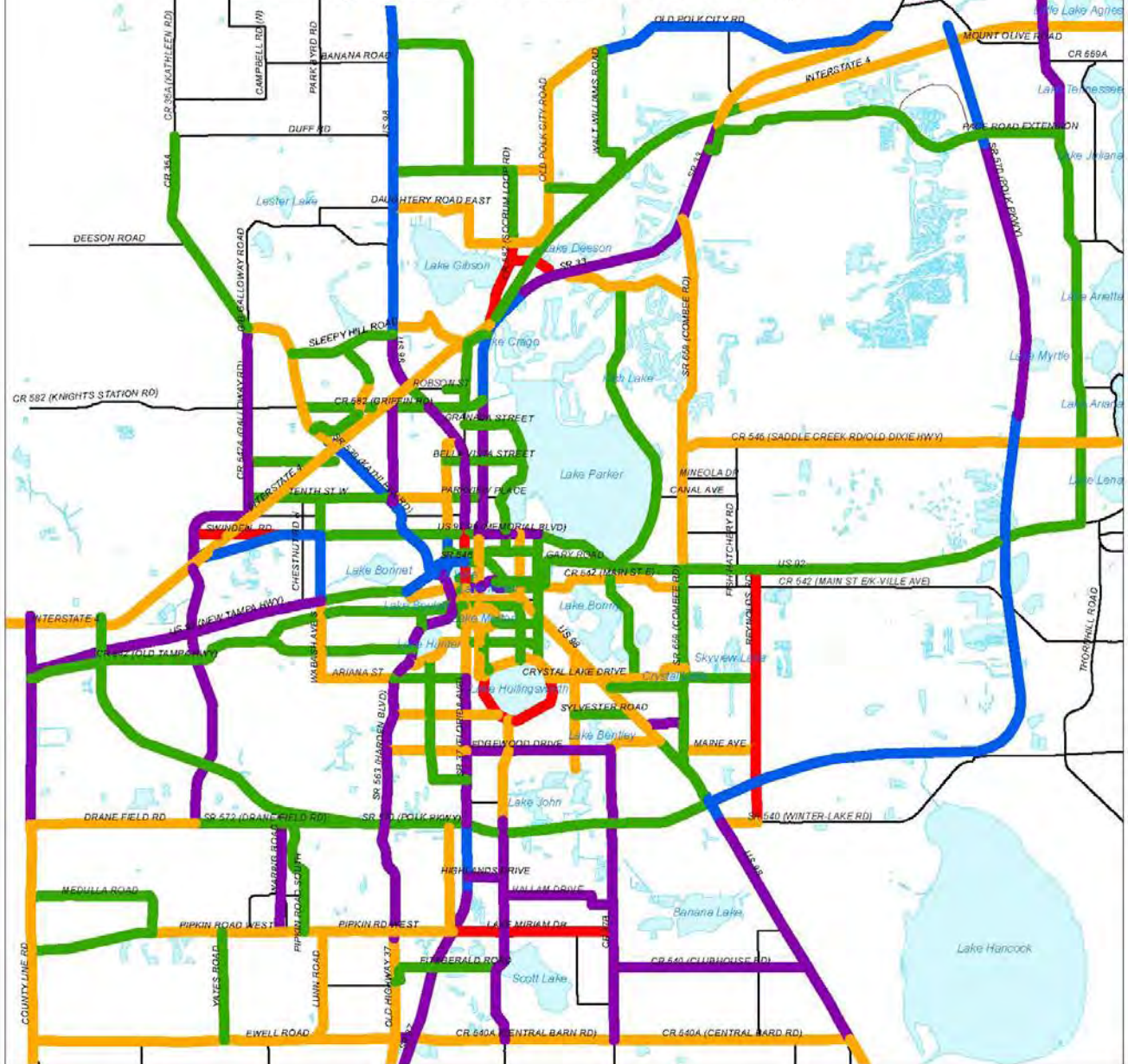


- A or B
- D
- F
- C
- E



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ILLUSTRATION III-10B  
**FUTURE TRANSPORTATION SYSTEM**  
**2020 ROADWAYS LEVEL OF SERVICE WITHOUT IMPROVEMENTS**  
**(PEAK HOUR AND DIRECTION)**



Source: Community Development Department, 2010  
 and Renaissance Planning Group, 2007



- A or B
- D
- F
- C
- E



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## **POLK COUNTY LONG RANGE TRANSPORTATION PLAN**

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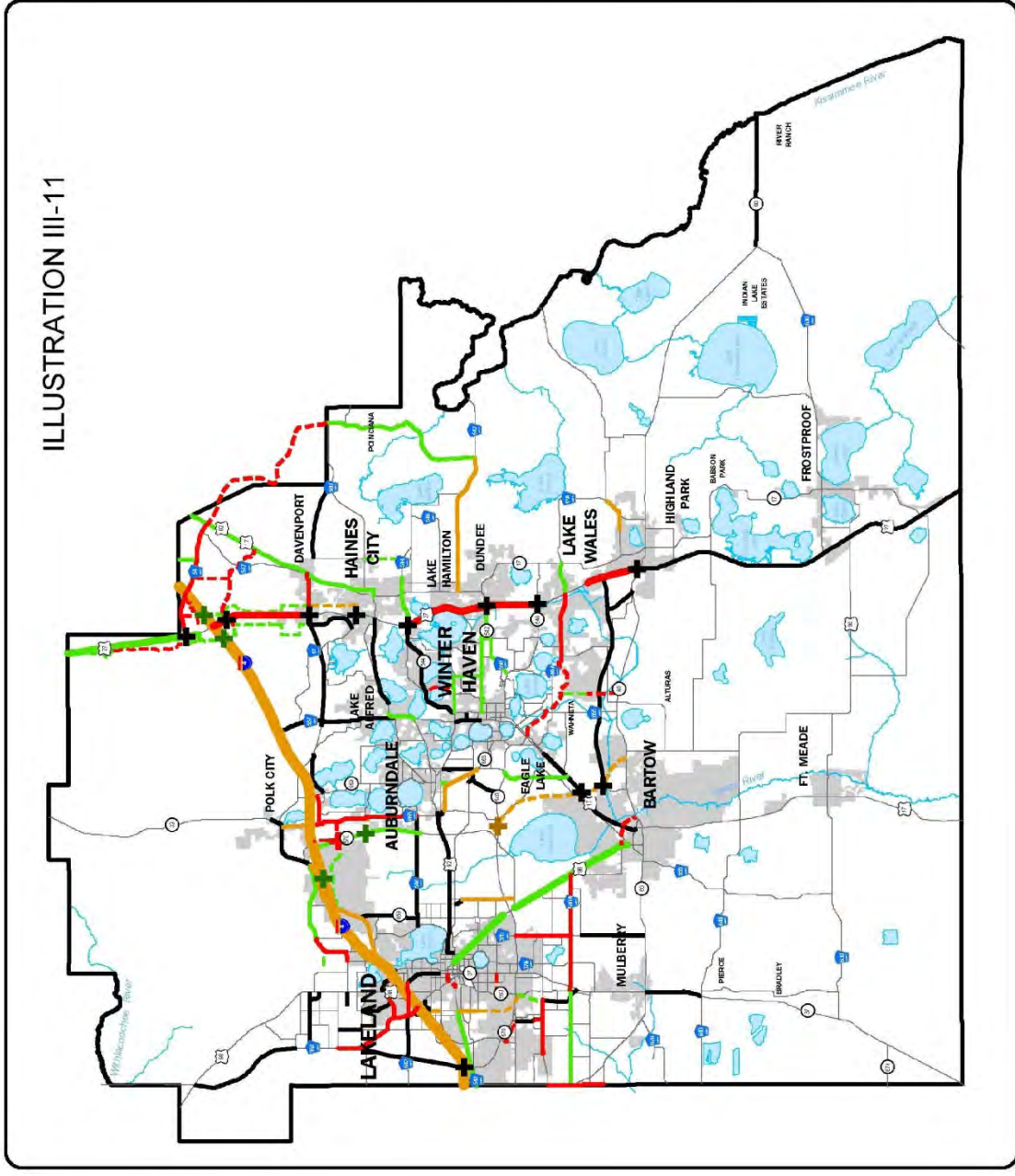
The need for a road project is determined by projecting roadway levels of service into the future. Since road improvement projects can take ten years or more from determination of need to completion of construction, local needs must be projected over a twenty-five year period to ensure the proper allocation and coordination of resources for planning, design, right-of-way and construction activities over time. In December 2005, the Polk TPO adopted a 25-year plan for transportation expenditures resulting in a 2030 horizon year for the *Polk County Long Range Transportation Plan*. The Polk TPO began updating its LRTP in 2009-2010 to identify needs and cost-feasible projects through the year 2035. The *2035 Mobility Vision Plan* (Long-Range Transportation Plan) is expected to be adopted in December 2010 and was used by the City as a reference for its 2010-2020 update of the City's Comprehensive Plan Transportation Element.

To develop a Long-Range Transportation Plan, several alternative series of road improvements are tested by computer using the Florida Standard Urban Transportation Modeling Structure (FSUTMS). Using quantitative methods, the FSUTMS model indicates how travel patterns will change County-wide if a new road is constructed versus widening an existing road. Each alternative is evaluated regarding community and natural resource impacts through the use of the Florida Department of Transportation's Efficient Transportation Decision Making (ETDM) data and stakeholder agency review process. The ETDM process also reviews the projects ability to meet traffic circulation needs including goods (freight) movement. The safety of the existing roadway and other factors such as system preservation are also factored into the evaluation criteria that are used to rank each candidate project. The TPO then recommends funding for transportation improvements with the highest net benefits.

The performance of the future roadway network is based on socioeconomic data (population, employment and housing) provided by local governments throughout Polk County for each traffic analysis zone (TAZ) (a geographic unit), consistent with their future land use plans and modified to fit within countywide "control totals" estimated by the University of Florida's Bureau of Economic and Business Research (BEBR). These socioeconomic projections were based on actual Year 2000 U.S. Census data compiled for Lakeland and Polk County. In 2009, the TPO developed socioeconomic projections for five year increments through the Year 2060 for its *2060 Transportation Vision Plan* effort coordinated with the Central Florida Regional Planning Council's "Heartland 2060" plan. The *2035 Mobility Vision Plan* and planned improvements in the Transportation Element through Year 2020 are based on the socioeconomic projections contained in the *2060 Transportation Vision Plan*.

The 2030 and 2035 LRTP development processes include significant public involvement and outreach components that allow the TPO and City staff to receive feedback on transportation-related issues that are of concern to Lakeland area residents. In the LRTP, the Polk TPO determined those transportation "needs" that were deemed "cost feasible" based on anticipated federal, state or local revenue projections. The cost feasible projects

for the 2030 LRTP were divided into Phases I and II, which were those projects that might be funded from fiscal year 2012-2020 and those between fiscal years 2021 and 2030. Phase I, or up through 2020, is referred to as the Short-Range Component (SRC) of the LRTP. The SRC is important in that it identifies the transportation projects that will be annually prioritized by the TPO for State and Federal funding, and includes projects contained in the City, County and Florida Department of Transportation Five-Year Work Program that are included in the City's Year 2020 Transportation Network. Illustration III-11 displays the Polk County 2020 SRC projects targeted for the Lakeland Planning Area and Table III-7 lists the projects for that component. The TPO will develop an implementation schedule for each SRC project in Polk County during the annual update of its Five-Year Transportation Improvement Program (TIP), in order to identify when project development and environment (PD&E) study, design engineering, right-of-way acquisition, and construction should occur to ensure the timely implementation of each SRC project.



**2030 Cost Feasible Plan - Highway Projects**



- Legend**
- Committed Road Improvements FY 2007 - 2011**
    - 2 to 4 Lane Widening
    - 4 to 6 Lane Widening
    - New 2 Lane Road
    - New 4 Lane Road
    - New Interchange
  - Funded Road Improvements FY 2012 - 2020**
    - 2 to 3/4 Lane Widening
    - 4 to 6 Lane Widening
    - New 2 Lane Road
    - New 4 Lane Road
    - New Interchange
  - Funded Road Improvements FY 2021 - 2030**
    - 2 to 3/4 Lane Widening
    - 6 to 10 Lane Widening
    - New 2 Lane Road
    - New 4 Lane Road
    - New Interchange
  - Unfunded Road Improvements FY 2012 - 2030**
    - Road Project
    - Interchange



ADOPTED  
June 21, 2007

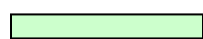
Note: In 2014, a proposed interchange on Interstate 4 at the Williams N-S Collector Road was removed from the Polk TPO 2035 Mobility Vision Plan (which superseded the 2030 LRTP that was in effect when the Comprehensive Plan Transportation Element was adopted) at the request of the Williams Company. The Development Order for the Williams DRI will require a preliminary engineering study of an overpass that allows for a future N-S Collector Road to connect University Boulevard with SR 33.

**TABLE III-7  
ADOPTED POLK COUNTY 2030 LONG-RANGE TRANSPORTATION PLAN  
PHASE ONE PROJECTS IN LAKELAND PLANNING AREA**


ROADWAY	FROM	TO	LANES	JURISDICTION
<b>COMMITTED PROJECTS: 2007- 2011</b>				
<i>SR 548 (George Jenkins Extension; In-Town Bypass)*</i>	<i>SR 600 (George Jenkins Boulevard)</i>	<i>US 98 (North Florida Avenue)</i>	<i>New 4/6</i>	<i>FDOT</i>
CR 35A (Kathleen Rd.)	Interstate 4	CR 542A (Galloway Rd.)	2 to 4	County
CR 582 (Griffin Road)	CR 35A (Kathleen Rd.)	US 98	2 to 4	County
CR 540A	Ewell Road @ Old Highway 37	CR 37B (Lkld. Highlands)	2 to 4	County
CR 540A	CR 37B (Lkld. Highlands)	US 98	2 to 4	County
Sleepy Hill Road	CR 35A (Kathleen Rd.)	US 98	2 to 4	City
CR 37B (Lkld. Highlands)	S. of SR 570 (Polk Parkway)	CR 540A	2 to 4	County
<i>County Line Road*</i>	<i>SR 60</i>	<i>West Pipkin Road</i>	<i>2 to 4</i>	<i>County</i>
Waring Road Extension	Old Medulla Road	West Pipkin Road	New 2 within 4 ROW	City
University Boulevard (Williams E-W Road)	SR 33	SR 570 (Polk Parkway)	New 4	FDOT
FPU Loop Road (Williams N. Loop)	University Boulevard	University Boulevard W. of SR 570	New 4 w/ 2 segment	FDOT
SR 570 (Polk Parkway)	@ Pace Road	NA	New Interchange	FDOT - Turnpike
CR 35A (Kathleen Road)	CR 542A (Galloway Rd.)	Duff Road	2 to 4	County
Edgewood Drive Extension	SR 563 (Harden Boulevard)	SR 37 (South Florida Avenue)	New 2	City
West Pipkin Road	Medulla Road	SR 563 Extension (North-South Route)	2 to 4	County
Old Polk City Road	North Socrum Loop Road	Walt Williams Road	2 to 4	County
<b>PLANNED PROJECTS: 2012-2020</b>				
<i>US 98*</i>	<i>Manor Drive (Bartow)</i>	<i>SR 540 (Winter Lake Rd.)</i>	<i>4 to 6</i>	<i>FDOT/ SIS</i>
<i>SR 570 (Polk Parkway)*</i>	<i>CR 546 (Old Dixie Highway)</i>	<i>Interstate 4</i>	<i>2 to 4</i>	<i>FDOT Turnpike/SIS</i>

US 98*	SR 570 (Polk Parkway)	Edgewood Drive	4 to 6	FDOT
SR 563 (North-South Route)*	Pipkin Road	SR 570 (Polk Parkway)	New 4	FDOT
US 92 (New Tampa Highway)*	Hillsborough County Line	Wabash Avenue	2 to 4	FDOT
US 98*	Edgewood Drive	In-Town Bypass	4 to 6	FDOT
Ewell Road	County Line Road	Old Highway 37	2 to 4	County
Old Polk City Road	Walt Williams Road	SR 33	2 to 4	County
Tom Costine Road Extension	Tom Costine Road (E. of Ridgeglen Dr.)	Old Polk City Road	New 2	County
Williams N-S Collector Road	@ Interstate 4		**	Private
Gapway Road	@ SR 570 (Polk Parkway)		New Interchange	County/Private

**Source:** Polk TPO, Polk County 2030 Long-Range Transportation Plan.

 Projects that have been completed, as of 2010.

 Projects under construction in 2010.

 Projects still committed for construction in a five-year work program.

\* Segments are components of the Strategic Intermodal System and/or West Central Florida CCC Regional Transportation Network. City of Lakeland has designated each segment as an “Intermodal Access Route”.

\*\* In 2014, a proposed interchange on Interstate 4 at the Williams N-S Collector Road was removed from the Polk TPO 2035 Mobility Vision Plan (which superseded the 2030 LRTP that was in effect when the Comprehensive Plan Transportation Element was adopted) at the request of the Williams Company. The Development Order for the Williams DRI will require a preliminary engineering study of an overpass that allows for a future N-S Collector Road to connect University Boulevard with SR 33.

A long standing priority of the City of Lakeland and Polk TPO was the SR 548 (In-Town Bypass II) project between US 98 (North Florida Avenue) and SR 600 (George Jenkins Boulevard) west of downtown. After many years on the drawing board, In-Town Bypass II opened on November 6, 2009 and now completes a critical freight and regional travel corridor around Downtown Lakeland. As freight rail traffic continues to grow through Downtown, the In-Town and associated improvements to SR 539 (Kathleen Road) will offer grade-separated alternatives to congested railroad crossings on SR 37 (Florida Avenue) and Massachusetts Avenue for motorists, transit and emergency response vehicles. It will be important to develop motorist advisory systems within the central part of Lakeland to guide motorists to the In-Town Bypass and north-south corridors such as SR 563 (Sikes Boulevard) and SR 539 (Kathleen Road) to reach full utilization of these corridors.



Between 2000 and 2010, the City continued its efforts to create a more livable and pedestrian-friendly Downtown area by removing portions of Main Street along the shores of Lake Mirror to expand Lake Mirror Park and its landmark promenade. The City also completed the two-way conversion of Lime Street between SR 37 (South Florida Avenue) and Ingraham Avenue to improve traffic safety within that corridor and improve connectivity between Downtown and Lake Morton. The Main and Lime Street projects follow past projects to improve walking and biking conditions in Downtown, including the two-way conversion of Main and Lemon Streets (once designated as Business Routes U.S. 92 and U.S. 98) in 2001 and the removal of South Lake Mirror Drive during the late 1990s.

In order to provide additional north-south capacity through Lakeland to relieve SR 37 (South Florida Avenue), FDOT and the City have supported the extension of SR 563 (North-South Route) between SR 570 (Polk Parkway) and West Pipkin Road. This new four-lane limited access arterial roadway has been implemented through the right-of-way acquisition phase; however, construction funding was removed from the Florida Department of Transportation's Five-Year Work Program in 2005 due to transportation funding shortfalls and skyrocketing project costs. The latest construction cost estimate for this one mile roadway alignment is approximately \$118 million. In 2009, the City commissioned a Project Development and Environment (PD&E) alignment study for an extension of Wabash Avenue between Harden Boulevard and Ariana Street. The Wabash Extension will also provide an important new north-south corridor for motorists as well as transit and non-motorized modes. The PD&E Study is scheduled to be completed in 2011 and be followed with design and right-of-way acquisition. The City will request that the Wabash Extension be advanced from Phase II of the Long-Range Transportation Plan (LRTP) to Phase I during the 2035 LRTP update scheduled for adoption in December 2010.

In terms of east-west roadway corridor improvements, the four-laning of US 92 (New Tampa Highway) was included in Phase I of the adopted LRTP as a "cost-feasible" improvement between Wabash Avenue and County Line Road. This section of US 92 is a major freight and goods movement corridor lined with facilities such as Publix Supermarkets' primary production and packaging facilities. Since this section of US 92 has a very high level of bicycle and pedestrian traffic, any roadway multi-laning project should include the appropriate sidewalk, bicycle lane and transit facilities to serve all travel modes.

Another critical corridor for roadway capacity improvements is State Road 33, between Interstate 4 at Exit 33 and Interstate 4 at Exit 38, which provides a direct link between Lakeland's downtown and the Bridgewater Development of Regional Impact, Williams Development of Regional Impact, Florida Polytechnic University (FPU) and Polk Commerce Center. In the 1980s, the City negotiated the dedication of a 200-foot wide right-of-way envelope throughout the entire length of this corridor with the initial land owner of the Bridgewater DRI, American Cyanamid, Inc. In 2007, the City negotiated a Campus Development Agreement with FPU through which it was provided with \$5.1 million to mitigate the university's concurrency impacts on SR 33. In 2008, the City executed a Developer Agreement with three entities within the Bridgewater DRI, through which \$1.9

million was ultimately provided to the City for mitigation improvements throughout the SR 33 corridor. Due to growth within the SR 33 corridor and funding provided by FPU, Bridgewater, FDOT and the City, capacity improvements are to be advanced from the post-2020 time frame shown in the 2030 LRTP.

The first phase of the *Long-Range Transportation Plan*, with a Year 2020 planning horizon, is a useful tool in the identification of future right-of-way needs so that likely corridors can be protected from development. For example, the City has executed Corridor Reservation Agreements with property owners within the “Bridgewater Collector” corridor in 2006 as a way to preserve an envelope for this important collector road and/or multi-use trail. A formal alignment determination must be completed by Year 2021. Improvements identified in the LRTP are reflected in conditions of approval for large Planned Unit Developments (PUDs) and Developments of Regional Impact (DRI). Depending on the scale of a project and the mitigation that is recommended, developers may be required to dedicate right-of-way and/or construct portions of corridors through project sites, such as was the case within the Lakeland Central Park DRI Development Order approved in 2008 (Kibler Boulevard) and Interstate Exchange Conditional Use zoning action approved in 2009 (Mall Hill Drive Extension). This issue is also addressed in the Future Land Use Element of the *Lakeland Comprehensive Plan*. Although all of the projects in the year 2020 Transportation Needs Plan will be necessary to maintain the currently adopted levels of service, not all of these projects are financially feasible (i.e., contained in the SRC or the City’s Year 2020 Transportation Network). If funding is unavailable for a needed project, the improvement is not considered to be financially feasible.

## **CANDIDATE PROJECTS FOR ALTERNATIVE SOURCES OF FUNDING**

Transportation funds are typically allocated by Federal or State agencies on a “fair-share” basis, generally defined as a combination of population and amount of gas tax receipts within a County. Impact fees assessed by local government depend on scale and location of development. Funding levels from these “traditional” sources have been very volatile since the mid-2000s due to declining gas tax collections and severe economic downturn that resulted in a general reduction in building activity and travel, nationwide. Many large projects have been funded through discretionary sources allocated on a regional- or state-wide basis depending on need. Lakeland and Polk County have successfully received funds through FDOT’s Intermodal Access Development Program for Lakeland Linder Regional Airport Southside Access Improvement projects including the:

- Extension and widening of County Line Road between Interstate 4 and State Road 60,
- Four-lane extension of West Pipkin Road between Medulla Road and County Line Road; and
- Two-lane extension of Waring Road between Old Medulla Road and West Pipkin Road, within a four-lane right-of-way envelope.

The City has also successfully received funding through the State of Florida's Economic Development Transportation Fund (EDTF) for strategic transportation improvements that are necessary to accommodate demand generated by new high-wage employers looking to locate to Lakeland and Polk County. In addition to the West Pipkin Road Extension to accommodate GEICO Direct's Regional Headquarters, the following projects have been recently awarded funding through the EDTF fund:

- Realignment of West Bella Vista Street to a reconstructed Fairbanks Avenue facility; completed in 2008, this realignment is located west of SR 539 (Kathleen Road) and was designed as the northern terminus of the Wabash Extension; and
- Signalization and median improvements at the County Line Road/Interstate 4 interchange (operational analyses were underway in 2010 with construction targeted for 2011).

### **STRATEGIC INTERMODAL SYSTEM (SIS):**

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In 2003, the Florida Legislature and Governor established the Strategic Intermodal System (SIS) to target transportation investments to those highway, mass transit, seaport, aviation and rail facilities that have the greatest statewide significance according to passenger/vehicular traffic volumes and amount/value of freight conveyed along designated routes. To fund the SIS, FDOT has established an investment policy that directs 75% of those transportation funds not already dedicated for specific programs to projects supporting the SIS. While the Polk TPO can provide input on the expenditure of funds on the SIS within Polk County, FDOT ultimately establishes funding priorities on these facilities at the District level or from FDOT Headquarters in Tallahassee. Since SIS highway facilities are intended to serve statewide travel needs and to preserve investments made in the SIS, the State of Florida has established more stringent level-of-service and access management standards that typically supersede local government regulations. Within the Lakeland Planning Area, the following are classified as SIS transportation facilities:

- Highway
  - Interstate 4;
  - SR 570 (Polk Parkway); and
  - US 98 (Polk Parkway to Bartow)
- Freight Rail:
  - CSX "S" Line extending north from the downtown Lakeland Wye;
  - CSX "A" Line traversing Lakeland area; and
  - CSX Line between "A" Line and Mulberry via Winston Rail Yard
- Passenger Rail:
  - AMTRAK Corridor through Lakeland;
  - Planned High-Speed Rail Corridor through Polk County; and
  - Planned High-Speed Rail Station in Lakeland.

While the SIS program and investment strategy has expedited projects in Polk County such as the six-laning of Interstate 4 and US 27 between SR 60 and Interstate 4, additional local and discretionary funds will be needed to complete other non-SIS improvements such as the four-laning of US 92 (New Tampa Highway) and SR 33.

### **TRANSPORTATION REGIONAL INCENTIVE PROGRAM (TRIP) & COUNTY INCENTIVE GRANT PROGRAM (CIGP):**

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In 2005, the Florida Legislature approved a landmark growth management bill that included special funding allocations for additional roadway projects that offer relief to the State Highway System and are determined to be regionally-significant by coalitions of metropolitan or transportation planning organizations (MPOs or TPOs) around Florida. As a member of the West Central Florida Chairs Coordinating Committee (CCC) in the Tampa Bay region, the Polk TPO has identified regional transportation facilities in Polk County that are included in a 2030 Regional Transportation Plan adopted jointly by the CCC and each individual MPO/TPO within the region. TRIP funding is provided to entities such as the CCC on a regional “fair-share” basis for prioritization and project selection with a 50% funding match required from a local or regional entity.

The City annually requests TRIP funding for projects to support economic development in the Lakeland area, including intersection improvements to the County Line/US 92 and US 92/Wabash Avenue intersections to leverage developer contributions required through the Lakeland Central Park DRI Development Order, approved in 2008. CIGP funding also requires a 50% local match; however, project applications must be submitted by counties instead of MPOs/TPOs or regional agencies. Polk County has successfully received CIGP funding for the four-laning of County Line Road between West Pipkin Road and SR 60.

In addition to SIS facilities, the following lists regionally-significant facilities that have been identified by the Polk TPO and CCC and included in the 2030 Regional LRTP.

- US 92 and SR 546 (Memorial Boulevard) east of Interstate 4;
- US 92 (Wabash Avenue): Memorial Boulevard to SR 600 (George Jenkins Boulevard);
- US 92 (New Tampa Highway): Wabash Avenue to County Line Road;
- County Line Road;
- US 98: SR 570 (Polk Parkway) to North Florida Avenue;
- SR 600/548 George Jenkins Boulevard: US 98 (North Florida Avenue) to US 92 (Wabash Avenue);
- US 98: SR 600/SR 548 (George Jenkins Boulevard) to Pasco County Line;
- Planned SR 563 Extension (North-South Route): SR 37 near CR 540A to SR 570 (Polk Parkway); and
- SR 37: Planned SR 563 Extension (North-South Route) to Mulberry.

**Freight/Goods Movement and Intermodal Access:** Lakeland has traditionally served as a major warehouse and distribution center with the presence of Publix Supermarkets' industrial operations and due to the city's central location within Florida and the Interstate 4 corridor between Tampa and Orlando. There is a continued need to improve routes to the Lakeland area's intermodal terminals, particularly those in western Lakeland, and to serve freight traffic without an origin or destination in the Lakeland area. This is expected to become a more important issue with as the Winter Haven Integrated Logistics Center (ILC) develops over time and additional truck and rail trips are made to access domestic and international markets via Interstate 4, Port of Tampa and Port Manatee.

In order to better position Lakeland and Polk County to obtain discretionary funding from Federal and State sources for improved connections to the SIS and regional transportation networks that are included in the 2030 and 2035 LRTP "cost-feasible" and "needs" plans, the City has identified primary access routes to intermodal facilities throughout the Lakeland area. Once improved, these routes will better serve truck traffic, improve interface with rail lines that traverse the City, and provide enhanced connections to other intermodal facilities such as Lakeland Linder Regional Airport and Lakeland's High-Speed Rail (HSR) Station. The goal is to provide safer and more efficient transportation facilities for freight and the bicyclists, pedestrians and transit patrons that share them with large trucks. The routes shown in Illustration III-14 include all designated SIS, regional transportation facilities and routes with greater than 10% heavy vehicle traffic based on Year 2008 data obtained from the Florida Department of Transportation. Example of other important intermodal access routes that are not included on the SIS or regional networks include SR 33, SR 659 (Combee Road), CR 546 (Saddle Creek Road) and SR 572 (Airport Road). For "Type I" roadways designated in the Transportation Element, corridor management strategies will be developed to control and coordinate access points and plan proper facilities to accommodate alternative transportation modes.



US 92 (New Tampa Highway) in western Lakeland



SR 33 @ Firstpark Boulevard North

The LRTP includes projects that were evaluated as good candidates for these and other discretionary sources of funding that might be available in the future; the list of these projects in the Lakeland Urban Area is found in Table III-8. While overall widening projects are listed for these corridors, intersection, operational (such as signalization) or other improvements at specific locations within these corridors could address the most critical need in a cost-effective manner within the funding constraints of any discretionary funding that is requested by the City of Lakeland or Polk County. For example, Economic Development Transportation Fund (EDTF) dollars awarded to attract a specific high-wage employer and mitigate its impacts are based on the number of new jobs created in the Lakeland area and is often enough to fund the installation of traffic signals, turn lanes or other such improvements near the development site and not a full multi-laning project throughout a corridor.

**TABLE III-8  
POLK COUNTY LONG-RANGE TRANSPORTATION PLAN NEEDS  
CANDIDATE PROJECTS FOR ALTERNATIVE SOURCES OF FUNDING  
ON CITY-DESIGNATED “INTERMODAL ACCESS ROUTES”**

ROADWAY	FROM	TO	LANES
State Road 33	Old Combee Road/Deeson Pointe Boulevard	Interstate 4	2 to 4
State Road 33	@ Interstate 4 (Exit 38)		Interchange Imp.
County Line Road	@ Interstate 4 (Exit 25)		Interchange Imp.
SR 659 (Combee Road)	CR 546 (Saddle Creek Road)	SR 33	2 to 4
CR 546 (Saddle Creek Road)	SR 659 (Combee Road)	CR 655 (Berkley Road)	2 to 4
Waring Road Phase II	West Pipkin Road	SR 572 (Drane Field Road)	2 to 4
Reynolds Road (including realignment)	SR 540 (Winter Lake Road)	US 92	2 to 4; New 4
Galloway-Memorial Boulevard Connector	CR 542A (Galloway Road)	SR 546 (Memorial Boulevard) east of Interstate 4	New 2
State Road 572 (Airport Road)	State Road 572 (Drane Field Road)	US 92 (New Tampa Highway)	2 to 4
CR 582 (Knights Station Road)	Hillsborough County Line	CR 35A (Kathleen Road)	2 to 4
CR 542A (Galloway Road)	US 92 (New Tampa Highway)	CR 35A (Kathleen Road)	2 to 4
County Line Road Extension	Swindell Road	CR 582 (Knights Station Road)	New 2

County Line Road	SR 60	Interstate 4	4 to 6
SR 563 (North-South Route)	West Pipkin Road	SR 37	New 4
US 92	Gary Road	CR 655 (Recker Hwy.)	4 to 6
<b>ROADWAY</b>	<b>FROM</b>	<b>TO</b>	<b>LANES</b>
US 98	West Daughtery Road	Duff Road	4 to 6
Interstate 4	Hillsborough County Line	Osceola County Line	6 to 10 w/ Express Ln. Ramps

Source: Polk County 2030 Long-Range Transportation Plan and 2035 Long-Range Plan, Polk TPO.

### CANDIDATE PROJECTS FOR LOCAL FUNDING AND PUBLIC/PRIVATE PARTNERSHIPS

The roadway projects discussed in this section may not technically be considered financially-feasible projects by Year 2020 based on the amount of local, State and Federal funding that is anticipated to be available through that period. They are considered to be, however, priority major/minor collector road projects for the City of Lakeland and could be financially-feasible depending on the amount of local funding that is available through Year 2020, primarily transportation impact fees and gas tax revenues available to the City and County for such improvements. Public-Private Partnerships are also a critical means of implementing many of these projects. For example, a large development may be required to incorporate a collector corridor into its design and 1) dedicate the necessary right-of-way (including drainage and retention) with public agency constructing the road, or 2) dedicate right-of-way for and construct the road at the time of development activity with connections to the existing public road system. The realignment and construction of South Pipkin Road through the Parkway Corporate Center is an instance where a collector road was incorporated into the design of this major employment center development project that also serves the general public by relieving adjacent corridors such as Waring and Pipkin Creek Roads. Through a Public-Private Partnership, the developer is eligible for transportation impact fee credits in compliance with the latest adopted Transportation Impact Fee Ordinance adopted by the City.



South Pipkin Road in Parkway Corporate Center

The candidate projects for future local funding or public-private partnerships in Table III-9 and are intended to address two types of future highway needs in the Lakeland Planning

Area. First, are good north-south routes that remove local traffic from major corridors such as County Line Road, US 98 and SR 563 (Harden Boulevard). Secondly, development of a good grid network that provides multiple efficient transportation routes for motorists, bicyclists, pedestrians and transit patrons.

**TABLE III-9**  
**POLK COUNTY LONG-RANGE TRANSPORTATION PLAN**  
**CANDIDATE PROJECTS FOR LOCAL FUNDING OR PUBLIC-PRIVATE PARTNERSHIPS**

ROADWAY	FROM	TO	LANES	JURISDICTION
Wabash Avenue Extension - South	Ariana Street	Harden Boulevard	New 2/4	City
Wabash Avenue	US 92 (New Tampa Highway)	Ariana Street	2 to 4	City/County
Wabash Avenue	Tenth Street	US 92 (Memorial Boulevard)	2 to 4	City/County
Wabash Avenue Extension - North	West Bella Vista Street @ Fairbanks Avenue	Tenth Street	New 2	City/County
Beacon Road Extension	SR 563 (Harden Boulevard)	Wabash Avenue Extension - South	New 2	City
Crevasse – Lakeland Park Drive Connector	US 98	Lakeland Park Drive	New 2	City
Mall Hill Road Extension	West Bella Vista Street	CR 35A (Kathleen Road)	New 2	City/County
Interstate Drive Extension	Interstate Drive (east of SR 539/Kathleen Road)	Mall Hill Drive	New 2	City
N. Galloway Road Extension	Galloway Road @ Gibsonia-Galloway Road	Duff Road @ Lewis Road	New 2	County
W. Daughtery Road Extension	W. Daughtery Road @ Gibsonia-Galloway Road	Sleepy Hill Road	New 2	City/County
<b>Southwest Lakeland Sector Plan</b>				
Flagler Park Boulevard (formerly Kibler Boulevard)	CR 542 (Old Tampa Highway)	SR 572 (Airport Road)	New 4	Public/Private
Flagler Park Boulevard (formerly Kibler Boulevard)	SR 572 (Airport Road)	North Parkway Frontage Road Near Waring Road	New 2	Public/Private



ROADWAY	FROM	TO	LANES	JURISDICTION
Gateway Boulevard Extension (Incl. New Interchange)	County Line Road	SR 570 (Polk Parkway)	New 2 w/ New Int.	Public/Private
Hamilton Road Extension	Drane Field Road	Whitten Road @ Gateway Boulevard	New 2	Public/Private
Hamilton Road Improvements	Medulla Road	Drane Field Road	Imp. 2	Public/Private
Medulla Road Ext.	West Pipkin Road @ Medulla Road	Ewell Road	New 2	Public/Private
County Line Road Backage Road	West Pipkin Road	Medulla Road	New 2	Public/Private
<b><i>Northeast Lakeland/Williams DRI*</i></b>				
Bridgewater Collector Road	SR 33 @ Firstpark Boulevard North	Walt Williams Road	New 2	Public/Private
Williams N-S Collector	University Boulevard	State Road 33	New 2	Public/Private
Williams S. Loop	University Boulevard	University Boulevard @ Research Way	New 2	Public/Private
Mt. Olive Road Extension	Pace Road @ Polk Parkway NB Ramp	Mt. Olive Road	New 2	Public/Private
Williams S. Loop Connector	Williams S. Loop	Williams S. Loop	New 2	Private
Gapway Road Extension	SR 570 (Polk Parkway)	Williams S. Loop	New 2	Public/Private
<b><i>Other Corridors</i></b>				
Glendale Parkway Extension	Lakeland Highlands Road	US 98	New 2	Public/Private
SR 659 (Combee Road) Realignment	SR 659 (Combee Road)	US 98 @ Glendale Parkway	New 2	Public/Private
CR 546 (Saddle Creek Road Extension)	East Lake Parker Drive	SR 659 (Combee Road)	New 2	Public/Private

ROADWAY	FROM	TO	LANES	JURISDICTION
CR 542 (Old Tampa Highway)	Clark Road	SR 572 (Airport Road)	2 to 4	Public/Private
Marcum Road Extension	Green Road	US 98	New 2	Public/Private
Raulerson/DR Bryant/Banana Connector/Banana Road Corridor	CR 35A (Kathleen Road)	US 98	New 2 (4L ROW)	Public/Private

**Sources:** Polk County 2030 Long-Range Transportation Plan, Polk TPO, amended in 2007; 2035 Long-Range Plan, adopted in 2010; City of Lakeland Southwest Sector Plan, approved in 2008.

\* In 2014, a proposed interchange on Interstate 4 at the Williams N-S Collector Road was removed from the Polk TPO 2035 Mobility Vision Plan (which superseded the 2030 LRTP that was in effect when the Comprehensive Plan Transportation Element was adopted) at the request of the Williams Company. The Development Order for the Williams DRI will require a preliminary engineering study of an overpass that allows for the N-S Collector Road to connect University Boulevard with SR 33.

## CONSTRAINED CORRIDORS AND DESIGN EXCEPTION AREAS

In order to have a truly sustainable transportation system, it is important to invest in the most appropriate transportation modes that meet travel demand and are sensitive to adjacent commercial and residential areas to minimize long-term negative community impacts. In some instances, adding lanes to a congested roadway segment within a highly-developed area will have greater negative community impacts than the transportation problem it was meant to solve. For example, a road widening project could create a barrier between residences and nearby community facilities such as parks and deter access via foot or bicycle because the new roadway is designed to move more cars as opposed to more people. Participants in a day-long public planning session conducted during the development of the Citywide Pathways Plan reaffirmed that several arterial corridors are significant barriers to bicycle and pedestrian travel, including Florida Avenue and Memorial Boulevard.

Several corridors that are not expected to operate at an acceptable level-of-service by Year 2030 have been identified as “constrained” by the Polk TPO, meaning that widening projects are not considered feasible due to right-of-way constraints, community/environmental impacts and the lack of a logical terminus to distribute traffic from the widened roadway. Additional corridors have been proposed for inclusion in the *2035 Mobility Vision Plan* that will be adopted by the TPO in 2010. In all of these corridors, a focus will be placed on intersection and other such “transportation system management” projects intended to improve traffic flow. Bicycle, pedestrian and transit facility improvements will also be critical to improve the viability of those modes to address travel demand. The TPO is also proposing the creation of “design exception areas” within which the City will work with Polk County and FDOT during the Project Development and Environment Study (PD&E) and engineering processes to develop acceptable roadway widening designs that minimize impacts on adjacent areas and accommodate enhanced

bicycle, pedestrian and/or transit facilities. All of the “constrained” and “design exception” corridors identified by the City of Lakeland can be found in Table III-10.

**TABLE III-10  
POLK COUNTY LONG-RANGE TRANSPORTATION PLAN  
CONSTRAINED CORRIDORS AND DESIGN EXCEPTION CORRIDOR**

<b>CONSTRAINED CORRIDORS</b>			
<b>ROADWAY</b>	<b>FROM</b>	<b>TO</b>	<b>COMMENTS AND MOBILITY OPTIONS</b>
Edgewood Drive	SR 37 (South Florida Avenue)	US 98	Neighborhood impacts; opportunities for transit and Lake-to-Lake Bikeway improvements.
SR 37 (South Florida Avenue)	West Pipkin Road/Lake Miriam Drive	Main Street	Commercial impacts, severe right-of-way constraints, very high bicycle/pedestrian volumes; planned premium transit improvements in LRTP.
SR 35/US 98 (North Florida Avenue)	Main Street	Interstate 4	Neighborhood and commercial impacts (especially in Dixieland district), very high bicycle/pedestrian volumes; planned bus rapid transit service in LRTP—designation does not apply to facilities associated with premium transit service.
Cleveland Heights Boulevard	Lake Miriam Drive	Lake Hollingsworth Drive	Neighborhood impacts, very high bicycle/pedestrian volumes; opportunities for Lake-to-Lake Bikeway improvements.
Lake Miriam Drive	SR 37 (South Florida Avenue)	Lakeland Highlands Road	Neighborhood impacts; bicycle/pedestrian improvement needs.
West Pipkin Road	Harden Boulevard	SR 37 (South Florida Avenue)	Neighborhood impacts; severe right-of-way and utility constraints; opportunities for transit and bicycle/pedestrian improvements.
SR 659 (Combee Road)	US 98	CR 546 (Saddle Creek Road)	Commercial impacts and right-of-way constraints, very high bicycle/pedestrian volumes; opportunities for transit improvements; pedestrian facilities needed.
Massachusetts Avenue	Lake Morton Drive	US 92 (Memorial Boulevard)	Downtown and commercial impacts; severe right-of-way constraints; very high bicycle/pedestrian traffic volumes; transit, bicycle and pedestrian improvements needed.
SR 33 (Lakeland Hills Boulevard)	US 92 (Memorial Boulevard)	Interstate 4 EB Ramps @ Lakeland Harbor Circle	Neighborhood and commercial impacts; very high bicycle/pedestrian volumes; emphasis on improved transit services and bicycle/pedestrian improvements.
US 92 (Memorial Boulevard)	Gary Road	Wabash Avenue	Commercial and neighborhood impacts; very high bicycle/pedestrian volumes; opportunities for transit improvements.

CONSTRAINED CORRIDORS			
ROADWAY	FROM	TO	COMMENTS AND MOBILITY OPTIONS
SR 700 (North Lake Parker Avenue)	US 98 (Bartow Road)	US 92 (Memorial Boulevard)	Neighborhood and commercial impacts; physical constraints; opportunities for parallel bicycle and pedestrian improvements.
SR 563 (Dr. Martin Luther King Avenue)	SR 539 (Kathleen Road)	US 92 (Memorial Boulevard)	Severe neighborhood impacts and very high bicycle/pedestrian volumes. Lake-to-Lake Bikeway improvements are needed.
SR 572 (Drane Field Road)	SR 572 (Airport Road)	Pipkin Creek Road	Parallel facility to toll facility, SR 570 (Polk Parkway).
Gary Road	Main Street	US 92 (Memorial Boulevard)	Neighborhood and commercial impacts; right-of-way and physical constraints (CSX underpass) and opportunities for bicycle/pedestrian improvements. Lack of logical southern terminus.
SR 563 (Sikes Boulevard)	Edgewood Drive Extension @ Grasslands Boulevard	SR 600 (George Jenkins Boulevard) @ SR 539 (Kathleen Road)	Neighborhood impacts; severe physical constraints in Downtown areas and lack of logical northern terminus.
South Pipkin/Pipkin Creek Road	West Pipkin Road	SR 572 (Drane Field Road) @ S. Parkway Frontage	City-designated suburban canopy road in Southwest Lakeland Sector Plan.
Yates Road (South of Wagner Elementary)	Wagner Elementary School	Ewell Road	City-designated suburban canopy road in Southwest Lakeland Sector Plan.
Medulla Road	West Pipkin Road	County Line Road	City-designated suburban canopy road in Southwest Lakeland Sector Plan.
US 98	Griffin Road	Daughtery Road	Corridor is already six- and eight-lane cross section.
DESIGN EXCEPTION CORRIDOR			
US 98 (Bartow Road)	Edgewood Drive	Lake Parker Avenue	Six-lane improvement must include dedicated facilities for BRT service identified by TPO.
US 98 (Bartow Road)	SR 700 (Lake Parker Avenue)	Main Street	Corridor identified as bus rapid corridor by TPO.

Source: Polk TPO Draft 2035 Long-Range Plan; City of Lakeland, 2010.

## TRANSPORTATION AND LAND USE VISIONING

The Polk Transportation Planning Organization (TPO) staff worked with local governments throughout Polk County to develop alternative land use scenarios that were used for highway needs testing during the development of the *2025 Long-Range Transportation Plan*, adopted in 2000. Alternative population and employment forecasts were developed for each of the following three (3) sub-areas impacting the Lakeland Planning Area:

- West Lakeland:
  - *Boundaries:* Interstate 4, Galloway Road, Tenth Street (north); Shepherd Road (south); County Line Road (west); and Winston Rail Yard (east).
  - *Activities and Uses:* Lakeland Linder Regional Airport, Publix Supermarkets Corporate Headquarters, GEICO Direct Regional Headquarters, Rooms-to-Go Distribution Center.
  - *Transportation Facilities:* SR 570 (Polk Parkway), County Line Road, Airport Road, West Memorial Boulevard @ Interstate 4.
  - *Changes Since Year 2000:* Completion of new passenger terminal at Airport in 2002, completion of Publix Headquarters Phase I in 2003, continued implementation of Parkway Corporate Center, completion of new West Memorial Boulevard interchange at Interstate 4 in 2005 as part of Interstate six-laning project, approval of Lakeland Central Park DRI in 2008.
  
- Northeast Polk Parkway:
  - *Boundaries:* State Road 33 (north); US 92 (south); Bridgewater DRI (west); and Polk Commerce Center (east).
  - *Activities and Uses:* Bridgewater DRI, Williams DRI, Polk Commerce Center DRI.
  - *Transportation Facilities:* SR 570 (Polk Parkway), Interstate 4, State Road 33, Williams Collector Roads.
  - *Changes Since Year 2000:* Annexation of Williams DRI in 2001, approval of Florida Polytechnic University Master Plan and Campus Development Agreement in 2007 and removal of campus site from Williams DRI in 2007, award of American Reinvestment and Recovery Act (ARRA) funding for University Boulevard and Research Way (formerly known as Williams E-W Connector) between Polk Parkway and State Road 33 in 2009, and start of construction on Polk Parkway/Pace Road interchange in 2010. In 2014, the Williams interchange was removed from the Polk TPO 2035 Mobility Vision Plan (Long-Range Transportation Plan) at the request of the Williams Company along with substantial reductions in their development plan. A preliminary engineering study is called for in the Williams DRI in order to assess a future overpass connecting University Boulevard with SR 33 north of the interstate. The overpass could provide better connectivity across Interstate 4 and distribute traffic around adjacent interchanges at SR 33 (Exit 38) and the Pace Road interchange on SR 570/Polk Parkway.
  
- North Bartow:
  - *Boundaries:* US 98 corridor between SR 570 (Polk Parkway) and Bartow, including Clear Springs Mine development area in eastern Bartow and Old Florida Plantation DRI area in northeast Bartow.

- *Activities and Uses:* Polk State College/Florida Polytechnic University joint campus near US 98 and SR 540 intersection; Highland City Town Center, University Parkway Corporate Center; Old Florida Plantation DRI, Clear Springs Mine Area.
- *Transportation Facilities:* US 98 (Bartow Road), Fort Fraser Trail, LAMTD Route #22L (Bartow Express).
- *Changes Since Year 2000:* Zoning approval and construction of Highland City Town Center (Phase I); continued implementation of University Parkway Corporate Center; adoption of US 98 Corridor Access Management Plan in 2004 and completion of Fort Fraser Trail (Phase I) in 2006; purchase of Old Florida Plantation site by Southwest Florida Water Management as part of Lake Hancock Restoration project and Central Florida RPC review of 2009 Clear Springs Detailed Specific Area Plan #1 for potential DRI project.

The sub-areas analysis was used to identify transportation impacts associated with each scenario, and was forwarded to each affected local government for use in the development of their Local Comprehensive Plan Transportation Elements in 2001. This exercise was used as a way to critique the 2020 “base” population and employment totals that were developed for the *2020 Long-Range Transportation Plan* in the mid-1990's, and to determine which scenarios, if any, would be included in the population and employment control totals that would be used for 2025.

### **POLK TPO 2060 TRANSPORTATION VISION PLAN:**

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During the period between 2005-2010, a number of long-range “visioning” initiatives were undertaken to engage the public and civic leaders within the Tampa Bay (OneBay), East Central Florida (How Shall We Grow?) and Central Florida Regional Planning Council areas (Heartland 2060) in discussions about how those regions should develop over the next fifty years. This input was provided through a wide range of methods following extensive data collection and analysis to demonstrate environmental, transportation and social impacts of continuing the current development trends through Year 2060, compared to concentrating future growth into denser centers around the county to preserve open space and reduce inefficiencies associated with sprawl development. Polk County is unique in that it is located within each of those regions studied and is playing a pivotal role in the planning of the Interstate 4 super-region. Polk TPO conducted a transportation-based visioning exercise for Polk County based on the recommendations from OneBay and How Shall We Grow?, and utilized population and employment projections it prepared through Year 2060 for use in the Heartland 2060 visioning effort for Polk, Hardee, Highlands, DeSoto, Okeechobee, Glades and Hendry Counties. During this process, the TPO staff commissioned a consultant study to inventory developable lands within Polk County and met with local government staff to review growth plans within their jurisdictions. Through a working group of the TPO’s Technical Advisory Committee (TAC), the increment of population and employment growth not already attributed to an approved development was assigned to developable lands within “centers” of expected high-growth activity around Polk

County. Four of the five top centers for person trip generation and interaction with other activity centers in Year 2060 are in the Lakeland Planning Area and are as follows (see Illustration III-12):

1. Lakeland City Center (including Downtown): 81,779 peak-season daily person trips;
2. Lakeside Village/Oakbridge DRI: 68,289 peak-season daily person trips;
3. Lakeland Square Mall: 62,524 peak-season daily person trips;
4. Eagle Ridge Mall (Lake Wales): 59,774 peak-season daily person trips; and
5. US 98 Center at Polk State College: 53,557 peak-season daily person trips.

Tables III-11(A) through III-14(B) provide a description of each of the Lakeland-area key activity centers as identified by the TPO for the year 2060, including the top ten “center interactions” between those top centers:

### Lakeland City Center

**TABLE III-11(A)  
PROJECTED POPULATION AND EMPLOYMENT GROWTH**

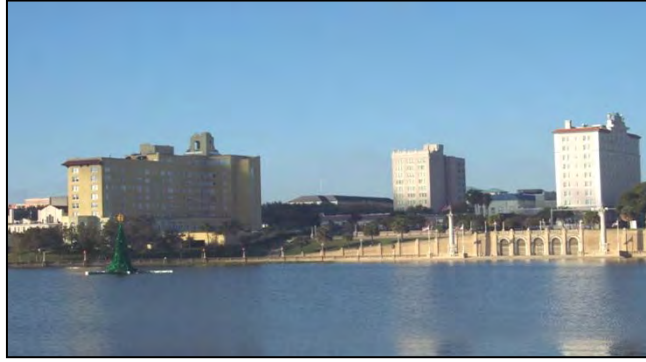
	2006	2035 Centers Forecasts	2060 Centers Forecast	Change from 2006-2060
Population	7,338	9,804	14,506	+7,168
Employment	13,172	17,387	24,114	+10,942

Source: Polk TPO 2060 Vision Plan.

**TABLE III-11(B)  
TOP TEN CENTER INTERACTIONS  
TO/FROM LAKELAND CITY CENTER (YEAR 2060)**

Center	Peak Season Weekday Person Trips
Lakeside Village/Oakbridge DRI	12,864
Lakeland Square Mall	11,592
US 98 Center @ PSC Campus	7,930
Lakeland Regional Medical Center	6,014
Lakeland Highlands Road @ Polk Pkwy	4,365
Bridgewater	3,862
County Line Road BPC	3,238
Florida Polytechnic University (New Campus)	3,220
Merchants Walk (S FL Ave @ Polk Pkwy)	3,098
Lakeland Central Park DRI	2,627

Source: Polk TPO 2060 Vision Plan.



Downtown Lakeland at Lake Mirror

**Lakeside Village/Oakbridge DRI**

**TABLE III-12(A)  
PROJECTED POPULATION AND EMPLOYMENT GROWTH**

	2006	2035 Centers Forecasts	2060 Centers Forecast	Change from 2006-2060
Population	5,098	21,350	25,858	+20,760
Employment	828	7,668	11,194	+10,366

Source: Polk TPO 2060 Vision Plan.

**TABLE III-12(B)  
TOP TEN CENTER INTERACTIONS  
TO/FROM LAKESIDE VILLAGE/OAKBRIDGE DRI (YEAR 2060)**

Center	Peak Season Weekday Person Trips
Lakeland City Center	12,864
Lakeland Square Mall	6,476
County Line Road BPC	5,824
US 98 Center @ PSC Campus	5,455
Lakeland Central Park DRI	4,601
Lakeland Highlands Road @ Polk Pkwy	3,900
Merchants Walk (S FL Ave @ Polk Pkwy)	3,717
Lakeland Linder Regional Airport	3,175
Lakeland Regional Medical Center	2,762
Galloway Road BPC	2,504

Source: Polk TPO 2060 Vision Plan.





Lakeside Village in Oakbridge

### Lakeland Square Mall

**TABLE III-13(A)  
PROJECTED POPULATION AND EMPLOYMENT GROWTH**

	2006	2035 Centers Forecasts	2060 Centers Forecast	Change from 2006-2060
Population	8,439	14,673	16,599	+8,160
Employment	6,427	9,302	11,309	+4,882

Source: Polk TPO 2060 Vision Plan.

**TABLE 13(B)  
TOP TEN CENTER INTERACTIONS  
TO/FROM LAKELAND SQUARE MALL (YEAR 2060)**

Center	Peak Season Weekday Person Trips
Lakeland City Center	11,592
Lakeside Village/Oakbridge DRI	6,476
Florida Polytechnic University (New Campus)	6,021
Bridgewater	4,537
Lakeland Regional Medical Center	4,409
County Line Road BPC	3,411
US 98 Center @ PSC Campus	2,633
Galloway Road BPC	2,124
Lakeland Central Park DRI	2,085
Lakeland Highlands Road @ Polk Pkwy	1,438

Source: Polk TPO 2060 Vision Plan.



Hampton Hills Townhomes

**US 98 Center at PSC Campus**

**TABLE III-14(A)  
PROJECTED POPULATION AND EMPLOYMENT GROWTH**

	2006	2035 Centers Forecasts	2060 Centers Forecast	Change from 2006-2060
Population	8,256	8,986	11,744	+2,488
Employment	2,741	6,788	10,764	+8,023

Source: Polk TPO 2060 Vision Plan.

**TABLE III-14(B)  
TOP TEN CENTER INTERACTIONS  
TO/FROM US 98 CENTER AT PSC CAMPUS (YEAR 2060)**

Center	Peak Season Weekday Person Trips
Lakeland City Center	7,930
Lakeland Highlands Road @ Polk Pkwy	6,354
Lakeside Village/Oakbridge DRI	5,455
Highland City Town Center	3,001
Lakeland Square Mall	2,633
Bridgewater	2,453
SR 540 Government Complex	2,309
Merchants Walk (S FL Ave @ Polk Pkwy)	2,025
Lakeland Regional Medical Center	1,880
Bartow City Center	1,530

Source: Polk TPO 2060 Vision Plan.

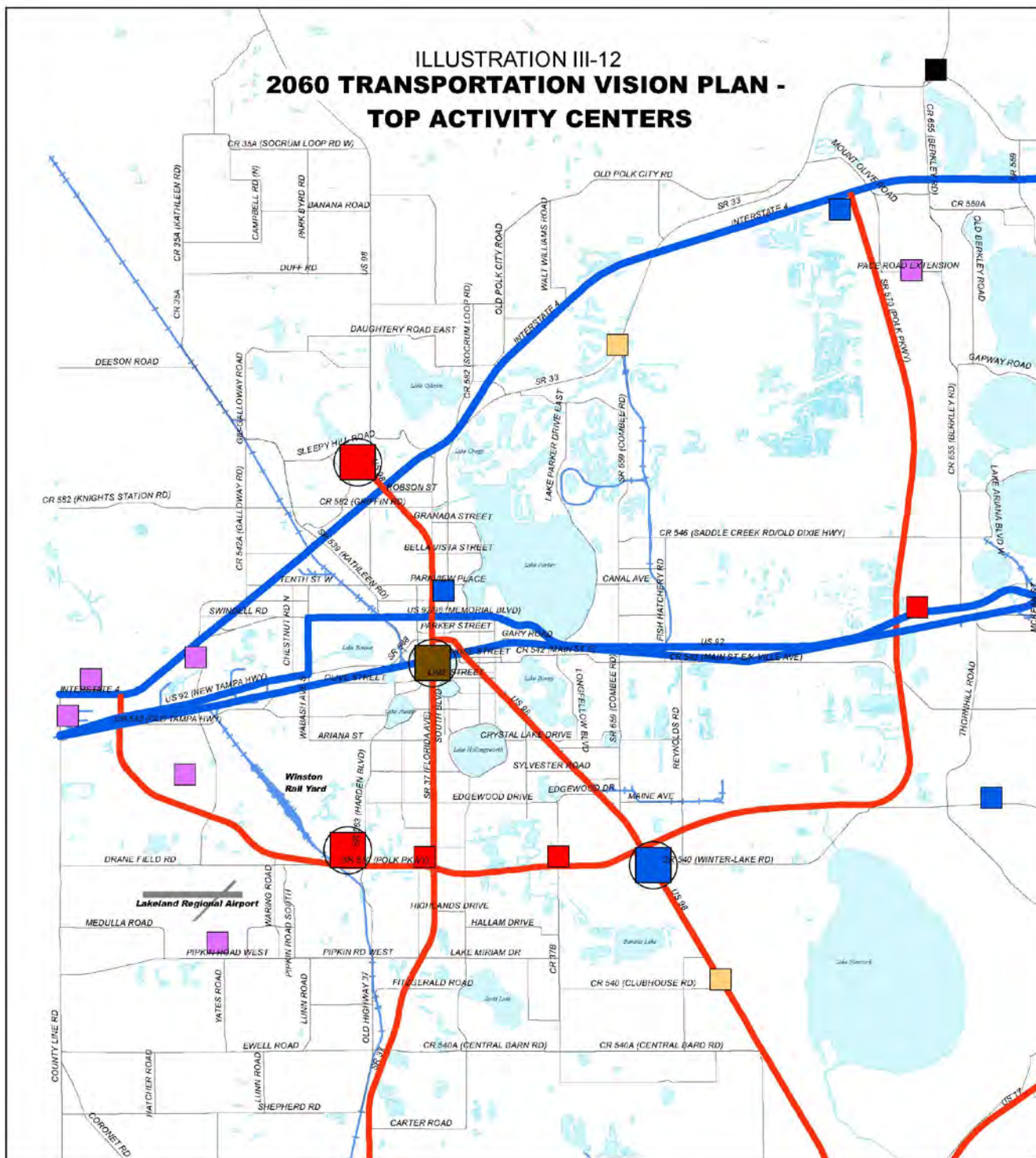
### **Other Lakeland Area Centers**

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In addition to the activity centers discussed above, several more clusters of development activity were assumed to receive a greater share of population and employment growth through Year 2060, including:

- County Line Road Business Park Center (County Line Road @ Interstate 4);
- Swindell Road Industrial (Swindell Road, east of County Line Road);
- Galloway Road Business Park Center (Galloway Road @ South Frontage and proposed Galloway-Memorial Boulevard Connector);
- Lakeland Central Park DRI;
- Lakeland Linder Regional Airport;
- Merchants Walk (South Florida Avenue at Polk Parkway);
- Lakeland Highlands Road at Polk Parkway;
- Lakeland Regional Medical Center/Watson Clinic Medical Corridor;
- Bridgewater DRI (SR 33 @ SR 659);
- Florida Polytechnic University Campus/Williams DRI; and
- Highland City Town Center.

## ILLUSTRATION III-12 2060 TRANSPORTATION VISION PLAN - TOP ACTIVITY CENTERS



Source: Polk Transportation Planning Organization, Adopted 2060 Vision Plan

	 <p>Top Activity Center</p>	<p><b>2060 TVP Centers</b></p> <ul style="list-style-type: none"> <li> Business Commerce</li> <li> Commercial (Regional)</li> <li> Community Mixed Use (Local)</li> <li> Community Mixed Use (Regional)</li> </ul>	<ul style="list-style-type: none"> <li> Historic Town Center</li> <li> Integrated Logistics Center</li> <li> Professional (Regional)</li> <li> Urban Center</li> </ul>
<ul style="list-style-type: none"> <li> Core Transit Corridor</li> <li> Regional Core Transit Corridor</li> </ul>			

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## MULTI-MODAL CORRIDORS

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Unlike the alternative land use scenarios developed during the 2025 LRTP update in 2000, multi-modal connections were identified during the *2060 Transportation Vision Plan* to take advantage of the increased densities and mix of uses contained in each of the planned development centers around Polk County. Listed below are the multi-modal corridors that have been identified in the Lakeland area, including the centers served and potential transportation options between them to meet future travel demand.

- **US 98/SR 35/SR 60: Bartow to Lakeland**
  - *Limits:* Clear Springs to Interstate 4 @ Lakeland Square Mall.
  - *Centers Served:* Clear Springs, Bartow, Highland City Town Center, US 98 Center @ PSC, Lakeland City Center, LRMC/Medical Center and Lakeland Square Mall.
  - *Public Transportation Service:* Bus rapid transit (BRT), possible light rail, phased service development.
  - *Policy Recommendations:* Access management controls, considerations for Highland City community, increased densities along corridor to support premium transit service.
  
- **SR 37 Corridor: Mulberry to Lakeland**
  - *Limits:* Mulberry to Interstate 4 @ Lakeland Square Mall.
  - *Centers Served:* Mulberry, Merchants Walk, Lakeland City Center, LRMC/Medical Center, Lakeland Square Mall.
  - *Public Transportation Service:* Phased service expansion, BRT between West Pipkin Road and Lakeland Square, mix of BRT services/facilities including mixed-traffic, queue jump locations and separate busway operations.
  - *Policy Recommendations:* Strong infill, intensification and redevelopment policies.
  
- **SR 570/Polk Parkway Corridor**
  - *Limits:* Entire length of Polk Parkway.
  - *Centers Served:* County Line Road Business Park Center, Lakeland Central Park DRI, Lakeside Village/Oakbridge DRI, Merchants Walk, Lakeland Highlands at Polk Parkway, US 98 Center at PSC Campus, SR 540 Government Center, US 92 Center at Auburndale, Polk Commerce Center, Florida Polytechnic University.
  - *Public Transportation Service:* BRT, development of key transfer stations with public transportation service.
  - *Policy Recommendations:* Design and location of station areas within centers to provide efficient access.

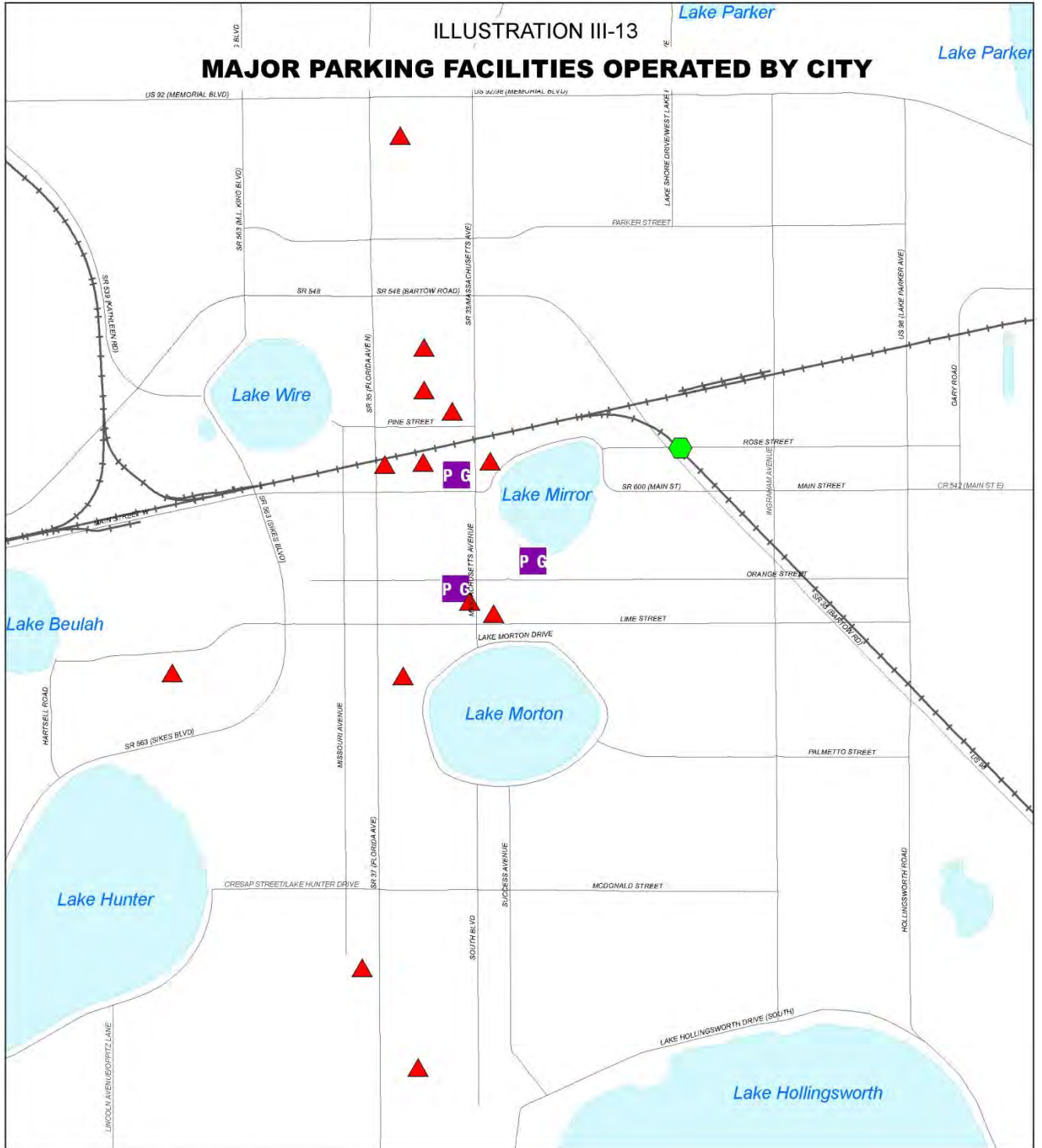
- **Interstate 4:**
  - *Limits:* Hillsborough County Line to Osceola County.
  - *Centers Served:* County Line Road BPC, Swindell Road Industrial, Galloway Road Business Park, Lakeland Square Mall, Bridgewater, Florida Polytechnic University, Polk Commerce Center, Victor Posner City Center (at US 27), Four Corners DRI
  - *Public Transportation Service:* Multi-regional transportation planning approach with express bus, high-speed rail, integration with planned Polk Parkway BRT service.
  
- **US 92/CSX Rail Corridor**
  - *Limits:* Hillsborough County to Osceola County Line
  - *Centers Served:* County Line Business Park Center, US 92 Center at Auburndale and the following City Centers: Lakeland, Auburndale, Lake Alfred, Haines City and Davenport.
  - *Public Transportation Service:* Phased service development, local service, express bus, bus rapid transit and commuter rail.
  - *Policy Recommendations:* Increased residential densities, access management policies.

The designation of these multi-modal corridors will help guide long-range public transportation investments and land use decisions in Polk County and will provide a blueprint for how roadway improvements will be planned to accommodate multiple modes of travel through the Project Development and Environment (PD&E) and design processes undertaken by the City, County and FDOT.

## **PARKING ANALYSIS**

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Transportation Elements within local government comprehensive plans are required to identify “significant” parking facilities and their duration – that is, the maximum amount of time a car is allowed to park in a particular space. Illustration III-13, Lakeland’s Significant Parking Facilities, gives the location of most of the parking garage, surface lot and other parking facility information in downtown Lakeland. This map inventory is maintained by the City’s small Parking staff of a supervisor and five parking service attendants. The City completed a major renovation of the Orange Street Garage by early 2001. The spaces within that garage are leased by two major downtown employers.



Source: Lakeland Community Development Department, 2010



- City Surface Lot
- Parking Garage
- Park & Ride Lot



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An analysis of the supply or capacity of downtown parking facilities is shown in Table III-15. In addition to the garage space, much of which is leased or otherwise committed, the public has several surface lots from which to choose. Approximately half of the parking spaces in these lots are metered. While the on-street parking in downtown is not metered, it's generally restricted to two-hour duration. Additional on-street parking is available in unmarked spaces along Lake Morton and Lake Wire. Since 2000, the amount of parking provided by the City in the Downtown area has increased by 12.7%. The Lakeland Center provides 3,000 exterior and 500 additional overflow parking spaces for events at this major entertainment and convention facility west of SR 563 (Sikes Boulevard). In 2010 daily parking rates for automobiles were \$7, with overnight parking permits available during special events at a rate of \$30 per night.

The parking data indicates that in the last ten years (since the 1999/2000 inventory), surface lot parking spaces increased significantly. While the total public and private garage parking remained relatively flat, surface lot parking increased from 553 to a total of 803, or by 45 percent. The surface lot spaces that are leased have remained at over 60 percent while metered spaces decreased by 25 percent and spaces with no fee increased by over 200% from 69 to 218. Total public spaces increased from 148 to 277, or 87 percent. Most surface inventory was added at South Tennessee Ave, Bay St. and North Massachusetts Ave. Private parking garage spaces total about 461 with only 320 spaces used, or 30% unused as of 2010. Thus, there appears to be an abundance of parking in the downtown area, and increasingly at no or low cost. Transit experts recommend market rate charges for parking in areas in which a community wishes to increase transit use, i.e., by increasing the cost to park individual vehicles.

The City's parking staff work on a regular basis with a parking task force of the Downtown Lakeland Partnership (DLP) and Lakeland Downtown Development Authority (LDDA) to seek solutions to parking needs, including for the handicapped. However, a long-term strategy or plan for parking in the downtown has not been formulated. The City should explore all feasible options with the official and other downtown stakeholders; these options may include but not be limited to dedicated parking spaces and/or a remote lot for downtown employees and increasing the cost for parking. The affected parties and the City may wish to explore establishing a downtown Transportation Management Association (TMA) to cooperatively address issues of parking, transit and trolley use, sidewalk and streetscape, and roadway improvements which impact the Downtown area. As of 2010, the City, LDDA and DLP will be working with the local business and arts community to develop a bicycle parking program for Downtown Lakeland, aimed at installing basic and decorative signature racks along sidewalks and within public spaces.

***Land Development Regulations (LDRs):*** Except for bicycle parking, Lakeland's downtown core is exempt from the off-street parking and loading requirements contained in the City LDRs. New buildings constructed within the downtown area must provide bicycle parking facilities, with flexibility in design and placement being allowed to account for building design and site constraints. For example, bicycle parking can be installed within a



new building as long as such placement is noted on the site plans being reviewed by City staff. Bicycle parking is not required for the renovation of existing buildings in Downtown.

In 2010, the LDRs were amended to replace minimum citywide off-street parking space requirements with maximum space allowances to reduce the amount of land dedicated to parking and to increase the viability of transit and other means of accessing a project site. The amended LDRs also provide increased credits for bicycle parking provisions, accessibility to transit routes with 30-minute frequencies and where such offsets can be used to protect trees on a development site.

**TABLE III-15  
CITY PARKING SUPPLY IN LAKELAND'S CENTRAL BUSINESS DISTRICT**

CITY PARKING GARAGES						
Location	Total Spaces	Handicap Spaces	Leased	Metered Public	No Fee Public	Total # Public
Main Street Garage	363	8	308	47	0	47
Orange Street Garage	718	14	718	0	0	0
Iowa Ave Garage	518	12	456	0	36	36
<b>Total City Garage Spaces</b>	<b>1,599</b>	<b>34</b>	<b>1,482</b>	<b>47</b>	<b>36</b>	<b>83</b>
<b>% of use</b>		<b>2%</b>	<b>93%</b>			<b>5%</b>
<i>NOTE: Orange St. Garage open to public for Mayfaire and Christmas Parade.</i>						
CITY SURFACE LOTS						
Location	Total Spaces	Handicap Spaces	Leased	Metered Public	No Fee Public	Total # Public
Lot A: S. Mass Ave.	64	2	64	0	0	0
Lot B: S. Tenn Ave	84	4	84	0	0	0
Lot CM: S. Mass Ave.	140	4	140	0	0	0
Lot C: N. FL Ave	101	2	94	0	7	7
Lot D: N. Kentucky Ave	23	2	0	0	21	21
Lot E: Cedar/Mass	11	0	0	0	11	11
Lot F: Bay St.	142	6	74	34	34	68
Lot G: Dixieland	49	2	1	0	46	46
Lot M: Park St.	22	2	0	0	20	20
Lot M/M: N. Mass Ave.	56	2	56	0	0	0
Lot N: N. FL Ave	20	1	0	0	19	19
Lot O: E. Oak St.	64	4	0	0	60	60
Lot MP: Munn Park	27	2	0	25	0	25
<b>Total Surface Lot Parking</b>	<b>803</b>	<b>33</b>	<b>513</b>	<b>59</b>	<b>218</b>	<b>277</b>
<b>% of use</b>			<b>64%</b>			<b>34%</b>

Location	Total Spaces	Handicap Spaces	Leased	Metered Public	No Fee Public	Total # Public
<b>ON-STREET PARKING</b>						
Boundaries: between Peachtree St. & Walnut St., and between Iowa Ave. & New York Ave.	413					
<b>PRIVATE PARKING GARAGES/SURFACE LOTS</b>						
SunTrust	320	320	0			
Heritage Phase I	141	0	0			
<b>Private Total</b>	<b>461</b>	<b>320</b>				
<b>NON-CITY OWNED PARKING GARAGES</b>						
Peterson State Garage	276	7	269			
<b>Non-City Garage Total</b>	<b>276</b>	<b>7</b>	<b>269</b>			

Sources: City of Lakeland Parking Services Division (2010) and Broadway Real Estate Services (2010).

## NON-MOTORIZED TRANSPORTATION

Since the amount of highway needs always exceeds available revenue, local, county and State agencies have begun to evaluate transportation needs in terms of personal mobility, which includes but is no longer limited to automobile mobility. As the City's population increases and road congestion becomes a growing concern, the City must develop a transportation system that relies less on the automobile, and more on alternative modes such as bicycles, walking and transit. Future residential and non-residential developments should consider the needs of bicyclists and pedestrians in order to make those modes of travel a more viable alternative to the automobile.

In 2009, Florida led the nation in bicycle and pedestrian injuries and fatalities. Safety is a major issue for both bicycle and pedestrian planning within the Polk County area. This issue, however, should not eclipse other significant problems. In addition to safety, convenience and connectivity are other key factors that must be addressed in order to make non-motorized travel a viable alternative to the automobile. Roadways and developments should be designed to be comfortable to the bicyclist/pedestrian, include secure parking facilities for bicyclists, and connect with other modes, such as transit, that can be used for traveling over greater distances. Both safety measures and support facilities such as transit shelters are required to meet the needs of bicyclists and pedestrians and to encourage modes of travel which are an alternative to reliance upon the automobile. Illustration III-14 depicts the location of the various intermodal facilities in the Lakeland area, not including the extensive sidewalk network in the City.

## TYPES OF NON-MOTORIZED TRAVEL

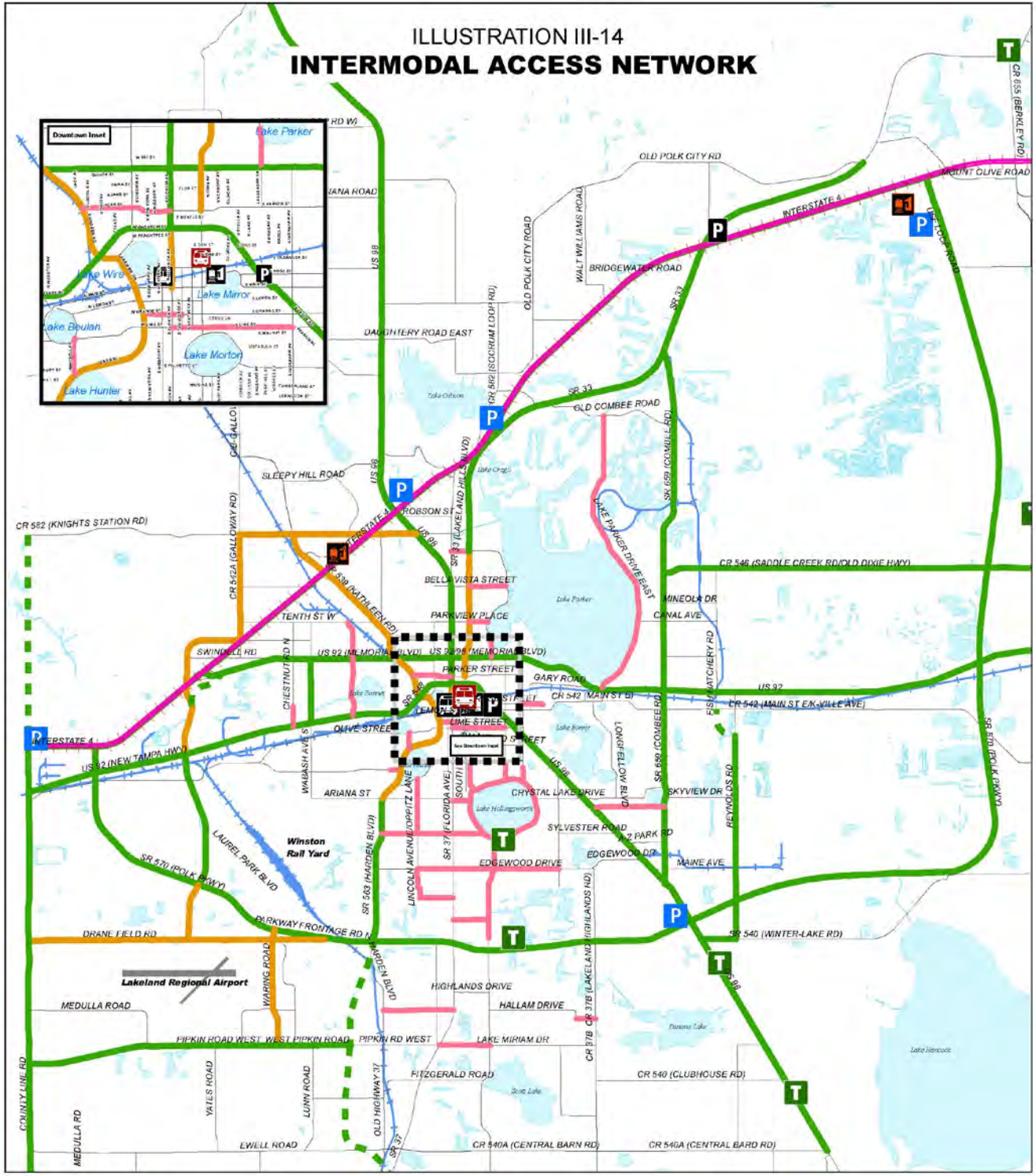
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Historically, bicycle and pedestrian facilities have been considered to be synonymous with one another. Planners and engineers increasingly understand that two types of facilities are needed: bicycle lanes which take into consideration the bicycle's status as a vehicle that can travel on the roadway with cars and at a considerable speed, and sidewalks or paths which are separated from adjacent street traffic (including bicycles). In general, bicycle and pedestrian trip purposes can be divided into two broad types, utilitarian (e.g., to and from work and grocery store) and recreational (e.g., exercise). Most trips will have some recreational and some utilitarian purposes. Bicycle and pedestrian trip generators are particular locations which represent a travel destination point, such as libraries, schools, employment centers, recreation areas, shopping centers, etc.

***State and Local Programs:*** The Florida Department of Transportation's Pedestrian and Bicycle Program was established to allow for a comprehensive approach to statewide bicycle planning not limited to the design and engineering of bicycle facilities but also including the development of safety and education courses, and provision of pedestrian and bicycle law enforcement training. In addition to the staff that operates from FDOT's Safety Office in Tallahassee, each FDOT District has a staff person that is assigned to address bicycle/pedestrian issues.

The Polk Transportation Planning Organization (TPO) developed comprehensive bicycle and pedestrian plans in 1989 and 1991, respectively, which provide guidelines for policy planning for non-motorized modes and assist in their integration into the transportation system and recreational facilities in Polk County and its municipalities. The TPO's Citizens Advisory Committee also includes seats for bicycle and pedestrian advocates. While there is no longer a TPO coordinator for bicycle facilities, a staff planner has been assigned the responsibility of working with the State of Florida and Polk County Departments of Transportation in relevant issues and accepted practices. This staff planner also serves as the TPO's representative on the Polk County Community Traffic Safety Team, a committee consisting of local law enforcement, education, public works and planning representatives that meets monthly to review transportation safety issues throughout Polk County.

## ILLUSTRATION III-14 INTERMODAL ACCESS NETWORK



Source: Lakeland Community Development Department, 2010



- Primary Intermodal Access Routes
- - - Future Primary Intermodal Access Routes
- Other Intermodal Access Routes
- - - Through-Truck Prohibitions
- Rail Lines

- Florida High-Speed Rail Route
- Candidate HSR Station Sites
- A Amtrak Train Terminal
- R Regional Bus Terminal
- B City Bus Terminal

- P Park & Ride Lot
- P Proposed Park & Ride Lot
- T Multi-Use Trailhead



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## TRAFFIC SAFETY

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A continuing goal of all levels of government is to provide a safe and efficient transportation system for all users. To assist in meeting this goal, the Florida DOT, Polk County Engineering Division, and City of Lakeland Public Works Department all cooperate in collecting and analyzing data on traffic crashes by location and cause of crash.

When a crash happens within or near an intersection, it is recorded as being influenced at or by an intersection. Different codes are used to determine how the crash happened; there are numerous factors that contribute to the cause of crashes including weather, lighting conditions and road surface conditions.

In 2009, there were a total of 2,523 crashes reported in the City of Lakeland, **an increase of less than one percent (0.64%)** over the 2,507 crashes reported in 2000. Of these crashes, 1,542 or 61% were located at signalized intersections and 981 or 39% were located at un-signalized intersections. According to the City of Lakeland Traffic Operations Division, crashes attributable to various causes include the following:

- Environmental causes (parked or stopped vehicles; trees, crops, bushes; buildings, fixed objects that obstruct the view, and signs or billboards) accounted for 41 or 1.6% of all crashes reported in 2009.
- Roadway causes such as obstruction with/without warning; road under repair or construction; loose surface materials; holes, ruts, unsafe pavement edge; standing water; and worn or polished road surfaces accounted for 22 or .9% of all crashes that were reported in 2009.
- Weather or lighting concerns may have impacted about 996 or 39% of all reported crashes; that is, the incidents occurred in less than ideal conditions due to rain/fog (245), driving at night (419) or when roads were slippery or wet (332).
- At least 58% of crashes (1464) occurred due to driver error without the above causes or concerns.

Of the 2,523 crashes reported in 2009, 1,389 were reported as being at or influenced by an intersection (by the City of Lakeland's standard is any crash that occurred within 20 feet of the intersection). Of the reported crashes, 27 involved pedestrians, 22 involved bicycles and 131 involved alcohol or drugs. The highest rate of crashes reported in the City of Lakeland in 2009 occurred during January (150 or 9.7%) and May (155 or 10%) for signalized intersections and February (97 or 9.8%) and March (116 or 11.8%) for non-signalized intersections. Friday had the highest crashes by day of the week (509 or 20%); 3:30 PM to 6:30 PM (658 or 26%) and 1:30 PM to 3:30 PM (454 or 17.9%) were the highest crash time-periods. The data reflects the majority of crashes occurred at peak hours and when the roads may be most crowded and when drivers tend to be tired and/or rushed/impatient, thus making crashes rise.

The term “first harmful event” is used to describe what event started the crash. Historically, rear end collisions have tended to be the top “first harmful event”. In 2009, there were 1,082 or 42.8% rear end crashes, 540 or 21.4 % angle crashes, 208 or 8.2% left turn crashes, 191 or 7.5% side swipe crashes, 70 or 2.7% backed into crashes, 54 or 2.1% right turn crashes, 21 or less than 1% head-on crashes. The other crashes were due to various causes.

**High Crash Locations:** The City of Lakeland’s traffic data has typically examined at least the top 10 crash locations in the City each year. The following Table III-16 identifies the highest crash locations at signalized intersections in the City of Lakeland for 2009, and the leading first harmful event.

**TABLE III-16  
HIGH-CRASH LOCATIONS WITHIN CITY OF LAKELAND – 2009**

LOCATION	NUMBER OF CRASHES	FIRST HARMFUL EVENT	% ATTRIBUTED TO THIS CAUSE
US 92 (Memorial Blvd.) @ US 98 (N. Florida Ave.)	34	REC	67.6%
Griffin Rd @ N. Rd. 98	30	REC	70%
Edgewood Dr @ S. Rd. 98	24	REC	66.6%
SR 572 (N. Parkway Frontage Rd.) @ SR 37 (S. Florida Ave.)	24	REC	45.8%
Sleepy Hill Rd @ N. Rd. 98	18	REC	55.5%
Parker St. @ US 98 (N. Florida Ave.)	16	AC	43.7%
Beacon Rd @ SR 37 (S. Florida Ave.)	16	AC	31.2%
US 92 (Memorial Blvd.) @ SR 563 (Martin L King Jr Ave.)	15	REC & AC	33% EACH
US 98 (Bartow Rd.) @ US 98/SR 35 (N. Florida Ave.)	14	REC & SS	35.7% EACH
US 98 (Bartow Rd.) @ Fredericksburg Ave./ S. Crystal Lake Dr.	14	REC	57%

**Source:** City of Lakeland, Traffic Operations Division, Crash Analysis 2009

- \* REC =REAR END COLLISION
- AC= ANGLE COLLISION
- SS = SIDE SWIPE

**City Traffic Safety Team (CTST):** The City of Lakeland’s Public Works Department coordinates the review of crash, operational and other safety issues through the CTST, consisting of representatives of the Public Works, Community Development Departments, as well as FDOT Safety Office and Lakeland Police Department personnel. The primary goal of the CTST is to review and recommend action items relating to engineering, enforcement, education and emergency response disciplines to ensure that traffic safety

issues are identified in the most appropriate strategic manner. Recent safety projects identified through the CTST and programmed for implementation by FDOT include modifications to US 92 (Memorial Boulevard) between US 98 (Florida Avenue) and SR 563 (Dr. Martin Luther King, Jr. Avenue) and modifications to SR 33 (Lakeland Hills Boulevard) between North Florida Avenue and North Socrum Loop Road. Many of the safety issues raised through the CTST are addressed by simple signage or other marking treatments by the City, County or FDOT at minimal cost.

## **BICYCLE AND PEDESTRIAN SAFETY**

Bicycle and pedestrian safety continues to be a significant statewide challenge, particularly in its metropolitan areas. The “Transportation for America” non-profit policy group released its “Dangerous by Design” report listing of the most dangerous metropolitan areas for pedestrians, based on fatalities, metropolitan area population and percentage of commuters walking to work. The four worst national 2007/08 “Pedestrian Danger Indices” were found in Orlando-Kissimmee, Tampa-St. Petersburg-Clearwater, Miami-Fort Lauderdale-Pompano Beach and Jacksonville. The Lakeland-Winter Haven metropolitan area ranked as the sixth most dangerous area in Florida, which was ranked the most dangerous state, nationally. While social and other non-work related pedestrian trips were not factored into this analysis, it is clear that Florida and its municipalities must address pedestrian safety and establish the necessary programs, investments and planning policies to confront this problem. To improve bicycle-pedestrian safety, investments must be made in adequate sidewalks, bicycle paths, and bicycle lanes to address the need for new facilities and to address gaps in these networks. The public must continue to be educated about applicable traffic laws relating to bicyclists/pedestrians; the City has participated in a “yield to pedestrian” signage and safety program supported by the local traffic safety team. Finally, communities must be planned to make biking and walking an efficient and safe alternative to driving; this requires complete streets that address all modes of travel and a building form that is oriented toward the street as a public place.

### **High-Crash Corridors - Bicycle and Pedestrian:**

As part of the *Polk County 2030 Long-Range Transportation Plan* adopted in 2005, the Polk Transportation Planning Organization (TPO) identified one “High Pedestrian Crash” corridor and three “High Bicycle Crash Corridors” within the Lakeland area based on the number of crashes and crashes per mile according to 2004 data. These corridors identified by the Polk TPO are as follows:

- High Pedestrian Crash Corridor:
  - US 92 (Memorial Boulevard): Florence Avenue to Lake Parker Drive
- High Bicycle Crash Corridors:



Memorial Boulevard @ Florida Avenue

- SR 37 (South Florida Avenue): US 92 (Memorial Boulevard) to SR 570 (Polk Parkway)
- US 92 (Memorial Boulevard): Kettles Avenue to Ingraham Avenue
- Wabash Avenue: US 92 (Memorial Boulevard) to Highland Street

Safety issues in these corridors are addressed through the TPO’s Congestion Management Program (CMP) and “Early Coordination” process for resurfacing projects, including road safety audits conducted in the field with the appropriate City, County, FDOT and TPO staff.

In 2009, the Polk TPO identified a Lakeland Safety Corridor Analysis as a high-priority for CMP funding through the FDOT. Based on input received from the City and TPO staff, FDOT conducted detailed bicycle/pedestrian crash and crossing analyses in the following corridors:

- US 92 (Memorial Boulevard): CSX Overpass @ Kathleen Road to Gary Road.
- SR 35/37 (Florida Avenue): US 92 (Memorial Boulevard) to West Highland Drive.
- Wabash Avenue: US 92 (Memorial Boulevard) to Ariana Street.
- Massachusetts Avenue/SR 33 (Lakeland Hills Boulevard): Peachtree Street to Parkview Street.

**CORRIDOR SAFETY PROGRAMS AND IMPROVEMENTS**

The Lakeland Safety Corridor analysis yielded specific improvement recommendations for programming by FDOT, City of Lakeland and/or Polk County, including:

1. The establishment of formal “pedestrian zones” on:
  - a. US 92 (Memorial Boulevard) between the CSX Overpass and Ingraham Avenue; and
  - b. SR 37 (South Florida Avenue) between Hiawatha Street and SR 570 (Polk Parkway). Specific projects that are proposed within these two pedestrian zones include:

- i. Overhead signage (internally illuminated with flashing beacons) to alert motorists that they are entering a high pedestrian traffic area;
- ii. Ground mounted flashing beacons and signage at strategic points throughout the pedestrian zones;



US 98 (North Florida Avenue)



SR 37 (South Florida Avenue) Dixieland



- iii. Crosswalk enhancements at lighted intersections to increase visibility and re-enforce traffic laws relating to pedestrians and bicyclists; and
  - iv. Raised medians and other such features that serve as unofficial refuge areas for crossing pedestrians.
- 2. Safety measures to be implemented through Community Redevelopment Agency, neighborhood, sector or other more localized plans such as raised medians and improved pedestrian crossings in vicinity of Lakeland Regional Medical Center.
- 3. The construction of sidewalk facilities on Wabash Avenue between George Jenkins Boulevard and a point south of Olive Street, including sidewalk connections to the Olive Street sidewalk constructed by the City.

The City of Lakeland has identified additional Safety Corridors for analysis and funding to improve conditions for bicyclists, pedestrians and transit patrons, including:

- US 98: from Memorial Boulevard north to Griffin Road;
- SR 37 (South Florida Avenue): from downtown south to Ariana Street, including the Dixieland District.

Potential improvements within these corridors include the installation of raised medians to eliminate uncontrolled five-lane roadway cross-sections and improved treatments at crosswalks within the corridor. All of the corridors under evaluation by the City and FDOT were identified as “barriers or unsafe conditions” by the Lakeland area’s bicycling and pedestrian community during a charrette planning exercise conducted as part of the Citywide Pathways Plan development process in 2007.

**Local and State Policies Regarding Transportation Facilities:** The Bicycle Safety Law of 1983 defines bicycles as vehicles and accords bicyclists the same rights and responsibilities as motor vehicle operators. Florida cyclists have the right to full use of the roadway, subject to established traffic laws. To support this use and to promote safety, the City has begun to sign roadways and bike lanes with signage which alerts the motor vehicle operators as well as bicyclists and pedestrians of the intended use. Likewise, paved shoulders and bicycle lanes are being integrated into major road projects within the City such as Griffin Road, US 98 North near Lakeland Square Mall, and the In-Town Bypass. It is FDOT’s policy to incorporate four-foot “paved shoulders” into most resurfacing projects for two-lane roadways and four-lane highways with open drainage systems. Although not officially designated as bicycle lanes, these paved shoulders give bicyclists the opportunity to operate on highways with a lesser degree of conflict with automobiles.

When a capacity project is undertaken with Federal dollars, FDOT must conduct a Project Development and Environment (PD&E) Study that determines where sidewalks, bicycle lanes/paved shoulders and street lighting should be included on a project. The TPO’s *2025 Long-Range Transportation Plan (LRTP)* calls for even earlier coordination with FDOT on these projects in order to give local governments and the TPO an opportunity to voice their

preference on where these features should be included in a road project. The City encourages the inclusion of both sidewalks and bicycle lanes in the design of future capacity projects within its corporate limits. The City also encourages Polk County to include sidewalks and bicycle lanes into the designs of its projects within the City. Capacity projects that are constructed by the City tend to include dedicated bicycle lanes and sidewalks as standard design features.

For utilitarian trips, pedestrian facilities will tend to be quite different than those that are developed to accommodate bicyclists. Generally, concrete sidewalks must be constructed which are separated from an adjacent roadway by concrete curbs and/or a grass strip. At intersections, crosswalks must be designated and pedestrian signals must be installed to safely control automobile and pedestrian traffic.

**Sidewalks:** As of 2008, approximately 217 miles of the sidewalk network within the Lakeland Planning Area were maintained by the City. Additional sidewalks have been installed by Florida DOT, Polk County (as part of capital improvement projects and through the Harden-Parkway Community Redevelopment Agency for the Oakbridge DRI area) and the private development community. Illustration III-15A shows the location of sidewalks in Lakeland; Illustration III-15B shows sidewalk gaps within the 1/4 mile buffer area surrounding the 30-minute transit routes. The City funding of sidewalk improvements has historically centered on downtown redevelopment and streetscaping therein, or upon the functional class of a roadway. That is, where a road was classified as a collector roadway, a sidewalk could be constructed if, for instance, it completed a connection in the network and/or accessed a public facility. By 2000, it became apparent that sidewalk needs should be funded on a prioritization basis that considered things such as whether or not the sidewalk was within the ¼ mile distance to a bus route offering 30-minute service to residents, or if the City had identified the sidewalk as a need in a neighborhood plan. Polk County has historically tended to fund sidewalk needs primarily to serve public schools. An up-to-date Lakeland Urban Area sidewalk inventory was undertaken in 2010 to identify crucial sidewalk network gaps or deficiencies, and act as a guide to future expenditures.

## **CITYWIDE PATHWAYS PLAN**

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The City of Lakeland's 2009-2018 Capital Improvement Plan programs approximately \$1 million per year for construction and maintenance of sidewalks on the City's public street system. These sidewalks are generally planned and designed to maximize connectivity to transit routes and provide for short trips between a neighborhood and adjacent school, retail center or recreation facilities. Bicycle lanes and unmarked paved shoulders are also evaluated for inclusion in all roadway construction projects – again with the intent of providing more localized connectivity between a mix of nearby residential and non-residential uses. The City also works with the Polk Transportation Organization (TPO), Polk County and Florida Department of Transportation (FDOT) to include sidewalks, bicycle lanes and paved shoulders on all public roadway capacity and maintenance projects in the Lakeland Planning Area.

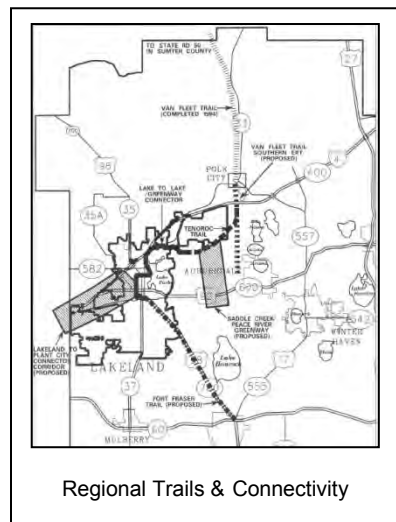
As is the case with the roadway network, it is necessary to classify and evaluate bicycle and pedestrian pathways according to the function they serve in overall mobility. In the Lakeland area, a primary pathway network is emerging that provides regional connectivity and improved accessibility to major residential communities and activity centers throughout our community. The Lake-to-Lake Bikeway and Greenway Connector network is the center of this regional trail system, ultimately connecting the Van Fleet National Trail and TECO-Auburndale Trail with the Fort Fraser Trail between Bartow and Lakeland.

**Lake-to-Lake Bikeway and Greenway:** The Lake-to-Lake Bikeway and Greenway Connector network, as depicted in Illustration III-16, includes primary on- and off-road pathways that link the City’s recreational facilities, lakes, historic neighborhoods, and activity centers. The hub of the Lake-to-Lake network is Lake Mirror Park in Downtown Lakeland, which includes Barnett Family Park, Lake Mirror Center, Hollis Gardens and the historic loggia constructed during the 1920s during the “City Beautiful” planning movement. Other major destinations on the Lake-to-Lake Network include Lake Hollingsworth and Florida Southern College,



Lake-to-Lake Bikeway Way-Finding Signage

Peterson Park and Lake Bonny Park across from Lakeland High School. In addition to providing recreational corridors for walkers, joggers and bicyclists, the Lake-to-Lake network serves an important transportation function by providing attractive parallel bicycle/pedestrian corridors to constrained roadways such as South Florida Avenue in the Dixieland District. The network Lake-to-Lake system also enhances access to fixed-route transit (bus) services provided in the Lakeland metro area.



Regional Trails & Connectivity

As of 2009, some of the Lake-to-Lake Network improvements included the designation of bicycle lanes on Lake Hunter Drive, and road-diet projects on Dr. Martin Luther King Jr. Avenue and the south side of Lake Wire Drive, near the Citrus Connection main bus terminal. A road-diet project on Parker Street east of Massachusetts Avenue was programmed in FY 2009-2010, including \$800,000 in

Federal Transportation Enhancement Program and Mid-Town Community Redevelopment Area funds, This project was intended to transform a one mile section of Parker Street from a four-lane undivided collector roadway into a divided two-lane street with bicycle lanes, enhanced crosswalks, transit amenities and landscaped medians.

**General Van Fleet State Trail/TECO-Auburndale Trail:** Opened in 1994, the General Van Fleet State Trail extends 29 miles north from Polk City to State Road 50 at Mabel in

Sumter County. The Van Fleet trail was constructed primarily with Federal Transportation Enhancement Program funds that are available for such bicycle and pedestrian facilities. With the construction of the TECO-Auburndale Trail, Lake Myrtle Park and pending southern extension of the Van Fleet Trail, the City of Auburndale and Town of Polk City continue to make critical linkages between this regional trail facility and urbanized population centers in central Polk County. Utilizing Federal Transportation Enhancement Program dollars, Polk County will construct a 12-foot wide multi-use trail facility along the south side of its Pace Road roadway project between Berkley Road and the programmed Polk Parkway interchange in the City of Lakeland. The Pace Road interchange design will include a continuation of the Pace Road Trail to a multi-use trail that is constructed as part of the proposed SR 33-FPU/Williams East-West Road project. Combined, this new east-west trail corridor will connect the Van Fleet and TECO-Auburndale Trails with the Florida Polytechnic University campus scheduled to open in 2011 and eventually will connect to the City's Lake-to-Lake Bikeway and Greenway Connector network in the central part of Lakeland.

**Fort Fraser Trail:** Opened in 2006, the first section of the Fort Fraser Trail extends approximately seven miles south from State Road 540 (Winter Lake Road) to State Road 60 in Bartow. Funding for this first section of the Trail was provided by FDOT with construction being managed by the City of Lakeland. Polk County provides maintenance and security along the Trail. Trailhead facilities were constructed near the Lakeland campus of the University of South Florida/Polk Community (State) College and in Highland City. The Highland City Trailhead was partially funded with FDOT Park and Ride Program grant dollars



and serves as a park-and-ride facility for the "Bartow Express" bus route serving the US 98 corridor between Lakeland and Bartow. In 2004 a U.S. 98 Corridor Access Management Plan (CAMP) was developed and adopted by FDOT in conjunction with the City of Lakeland, City of Bartow and Polk County; the CAMP limits roadway crossings of the Fort Fraser Trail along its entire length. Once the railroad line that operates along US 98 north of SR 659 (Combee Road) is abandoned, a northern extension of the Fort Fraser Trail is planned to link the trail to the Lake Mirror Park and the Lake-to-Lake Bikeway Greenway Network in Downtown Lakeland, represented by Pathway Segments #4 and #16 in Illustration III-17. Potential trailhead facilities exist along this future trail extension at the City's Lake Bonny Park and at a park-and-ride facility constructed beneath the US 98 (In-Town Bypass) overpass with FDOT park-and-ride and intermodal program dollars. A second connection between the Lake-to-Lake Network and Fort Fraser Trail is planned via Lakeland Highlands Road, along the south side of SR 570 (Polk Parkway), through a bicycle/pedestrian easement negotiated with the Lakeland Marketplace Shopping Center (see Pathway Segments #20 and #15.)

**Pathways Vision Plan:** While significant progress has been made in implementing the Lake-to-Lake Bikeway/Greenway Network, significant gaps remained as of 2009. These gaps prevent the network from achieving its full potential as a system that encourages residents and visitors to use alternative forms of transportation such as bicycles, walking or transit for intra-city trips. Thus, the City initiated a Pathways visioning and planning effort as described below in order to identify gaps and deficiencies and obstacles, receive public input and prioritize improvements in the pathway network. Beginning in 2007, City staff and its project consultant (Renaissance Planning Group) embarked on an effort to identify key gaps in the Lake-to-Lake Bikeway/Greenway Network and other corridors to connect the City with nearby regional trail facilities. Focus group meetings and a day-long charrette were conducted to obtain input on existing barriers and pathway opportunities that should be addressed during the Pathways Plan Update. The project consultant conducted a “handlebar” survey in the field to identify other additional barriers, critical crossings and right-of-way constraints in the Central City area. Additional input was also solicited from the Lakeland Citizen Advisory Committee and the Neighborhood Advisory Council comprised of neighborhood association officers.



Pathways Vision: Planning for Connectivity

Not surprisingly, the most significant barriers to a well-connected pathway system were identified as major roadway corridors such as Florida Avenue, Memorial Boulevard, Interstate 4 and Lakeland Highlands Road. The CSXT rail line traversing Downtown Lakeland was also seen as a barrier to cross-town mobility. In terms of potential pathway opportunities, corridors along natural features such as the eastern shore of Lake Parker and greater use of parallel local streets and alleys were seen as routes that should be pursued for future development or enhancement and as alternatives to pathway use along congested and constrained roadway corridors such as South Florida Avenue through the Dixieland District.

Potential pathway corridors throughout the Lakeland Planning Area were prioritized using stakeholder input and the handlebar survey; other considerations in the prioritization process were corridors identified through the Polk Urban Greenways (PUGS) planning effort, the Lakeland Southwest Sector Plan, the Lakeland Parks and Recreation Master Plan and Polk Transportation Planning Organization Long-Range Transportation Plans. Candidate corridors were prioritized using the following objective criteria:

- **Lake-to-Lake Bikeway/Greenway Gaps:** Is the Pathway project located on a designated segment that has not been completed to date?

- **Proximity:** What is the project distance to schools, transit stops, lakes, parks and activity centers?
- **Network Connectivity:** Is there project connectivity to existing trails, sidewalks or bicycle lanes?
- **Congested Roadways:** Is the project parallel to and located within ¼ mile of a congested roadway?
- **Land Use Characteristics:** Is the project located within walking distance of Community Redevelopment Areas or near frequent (30 minute) transit service?
- **Transit Emphasis Corridor:** Is the project located in close proximity to the South Florida Avenue Transit Corridor or other locations with premium transit services?
- **Connectivity between Residential and Commercial/Employment Centers:** Does the project provide connectivity between a residential use and a Community or Regional Activity Center as identified on the City's Future Land Use Map?
- **Major Roadway Crossing:** Does the project traverse a major roadway?

Pathway corridor project priorities were stratified into four tiers, based on segment scoring utilizing these criteria. The top tier of pathway corridors is concentrated in the central portion of Lakeland, and includes the future northern extension of the Fort Fraser Trail and connections from it to Lake Parker Park and Lake Hollingsworth. Other high priority corridors include connections to Lake Hunter, Lake Beulah and Lake Wire north to Lake Parker Park via Bella Vista Street. Illustration III-17 and Table III-17 (Pathways Projects) include the specific corridors included in the Pathways Vision Plan and their relative priority for implementation.

**Pathway Project Implementation:** Through the Pathways Vision Plan, projects on the prioritized Pathway Segments may be implemented through the following methods, where feasible:

- As elements of City capital improvements, including road projects;
- Through stand-alone projects funded by the City with local funds and/or discretionary grant funds from State and Federal sources.
- Through coordination with Polk County and FDOT on road projects programmed in the Lakeland Planning Area;
- As development requirements for projects within the City of Lakeland, including Developments of Regional Impact (DRI) or Planned Unit Developments (PUDs); and
- As suggested Polk County development requirements to include pathways segments in new or modified DRIs or PUDs within the Lakeland Planning Area and/or as a means to increase regional connectivity.

However, due to factors such as budgetary, environmental and right-of-way limitations, flexibility is recommended for specific approaches taken to implement the pathway corridors identified in the Pathways Vision Plan. For example, constructing a 12-foot wide dedicated multi-use trail through Downtown Lakeland is likely not feasible; however, such a facility could be incorporated into the design of new residential or retail development in suburban or rural areas around Lakeland.

Projects to be implemented through the Pathways Vision Plan should include:

- **12-Foot Wide Multi-Use Trails** constructed within 20-foot access easements or rights-of-way as stand-alone projects or constructed in conjunction with roadway improvement projects (*Estimated Unit Cost per Polk TPO: \$515,500/mile*);
- **Sidewalks** on designated Pathways Segments in neighborhoods or business districts where bicycles can share low-volume roadways with other vehicular traffic, signed with Lake-to-Lake Network and “Bikes Sharing Roadway” advisory signage (*Estimated Unit Cost per City Public Works Dept.: \$250,000/mile*);
- **Designated Bicycle Lanes** on local or collector streets with low-volumes (*Estimated Unit Cost per City Public Works Dept. \$12,000/mile*); and
- **Unpaved Trails** within 20-foot wide access easements through natural areas or between natural and developed areas to serve an added benefit as wildfire buffer.

Funding for projects on many of the pathway segments that have been scored in the Pathways Vision Plan will be considered for inclusion in the City’s Capital Improvement Plan (CIP). For those City-funded segments, five of the highest ranking segments will be selected each year for more detailed analysis to determine the most effective and efficient approaches to providing safe and attractive pathways for non-motorized transportation. As opportunities arise, other corridors will also be evaluated for implementation in conjunction with roadway projects constructed by the City, County and FDOT and/or private development activity occurring around the City.

The following “subjective” measures will be utilized in the selection of specific projects on each Pathway Segment, for funding in the City CIP:

- **System connectivity and continuity.** This relates to the project’s ability to link on- and off -road facilities and to support a more seamless non-motorized transportation network between trip origins and destinations. The intent is to avoid ranking of piecemeal projects that may not provide much benefit to system or corridor continuity.
- **Assessment of cost feasibility (or cost-benefit),** which includes potential right-of-way acquisition and community or business impacts relative to the potential value of the connection.

- **Safety Mitigation.** The ability of the project to mitigate perceived safety or potential safety problems regardless of crash data history. This information is derived from focus groups, discussions with agency staff, community input and/or professional judgment.
- **Mitigation of Obstacles or Barriers.** Because barriers are difficult to precisely define and compare equitably, this subjective measure considers the degree to which the project helps overcome barriers, such as a wide highway, fast traffic, an interstate, drainage canal or similar feature. Many barriers were defined in the focus groups and community charrette and will be addressed under this criterion.

Some regional pathway facilities may be only partially funded by the City of Lakeland, but may be eligible for regional or statewide discretionary funding sources, such as grants provided through the Florida Department of Environmental Protection's Office of Greenways and Trails. The Polk Transportation Planning Organization's 2030 Long-Range Transportation Plan, adopted in 2005, includes the following Multi-Use Trail Needs, including project limits and estimated project cost. The general regional corridors to be served by these trail facilities are depicted in Illustration III-19.

- **Fort Fraser Trail II** - SR 540 to Downtown Lakeland (including SR 570/Polk Parkway Crossing): \$5.1 million
- **Lakeland to Plant City Connector** – Lake Hunter Boulevard to Hillsborough County Line: \$3.7 million
- **Lake Hunter to Lake Hollingsworth Trail** – Lake Hunter Trail to Lake Hollingsworth Trail: \$556,740
- **Tenoroc Trail** – Lake-to-Lake Connector to TECO-Auburndale Trail near Braddock Road: \$5.5 million
- **Williams Trail** – SR 570 (Polk Parkway) to TECO-Auburndale Trail via Mt. Olive Road: \$1.1 million
- **Williams Trail** – SR 570 (Polk Parkway) to TECO-Auburndale Trail via Pace Road
- **Williams Trail** – SR 659 (Combee Road) to Alternate B Connector: \$1.8 million
- **Williams Trail** – Alt. B Connector to SR 570 (Polk Parkway): \$644,375
- **Williams Trail** – Tenoroc FMA to Williams DRI and Alternative B: \$1.3 million

**Publicly-Funded Pathway Project Examples:** Bicycle and pedestrian facilities are evaluated for inclusion in all new or expanded roadway projects implemented by the City of Lakeland. The City's planned Edgewood Drive Extension project, between SR 37 (South Florida Avenue) and SR 563 (Harden Boulevard), will include Pathway Segment #5, providing an important connection between the Lake-to-Lake Network and southwestern trail corridors in the vicinity of Lakeside Village and employment centers around Lakeland-Linder Regional Airport.



The City also evaluates the feasibility of including pathways projects in resurfacing or other routine maintenance projects to be implemented by the Public Works Construction and Maintenance Division. For example, designation of bicycle lanes was made during the resurfacing projects on Lake Hunter Drive and Lake Wire Drive. Additional such improvements are expected to be evaluated for resurfacing projects on Lime Street, Lake Bonny Drive and Interlachen Parkway in order to improve the pathways connectivity between Lake Bonny Park and Lake Parker, identified as Pathway Segments #60, #9, and #56 in the Pathways Vision Plan.

***Pathways Requirements for New Development Activity:*** In order to maximize neighborhood-neighborhood and neighborhood-activity center inter-connectivity, the City of Lakeland generally requires new residential and mixed-use developments to include dedicated bicycle and pedestrian facilities such as paved multi-use trails, bicycle lanes or natural trail facilities as conditions of Development of Regional Impact (DRI) or Planned Unit Development (PUD) approval. A few key examples are given below:

- **Williams DRI:** The amended Williams DRI Development Order approved in 2007 requires the construction of a 12-foot wide multi-use pathway adjacent to the SR 33-FPU/Williams E-W Road which will traverse the area between SR 33 and the Polk Parkway (see Pathway Segment #12.) Additional multi-use trail corridors are required throughout the Williams DRI to provide connections to the Florida Polytechnic University campus and Tenoroc Fish Management Area. These general corridors are represented by Pathway Segments #22, #34 and #35. All of these corridors through the Williams DRI will provide critical connections between the Lake-to-Lake Network and Van Fleet/TECO-Auburndale regional trail corridors.
- **Lakeland Central Park DRI:** The Lakeland Central Park Development Order approved in 2008 requires the construction of an eight-foot wide multi-use pathway along the north side of its primary spine road, Flagler Park Boulevard, which traverses an area between SR 572 (Airport Road) and CR 542 (Old Tampa Highway). An additional paved pathway is required on SR 572 along the project frontage. An unpaved trail connection through the center of the DRI is required between Flagler Park Boulevard and CR 542 (Old Tampa Highway). These corridors are represented by Pathway Segments #17 and #32 and are intended to provide connectivity options between Lakeland and Plant City as identified in the Polk TPO 2025 Long-Range Transportation Plan. These corridors could provide a more viable alternative routing to Pathway Segment #40, which is proposed in the TPO's 2030 Long-Range Transportation Plan.
- **Southwest Sector Plan:** The City's recently-completed Southwest Sector Plan includes the implementation of Pathway Segment #71, along Poley Creek south of SR 570 (Polk Parkway), adjacent to Wagner Elementary School and through the Towne Park and Hawthorne Mill residential communities. Alternative bicycle and pedestrian facility plans have been incorporated into the PUD regulations for both Towne Park and Hawthorne Mill and must be constructed during site development

activity. This is another corridor that will improve connectivity between Polk County and Hillsborough County.

**Parks Connectivity Plan:** This sub-component of the Citywide Pathways Vision Plan included specific analyses of and recommendations to address access improvement needs in the vicinity of parks, recreation facilities and open spaces around Lakeland based on the following standards for each facility type.

- **Community Parks** – Community parks serve a larger population than neighborhood parks, and provide more intensive or major recreational services and activities. A community park is a land-based park and is, ideally, paired with one multi-use facility.
  - **Connectivity** – Community Parks should have dedicated pathway access to neighborhoods and other park facilities throughout the city via the Lake-to-Lake Greenway Connector Network. Since these types of parks draw from a larger geographical area, access and site design should accommodate automobiles, bicyclists, pedestrians and transit patrons.
- **Neighborhood Parks** – Neighborhood parks provide the basic recreational needs to neighborhoods. They are accessible and ideally within walking distance of the residents of each neighborhood.
  - **Connectivity** - Neighborhood Parks have a smaller service area than Community Parks and should have unobstructed access within a general  $\frac{1}{4}$  to  $\frac{1}{2}$  mile radius of the park site. Access should be available via dedicated pathways or sidewalks adjacent to local streets. Internal site design should include connections to these external bicycle/pedestrian facilities and include bike/bus amenities where feasible.
- **Scenic Parks** – Scenic parks are primarily passive recreation oriented parks for lakeshores, greenways, scenic views, or historical sites. These areas are generally small and attract the pedestrian rather than the motorist.
  - **Connectivity** - Scenic Parks generally draw users from the proximate vicinity near the park but can also draw users from throughout the city and therefore should be connected by multiple modes, including sidewalks and dedicated pathways. Some Scenic Parks, by design, provide connections between other types of park facilities as components of the Lake-to-Lake Greenway Connector Network.
- **Conservation Areas** – Conservation/Preservation areas in some cases could support development with special conditions to reduce environmental impacts, while maintaining their natural functions typically including floodplain functions and wetland functions. The City has designated these areas due to environmental limitations for development and/or to maintain environmental integrity and quality, including habitat, water quality and filtration, flood control, recharge, well fields, and other related purposes. Consequently, these areas will most likely remain undeveloped and are not generally accessible by the public for recreation purposes although passive

recreation, trail, boardwalk or other complementary recreational uses could be proposed.

- **Connectivity** - Due to the undeveloped nature of most Conservation Areas, dedicated connections are not always feasible or desirable. Where appropriate, Conservation Areas could be served with at least unpaved pathways to provide a natural biking and hiking environment and paved pathways where feasible for other users such as seniors or the handicapped.
- **Special Use Facilities** – Special use parks and facilities (buildings) have been created to fulfill certain unique needs of the city, such as meeting facilities.
  - **Connectivity** – Main mode of access is typically by automobile, but alternative access should be accommodated for bicyclists, pedestrians and transit patrons who do not have access to personal automobiles.
- **Urban Parks** – Urban parks serve the entire City and are located primarily in the downtown area. These parks often contain public art such as sculptures.
  - **Connectivity** – Lakeland’s Urban Parks are generally located in or near the central business district. Where necessary, enhanced sidewalk and pathway connections should be made to these facilities, such as through the streetscape program for Downtown parks. It is recommended there be ¼ mile of unobstructed access to surrounding areas, containing significant numbers of residents and/or employees. Urban Parks draw from a large citywide geographical area, therefore connections should be made via the Lake-to-Lake Greenway Connector Network and be located in close proximity to transit routes.
- **Sport Complexes** – Sports complexes are specialized to primarily provide sports venues/field complexes, but may include other facilities such as a multi-purpose field and/or play equipment. A sports complex may include a stadium or clubhouse.
  - **Connectivity** – Sports Complexes provide major athletic facilities that draw patrons from throughout the city and region, or providing recreation facilities for a more localized population in adjacent neighborhoods. While primary access is via the automobile, site access and design should accommodate bicyclists, pedestrians and transit patrons through sidewalks, pathways and/or on-road bicycle lanes and appropriate amenities.

The full Parks Connectivity Plan, found in TSD V-Two in the Technical Support Document, contains two sections and sets of recommendations for each of the 73 facilities evaluated, including the Fort Fraser Trail operated by Polk County:

- Section One: Individual park analysis and connectivity recommendations; and
- Section Two: Recommendations for promoting the park system.

Section One focused on the ability to reach parks and recreational facilities on foot or bicycle, which is crucial to achieving a truly livable community. This section of the Parks Connectivity Plan was developed with the following goals:

- Improving community and neighborhood connectivity to the City’s park system;
- Identification of passive and active connections that address barriers or gaps that hinder park access, such as:
  - Missing sidewalk or bicycle network segments leading to a park facility;
  - Physical barriers such as fences, wall or ditches that preclude direct access;
  - Major highways that isolate park and recreation facilities from surrounding neighborhoods, employment centers;
  - Absence of handicap ramps along key access routes to a facility.
- Identification of specific projects to improve connectivity

Each of the 45 projects contained in the Parks Connectivity Plan fit into four general categories, also depicted in Illustration III-18:



*Bicycle Lanes.* Indicated when the addition of designated bicycle lanes is necessary to support a recommended connection.



*Enhanced Pedestrian Crossing.* Enhance an existing crossing to increase automobile and pedestrian visibility and to emphasize connections between communities and park facilities. Improvements for enhancement should include a textured pavement, painting the crossing beyond simple stripes, placing signage along the roadway to notify drivers of crossing and/or a median refuge.



*Create Pedestrian Crossing.* Defines where an existing crossing is identified, but should be enhanced to better convey the importance and connection to the park connectivity system.



*Neighborhood Connector* – Provides non-motorized connections between parks and neighborhoods, via select corridors. Connectors could include sidewalks, multi-use pathways and trails connections.

The City Parks and Recreation Department will be responsible for the periodic review and prioritization of these connectivity projects, which will be considered for incorporation into other Pathways Plan projects throughout Lakeland or as stand-alone projects to be programmed in the City’s Capital Improvement Plan. City staff will also request that Parks Connectivity projects be included into any City, County or FDOT resurfacing or maintenance projects on adjacent streets including FDOT projects on US 92 (Memorial Boulevard), US 98 (North Florida Avenue) and SR 33 (Lakeland Hills Boulevard).

Section Two identified steps that can be taken to better promote the City’s Parks facilities and the Lake-to-Lake Bikeway Greenway Connector network, such as through a dedicated Web page, increased wayfinding signage and maps of the parks and Lake-to-Lake network.

**Safety:** The City of Lakeland has addressed the issue of safety for bicyclists and pedestrians, and continues to promote safety-mindedness for bicyclists, pedestrians, and motorists. Bicycle routes are being designated and marked by means of bike lanes, sidewalks, “bikes sharing roadway” signs, Lake-to-Lake Bikeway signs, and maps. Flashing crosswalks (pedestrian-activated strobes located within a crosswalk that inform motorists of the pedestrian’s intent to cross the street) were installed on Lime Street at the Lakeland Center, and along Ingraham Avenue on the Florida Southern College campus as part of a pilot project sponsored by FDOT.

**Traffic Calming:** The City has enacted a “Neighborhood Traffic Management Program” aimed at improving safety in its residential areas through the use of various traffic calming techniques. Since its inception in 1999, approximately 40 projects have been constructed by the City Public Works Department, including:

- Street Narrowing (Prado and Palencia Place)
- Traffic Island (Success Avenue)
- Road Closure (Edgewood Alley)
- Speed Tables (Eastway Drive)
- Speed Humps (Westover Street)



Traffic Island  
on Success Avenue

The Public Works Department measures the effectiveness of each traffic calming project by conducting a before-and-after study, usually one year following implementation. In each instance evaluated, traffic speeds were lower following project implementation. Traffic volumes were also lower on all but three of the streets receiving a traffic calming treatment. The City has budgeted \$50,000 annually in its CIP for additional traffic calming projects throughout Lakeland. Through these programs, Lakeland is actively seeking a more bicycle-friendly city, and promotes this through safety practices and safe design.

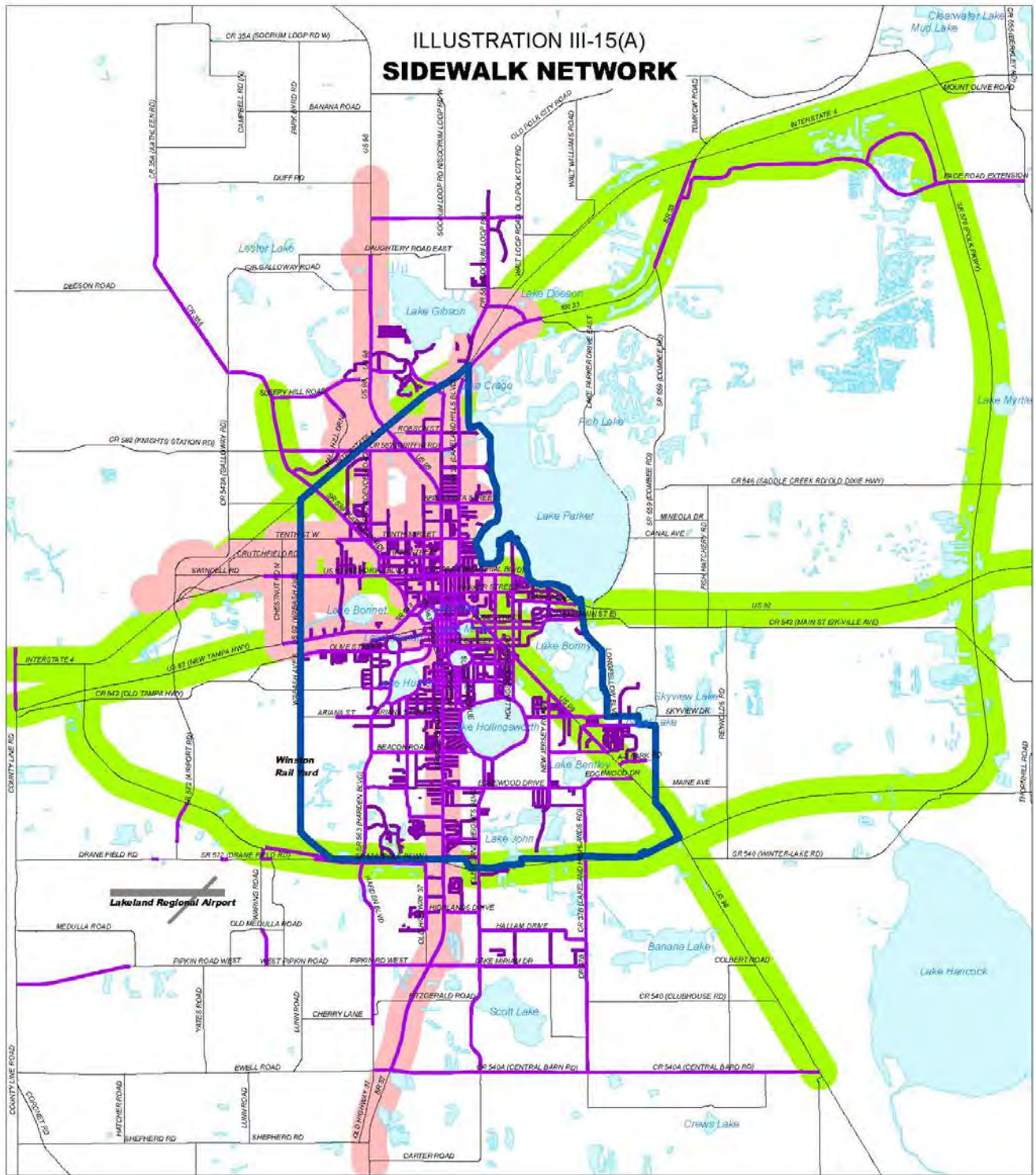
## FUNDING OPTIONS

Since the 1990s, the City of Lakeland has been very successful in obtaining Federal Transportation Enhancement Program (TEP) funding for bicycle/pedestrian projects to complete Lake-to-Lake Bikeway Greenway network improvements within the City, such as the Johnson Avenue Streetscape project in the vicinity of Florida Southern College. The City has obtained approximately \$3.2 million in TEP funds between 1993 and 2008. Approximately \$400,000 per year is available to the Polk TPO for Enhancement Projects that are prioritized for funding and programmed in the FDOT Five-Year Work Program approximately two years prior to implementation. The Polk TPO has also established

funding set-asides totaling \$4 million per year for “Congestion Management System” enhancement supplements to programmed FDOT resurfacing projects such as sidewalks, paved shoulders and transit stop improvements through the “Early and Continued Coordination on Road Projects” process. The TPO sets aside an additional \$1 million per year of its Federal funding allocation for multi-use trail projects that are on the regional network.

In terms of local funding, the City of Lakeland provides required local funding matches to Federal and State discretionary funding awards for pathways projects, as needed. The Dixieland, Downtown and Mid-Town Community Redevelopment Areas also provide funding for bicycle/pedestrian pathway enhancements on an as-needed basis in compliance with their redevelopment plans. The Mid-Town CRA has advanced the full \$800,000 cost to complete the Parker Street Multi-Modal Corridor Enhancement Project, with \$400,000 in TEP funding being reimbursed to the Mid-Town CRA in FY 2011/12.

The City has budgeted nearly \$9 million of local funds for sidewalk projects between FY 2010-2019, \$7.6 million of which is programmed for sidewalk repair, replacement and Americans with Disabilities Act (ADA) compliance upgrades. In addition, street improvements are programmed that will incorporate sidewalks into their designs. As explained in the Mass Transit section of this element, future sidewalk prioritization cycles will focus on linkages to transit routes, with headways of 30 minutes or less. The Polk County Board of County Commissioners has historically programmed about \$250,000 annually for sidewalk improvements on County roadways, some of which are in the Lakeland Area. Polk County places a high priority on safe connections to schools, based on such criteria as the volumes of the adjacent roads, speed of traffic and the project cost. The City must work with the County to include other considerations, such as connections to transit.



Source: Lakeland Public Works Department, 2010

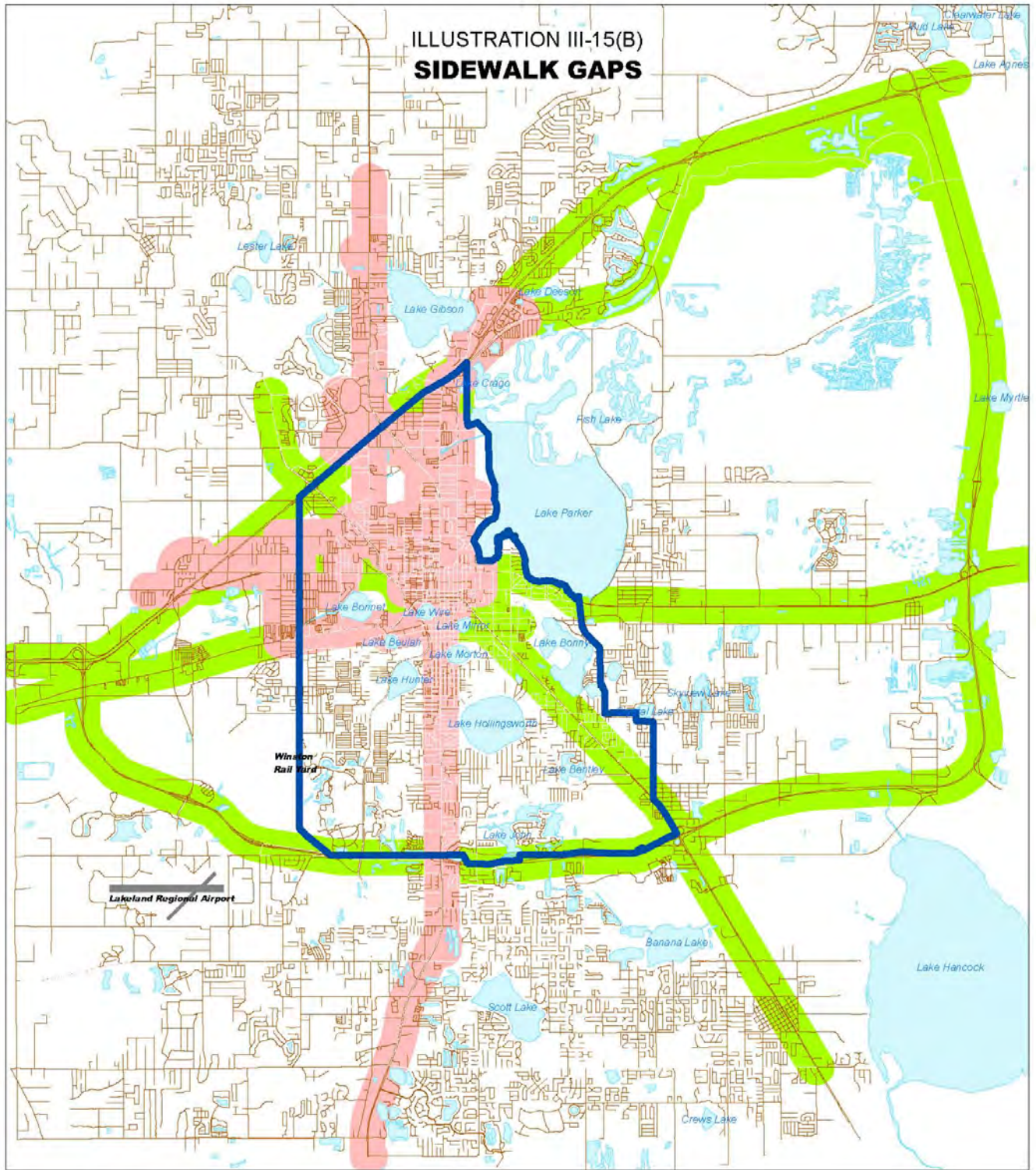


k:\od\maps\esri\Comp\_Plan\Trans\III-15 Sidewalks.mxd

- Sidewalks
- 30 min Headway 1/4 buffer
- Transit Oriented Corridors 1/4 buffer
- Central City Transit Supportive Area







**ILLUSTRATION III-15(B)  
SIDEWALK GAPS**



Source: Lakeland Public Works Department, 2010

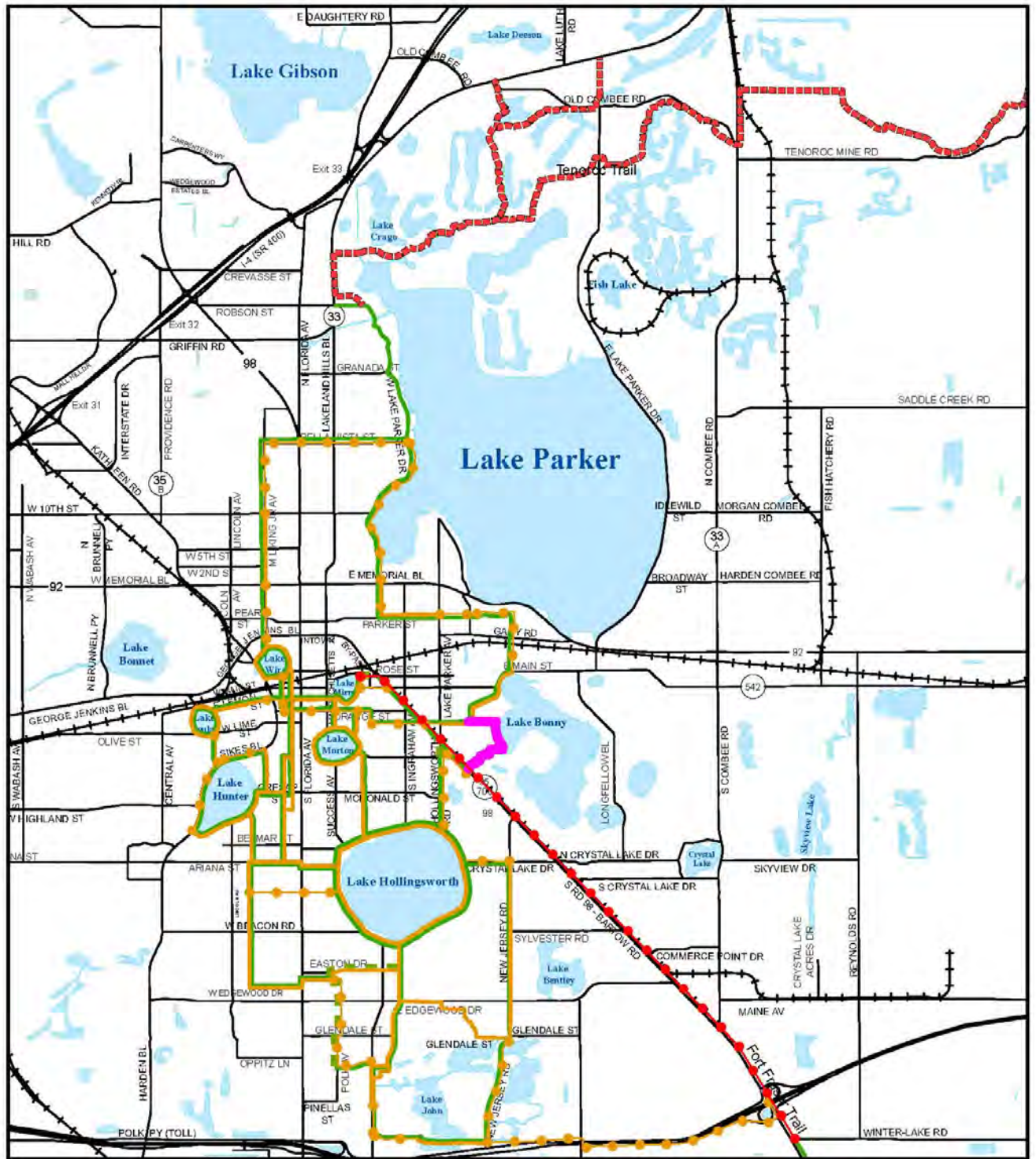


-  Sidewalk Gaps
-  30 min Headway 1/4 buffer
-  Transit Oriented Corridors 1/4 buffer
-  Central City Transit Supportive Area



k:\c0\maps\esri\Comp\_Plan\Trans\III-15(B) Sidewalk Gaps.mxd





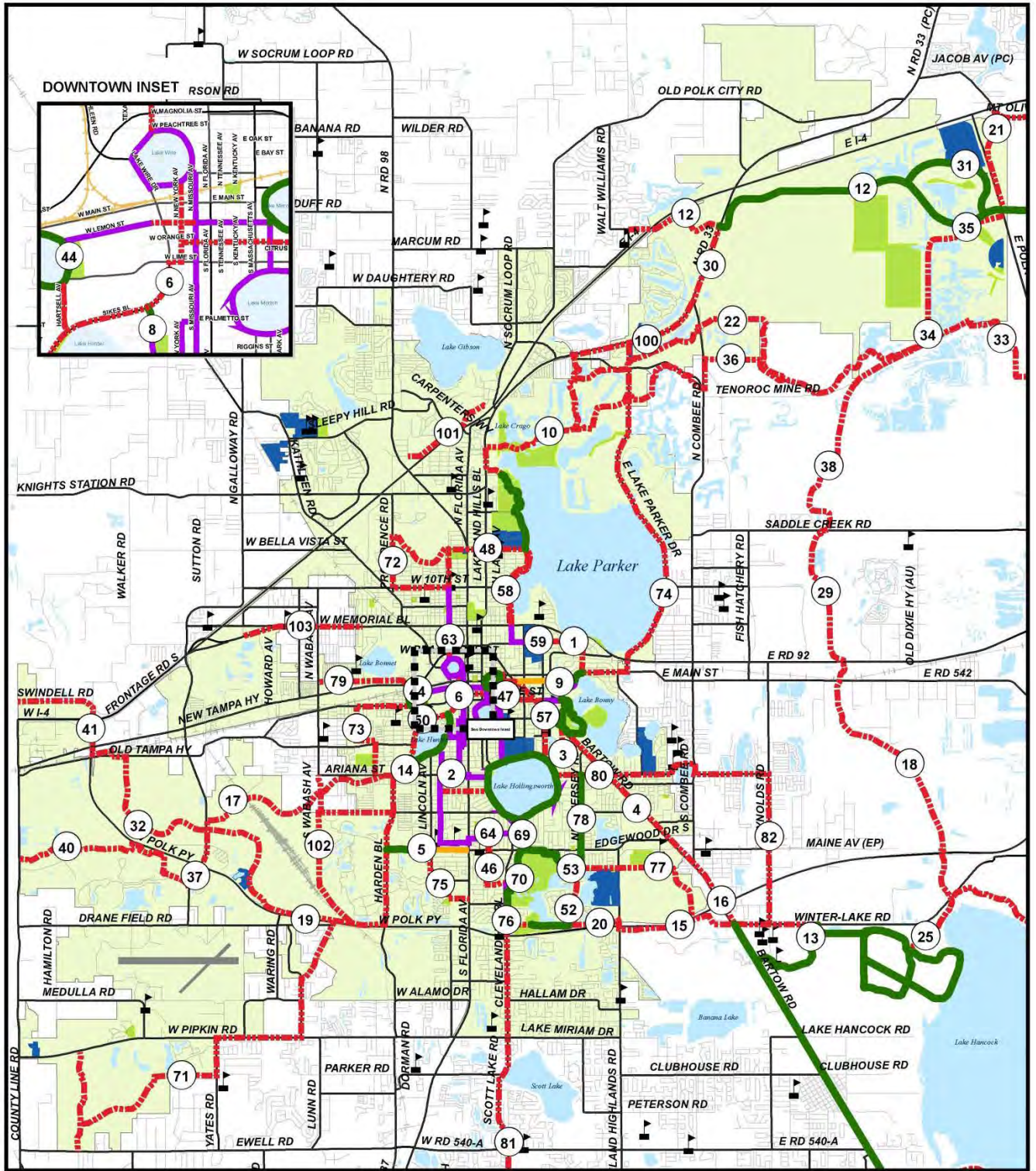
**LAKE-TO-LAKE GREENWAY CONNECTOR**  
ILLUSTRATION III-16

- |                                       |   |
|---------------------------------------|---|
| <b>Greenway Pedestrian Connector</b>  | <b>Planned Regional Trails</b>                |
| Existing (solid green line)           | Tenoroc Trail (proposed) (red dashed line)    |
| Proposed (dashed green line)          | Fort Fraser Trail (proposed) (red solid line) |
| <b>Lake-to-Lake Bicycle Connector</b> | Future Alternate Corridors (pink line)        |
| Existing (solid orange line)          |   |
| Proposed (dashed orange line)         |   |

Ordinance #5550  
Adopted 12/21/15



Date: 7/29/2015  
Source: Lakeland Community Development July, 2015  
Path: Z:\Comp Plan\Transportation\2015 Trail\III-16 Lake to Lake Greenway 7-15.mxd



**PROPOSED PATHWAYS CORRIDORS**  
ILLUSTRATION III-17

Ordinance # 5550  
Adopted 12/21/15

**Proposed Pathways Status**

- |   |  |   |
|---|--|---|
|  Planned                                 |  Recreational             |  Local Street      |
|  Existing Multiuse Trail                 |  Public and Institutional |  Collector Roadway |
|  Existing Lake to Lake Network (On Road) |  Public Schools           |  Arterial Roadway  |
|  Other On Road Pathways Plan Corridors   |  |  Railroad          |



Date: 8/21/2015

Source: Lakeland Community Development Department, 2015

Path: Z:\Comp\_Plan\Transportation\2015\_Trails

III-17 Proposed Pathways Corridors\_15-2.mxd

Note: Priority Scoring found in attached table

**TABLE III-17**  
**CITYWIDE PATHWAYS PLAN**  
**PATHWAYS CORRIDORS**  
(ALTHO REFERENCE ASSOCIATED ILLUSTRATION)

ID	Pathway Corridor Name	From	To	Jur.	Length	Score
1	Ft. Fraser to Lake Parker Connector	L Bonny Trail @ E Lime St.	L Parker Trail @ W Lake Parker Dr.	C/M	3.93	11.00
2	Lake Hunter-to-Lake Hollingsworth Trail	Lake Hunter Trail	Lake Hollingsworth Trail	C/M	1.08	10.00
3	Lake Bonny Trail Connection South	Lake Hollingsworth Drive	US 98 (Bartow Road)	C/M	0.53	9.00
4	Fort Fraser Trail	North of SR 570 (Polk Parkway)	Downtown Lakeland Lake Mirror Promenade	C/M	4.07	11.00
5	Edgewood Drive Ext. Trail**	SR 37 (Florida Ave)	SR 563 (Harden Blvd)	C/M	1.12	Complete
6	New York Avenue Cycle Track	Lime Street @ Sikes Blvd.	Lake Wire Drive	C/M	0.37	8.00
7	Tenoroc Trail (Segment 1a)	Tenoroc Trail Segment 1	SR 33 Trail	C/M	1.30	6.00
8	Lake Hunter Trail	Cresap Street	Waverly Place	C	0.26	7.50
9	Lake Bonny Park Connection North	Lake Bonny Park	Lake Bonny Shore	C	0.61	6.50
10	Tenoroc Trail (Segment 1)	Lake Parker Park near SR 33	SR 33 @ Old Combee Road	C/M	3.08	7.50
11	Lake Beulah - Lake Hunter Connector	Lemon St	SR 563 (Sikes Blvd)	C	0.88	8.00
12	Williams Trail Alternative 1 (Bridgewater – Williams Trail and University Blvd. Trail ***)	Walt Williams Road	SR 570 (Polk Parkway)	C/M	5.78	6.50
13	Circle B Bar Connector**	Fort Fraser Trail @ PCC Entrance Rd	Circle B Bar Reserve	NC	2.27	Complete
14	Lakeland-to-Plant City Connector Alt. 2	SR 563 (Harden Blvd)	Lake Hunter Blvd	C/M	0.37	7.00
15	Lakeland Highlands Trail	US 98	Lakeland Highlands Road	M	1.68	6.50
16	Fort Fraser Trail Bridge*	SR 540 (Winter Lake Rd)	North of SR 570 (Polk Parkway)	NC	0.54	8.50
17	Lakeland-to-Plant City Connector Alt. 2	SR 572 (Airport Rd) @ SR 570 (Polk Pkwy)	SR 563 (Harden Blvd)	C/M	3.55	7.00
18	Peace River Greenway*	SR 540 (Winter Lake Rd)	US 92	NC	3.90	4.00

ID	Pathway Corridor Name	From	To	Jur.	Length	Score
19	Lakeland-to-Plant City Connector Alt. 1	SR 563 (Harden Blvd)	SR 572 (Airport Rd)	C/M	4.04	7.00
20	Turtle Rock – Lakeland Marketplace Connector	Lakeland Highlands Road	New Jersey Road	C	0.78	4.50
21	Williams Trail Alternative 2	SR 570 (Polk Parkway)	TECO-Auburndale Trail via Mt. Olive Road	C/M	2.23	2.50
22	Tenoroc Trail Regional Northern Alternative	Tenoroc Trail Segment 1a	Tenoroc Trail W. of Derby Lake	C/M	3.30	3.00
23	Auburndale Trail*	Old Dixie Highway	Lake Myrtle Drive (southern terminus of Auburndale*)	NC	0.93	2.50
24	Cypress Trail*	Ft. Fraser Trail	Peace River Greenway	NC	8.68	3.00
25	Peace River Greenway*	Circle-B-Bar Reserve	SR 540 (Winter Lake Rd)	NC	1.30	2.50
26	Williams Trail Alternative 1 (Pace Road Trail Segment**)	SR 570 (Polk Parkway)	TECO-Auburndale Trail & CR 655 (Berkley Road)	NC	1.17	Complete
27	Auburndale Trail Bridge*	West of CR 655	East of CR 655	NC	0.09	1.50
28	Van Fleet Extension**	Post Road	SR 33 (southern terminus of Van Fleet Nat. Rec. Trail)	NC	0.92	Complete
29	Peace River Greenway*	US 92	CR 546 (Saddle Creek Rd)	NC	2.05	2.50
30	Williams Trail Alt. 1 Connector West via SR 33 Trail	Tenoroc Trail Regional Northern Alternative	Williams Trail Alternative 1 (Bridgewater–Williams/University Boulevard Trails)	C/M	1.09	1.50
31	(Research Way Trail**)	University Boulevard Trail West	University Boulevard Trail East via Town Center- Florida Polytechnic University	C	1.67	Complete
32	Lakeland-to-Plant City Connector Alt. 1	SR 572 (Airport Rd)	CR 542 (Old Tampa Hwy)	C	2.30	1.50
33	Tenoroc Trail* (Segments 5-7)	Tenoroc Mine Rd @ Picnic Lake	Auburndale Trail at Braddock Rd	NC	4.80	2.00
34	Williams Trail SW Connector	Tenoroc FMA	Williams DRI and Alt. 2	C/M	2.45	1.00
35	Williams Trail Alternative 2	Williams SW Connector	SR 570 (Polk Parkway)	C/M	1.25	1.00
36	Tenoroc Trail (Segments 2-4)	Tenoroc Trail Segment 1	Tenoroc Mine Rd @ Picnic Lake	C/M	6.00	2.00

ID	Pathway Corridor Name	From	To	Jur.	Length	Score
37	Lakeland-to-Plant City Connector Alt. 2	SR 572 (Airport Rd)	SR 572 (Airport Rd) @ SR 570 (Polk Parkway)	C/M	0.40	2.00
38	Peace River Greenway*	CR 546 (Saddle Creek Rd)	Tenoroc State Reserve	NC	2.34	.50
39	Ft Fraser Trail to Bartow Eagle Lake Trail*	Cypress Trail	Bartow Eagle Lake Trail	NC	2.09	.50
40	Lakeland-to-Plant City Connector Alt. 2	Hillsborough County Line	SR 572 (Airport Rd)	C/M	2.83	1.50
41	Lakeland-to-Plant City Connector Alt. 1	Hillsborough County Line	Swindell Road @ County Line Rd.	C/M	2.16	3.00
42	Lake to Lake Bike-Orange St	Iowa Ave	New York Ave	C	0.37	3.00
43	Lake to Lake Bike-Lemon St	Missouri Ave	Lake Beulah Dr	C/M	0.57	10.00
44	Lake to Lake Bike-Lake Beulah Trail**	Lake Beulah Dr Loop	Lake Beulah Dr Loop	C/M	0.68	Complete
45	Lake to Lake Bike-Maxwell St	Lake Hollingsworth Dr	Camphor Dr	C/M	0.64	9.00
46	Lake to Lake Bike-Woodland Hills Ave	Cleveland Hts Blvd	Carolina Ave	C	0.97	8.50
47	Lake to Lake Bike-Orange/Lime St	Lime St. @ North Lake Parker Ave	Iowa Ave @ Orange St.	C/M	0.84	9.00
48	Lake to Lake Bike-Bella Vista St	Lake Parker	W 10th St	C/M	1.55	10.00
49	Lake to Lake Bike-Main St	US 98 (Bartow Rd)	Lake Mirror Promenade	C/M	0.20	7.00
50	Lake to Lake Bike-Hartsell Ave	Lake Beulah Dr	SR 563 (Sikes Blvd)	C/M	0.21	7.00
51	Lake to Lake Bike-West Lake Hunter Trail	Lake Hunter Dr	Lime St.	C/M	1.09	9.00
52	Lake to Lake Bike-New Jersey Rd	SR 570 (Polk Pkwy)	Willow Ave	C/M	0.93	4.00
53	Three Parks Trail - North	Glendale St. @ New Jersey Rd.	Edgewood Dr. @ Buckingham Ave	C/M	0.95	7.50
54	Lake to Lake Bike-New Jersey Trail I**	Easton Dr	Glendale St	C	0.50	Complete
55	Lake to Lake Bike-Lake Bonny Dr	Main St	Montgomery St	C	0.26	6.50
56	Lake to Lake Bike-East Lime Street	Montgomery St	Lime St @ N. Lake Parker Ave.	C	0.20	Complete
57	Lake to Lake Bike-Lake Bonny Trail	Lake Bonny Dr W	Lake Hollingsworth Dr	C/M	1.18	10.00
58	Lake to Lake Bike-Lake Parker Dr	Bella Vista St	Parker St	C/M	1.43	9.00
59	Lake to Lake Bike-Parker St**	Lakeshore Dr	Gary Rd	C/M	0.69	Complete

ID	Pathway Corridor Name	From	To	Jur.	Length	Score
60	Lake to Lake Bike-Interlachen Pky	Main St	Holly Rd	C/M	0.32	6.00
61	Lake to Lake Bike-Shore Acres Dr	Holly Rd	Gary Rd	C/M	0.40	6.00
62	Lake to Lake Bike-Rose St	Lake Av	Lake Mirror Dr	C	0.06	7.00
63	Lake to Lake Bike-MLK JR Ave	US 92 (Memorial Blvd)	Peachtree St	C/M	0.45	10.00
64	Lake to Lake Ped-Woodland Hills Ave	Carolina Ave		C	0.72	8.00
65	Lake to Lake Ped-Easton Dr	Buckingham Ave	Kerneywood St	C	0.55	8.00
66	Lake to Lake Ped-Carolina Ave	Kerneywood St	Carolina Ave	C	0.04	7.00
67	Lake to Lake Ped-Hollingsworth Rd	US 98 (Bartow Rd)	Lake Hollingsworth Drive	C	0.64	8.00
68	Lake to Lake Ped-Rose St	Lake Av	Lake Mirror Dr	C/M	0.08	6.50
69	Lake to Lake Ped-Buckingham Ave	Lake Hollingsworth Dr	Edgewood Drive	C/M	0.39	5.00
70	Lake to Lake Ped-Buckingham Ave**	Cleveland Heights Blvd	Edgewood Drive	C/M	0.62	Complete
71	Southwest Corridor	SR 570 (Polk Parkway)	County Line Rd	C/M	6.78	6.50
72	Paul A. Diggs - Webster Park Loop	Tenth St. at Martin Luther King, Jr. Ave.	Martin Luther King, Jr. Ave. at Bella Vista Street	C	2.44	7.00
73	Westgate – Central Trail	Lake Beulah	Ariana Street at Harden Boulevard	C/M	2.31	7.00
74	East Lake Parker Trail	Lake Mirror Promenade	Tenoroc Trail	C/M	5.83	10.00
75	Lincoln-Imperial Canal Trail	Lincoln Avenue at Edgewood Dr	Imperial Boulevard at Florida Ave	C	0.51	9.00
76	Three Parks Trail - South	Cleveland Hts Bl. @ Carleton St	Peterson Park	C/M	0.97	6.00
77	Holloway Park Trail	Lkld Highlands Trail @ US 98	Glendale St. @ New Jersey Rd.	M	2.75	7.00
78	Lake to Lake Bike - New Jersey Trail II	Easton Dr.	Crystal Lake Dr.	C/M	.75	6.00
79	Chase Street Trail	US 92 (Wabash Avenue)	Hodges Road @ George Jenkins Blvd.	C/M	1.21	7.00
80	Crystal Lake Drive	Lake Hollingsworth Drive	US 98 (Bartow Road)	C/M	.65	9.00
81	Cleveland Heights. – County Highlands Trail Connector	Cleveland Heights Blvd @ Westover	Carter Road @ Loyce Harpe Park Entrance	C/M	5.42	6.50
82	Crystal Lake – Skyview Corridor	Upper Peace Legacy & Fort Fraser Trails	US 98 (Bartow Road) @ North Crystal Lake Drive	M	6.46	7.00

ID	Pathway Corridor Name	From	To	Jur.	Length	Score
100	Long Lake/SR 33 Trail	SR 33 @ SR 659 (Combee Rd.)	Old Combee Road	NC	1.84	N/A <sup>1</sup>
101	Lakeland Park Trail	Hopewell Avenue	Lakeland Park Dr. @ Existing Terminus	M	1.27	N/A <sup>1</sup>
102	Wabash/Beacon Trail	Harden Blvd. @ Beacon Rd.	Beaker Blvd. @ Harden Blvd.	M	3.08	N/A <sup>1</sup>
103	West Memorial Blvd Trail	Brunnell Parkway	Crutchfield Road	C/M	1.62	5.50

**Source:** Renaissance Planning Group, City of Lakeland, & Polk TPO, 2009; City of Lakeland, 2012.

\* Regional funding required

\*\* Project completed after 2009.

\*\*\* Trail is completed east of SR 33, constructed as part of University Boulevard roadway project.

<sup>1</sup> Trails would be incorporated into design and implemented as part of road improvement projects.

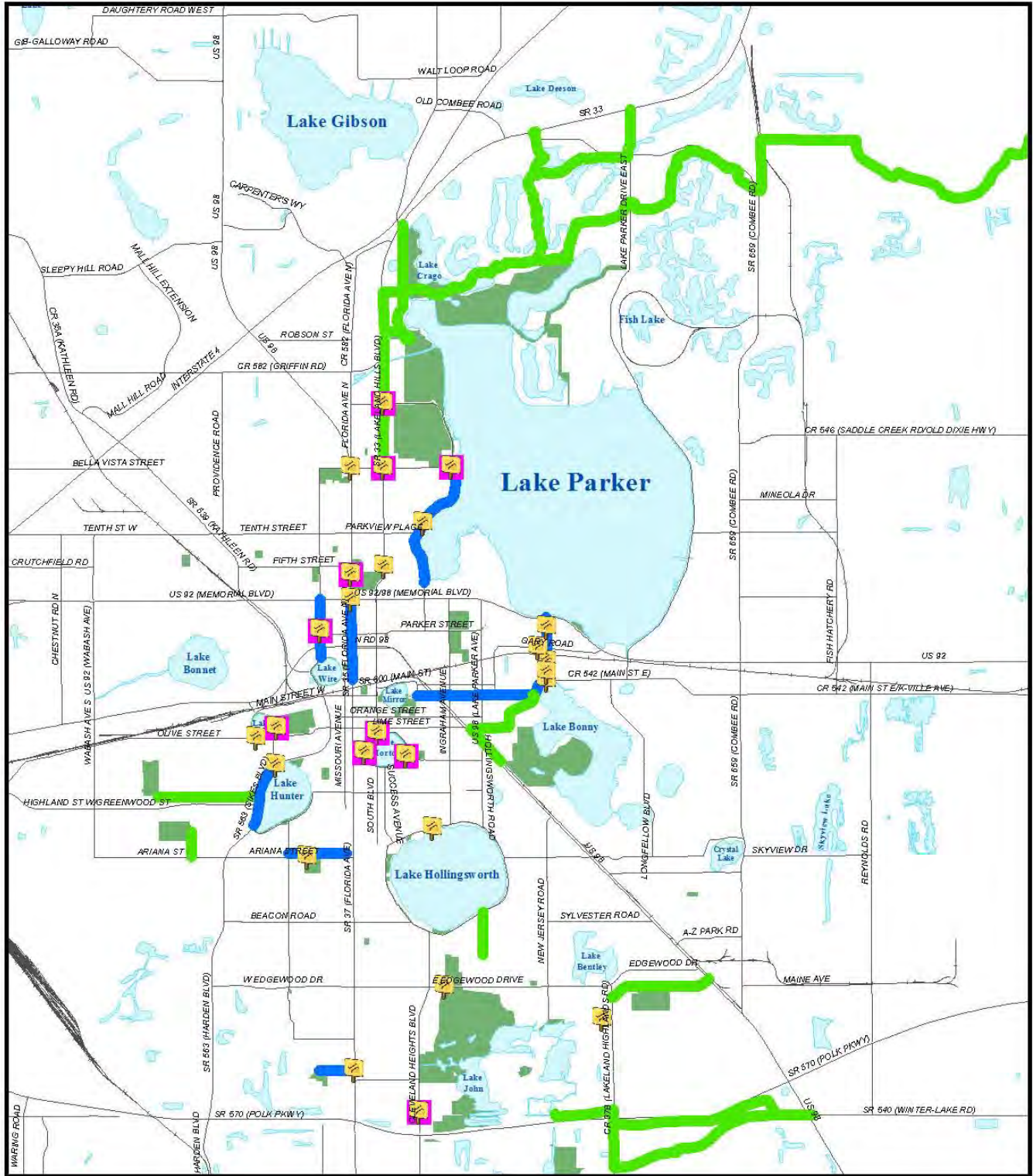
Jurisdiction

C – City\*\*\*\*

NC – Not City

M – Multiple

\*\*\*\* City Jurisdiction could result in direct CIP funding for construction/maintenance, city management using State/Federal funds or privately-funded/maintained as a condition of development approval.



**PARKS CONNECTIVITY PROJECTS**  
ILLUSTRATION III-18

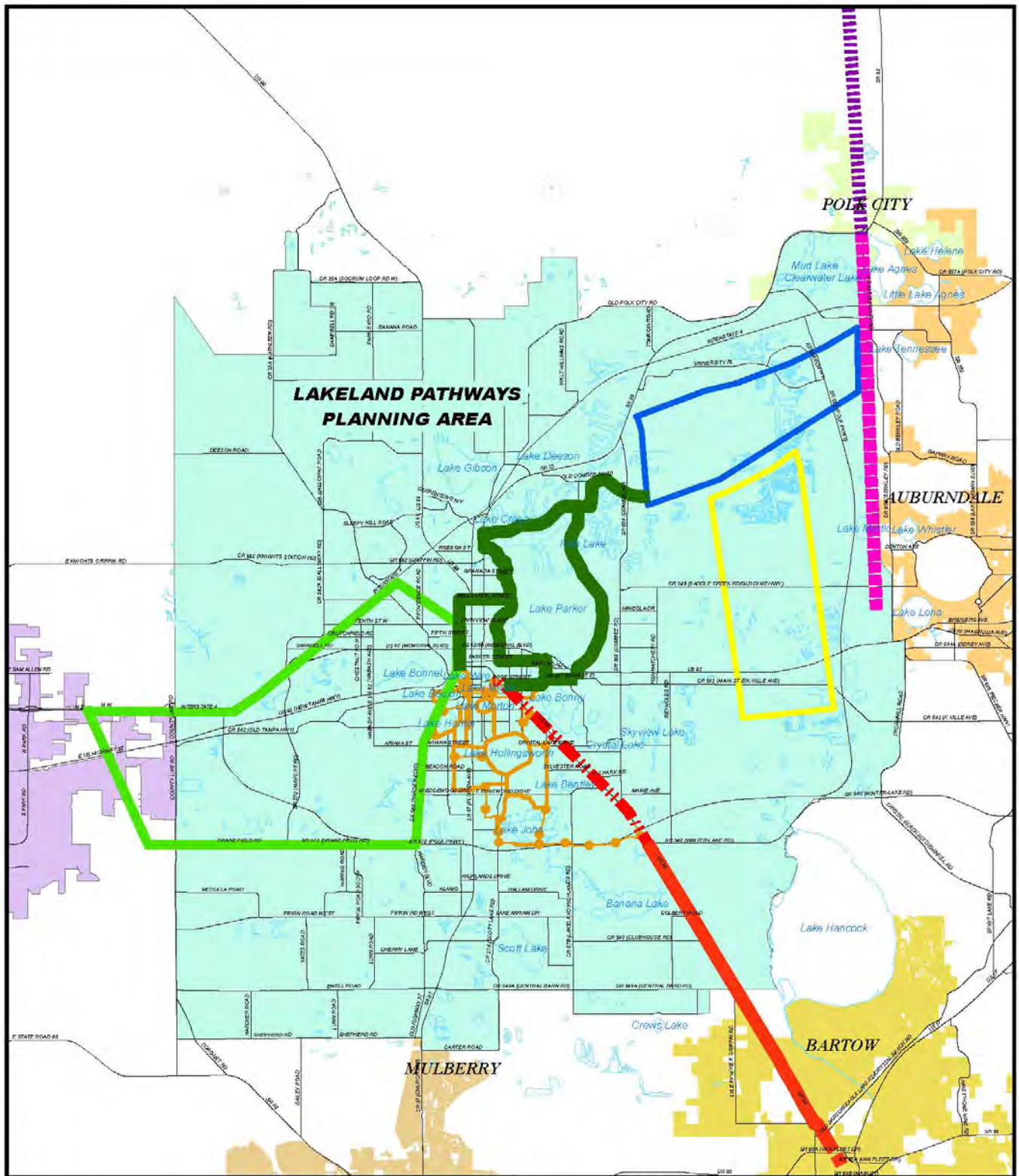
Ordinance # 5550  
Adopted 12/21/15

-  Pedestrian Crossing
-  Enhanced Pedestrian Crossing
-  Bicycle Lane
-  Neighborhood Connector
-  Existing Parks



Date: 7/29/2015  
Source: Lakeland Community Development Department, 2015  
Path: Z:\Comp\_Plan\Transportation\2015\_Trail\III-18 Park Connectivity Projects\_15.mxd





**POLK COUNTY TRAIL SYSTEM**  
ILLUSTRATION III-19

Ordinance # 5550  
Adopted 12/21/15



- |                                  |  |                                |
|----------------------------------|--|--------------------------------|
| Lake-to-Lake Greenway Connectors | Lakeland to Plant City Connector Corridor (Proposed) | Lake-to-Lake Bicycle Connector |
| Tenoroc Trail (Proposed)         | Saddle Creek/Peace River Greenway (Proposed)         | Existing                       |
| Fort Fraser Trail                | Van Fleet Trail (completed 1994)                     | Proposed                       |
| Fort Fraser Trail (Proposed)     | Van Fleet Trail Southern Extension (completed 2009)  |                                |

Date: 8/21/2015  
Source: Lakeland Community Development Department  
Path: Z:\Comp\_Plan\Transportation\2015\_Trails  
III-19 Polk County Trails System -15.mxd

## MASS TRANSIT

The summary of findings for the mass transit portion of this element deals with the public transportation system in the Lakeland Planning Area, specifically, the Lakeland Area Mass Transit District (LAMTD). The information used in this summary represents a compilation of research and data from resources such as the Transit Development Plan prepared by the Transportation Planning Organization (TPO), the LAMTD route schedules, various articles, and information gathered from the Transit Director.

### LAKELAND TRANSIT SERVICE AREA BACKGROUND

The City of Lakeland is a part of the Lakeland urbanized area which is one of two urbanized areas within Polk County, Florida. The role of Lakeland as a growing commercial, industrial distribution and corporate office area, is increasingly emphasized by its position as the most populous city between Orlando and Tampa as well as within Polk County. Lakeland is becoming more involved with regional economic and travel patterns. The Lakeland Urban Area's diversity of age groups and income levels continues to ensure significant annual ridership figures reflecting the increasing demand for transit services. As the population and roadway congestion levels increase, transit services will continue to be a viable alternative for meeting future transportation needs. Creative use of transit services and development designs which are transit friendly will further assist in meeting future demand for transit in the Lakeland area.

The LAMTD was created by County ordinance approved in 1980, with service beginning in 1982. A special taxing district with authority to levy up to a half mil, or 50¢ per \$1,000 of assessed valuation, was also established. That assessment primarily funds transit services and administration within the district. The LAMTD taxing district has historically fallen just outside the City of Lakeland boundaries. The City of Lakeland, which has continued to annex new territories, includes some areas which are not in the transit district. Likewise, the portion of Lakeland urban area residents which reside outside the corporate limits of the City may be within the transit district service area. In fact, as LAMTD expands to the south, west and east, and as it adds links to countywide services, its services will become more regional in nature.

**Polk Transit Authority (PTA):** Joint City-County efforts led to a 2003 Countywide Transit Study conducted by the Polk Transportation Planning Organization (TPO), which recommended the creation of a regional transit authority providing countywide transit services by consolidating Polk County's three existing transit providers. In 2007, the Florida Legislature created the PTA to serve as that consolidated provider of countywide transit services. The PTA has no dedicated funding source, and until action during the 2009 Florida Legislative Session, did not have the ability levy a Charter County Transportation Surtax to maintain and expand transportation services. In 2010, voters will be asked to approve a half-percent sales tax to maintain existing service levels and fund service enhancements, including longer hours, Sunday service and circulator routes. If voters approve this countywide sales tax, then the half-mil property tax levied within LAMTD's

boundaries will disappear. If this sales tax is not approved, then the property tax will continue to be levied within LAMTD; however, significant service cuts are expected due to the loss of available Federal operating funding associated with the Lakeland's Urbanized Area population surpassing 200,000 residents following the 2010 Census.

## EXISTING CONDITIONS

Illustration III-20, Lakeland Area Mass Transit District and Connector Service, depicts the existing LAMTD service area for greater Lakeland. In year 2007, LAMTD district boundaries extended well beyond the Lakeland city limits in some areas. The District's staff office and bus garage is located at 1212 George Jenkins Boulevard, west of downtown. The bus terminal is located on North Florida Avenue, about a block north of Main Street and within walking distance of downtown's Munn Park Historic District and other retail areas. In 2007, LAMTD included Monday through Saturday services on 19 existing fixed routes and Handy Bus or demand responsive services. The fixed routes include an express service to Bartow and a connector to Winter Haven's transit service area via Auburndale. This connector route allows, in theory, for riders originating from rural areas of eastern and south Polk County and using the Polk County Transit Services system, to travel through Winter Haven and then to an ultimate destination in Lakeland or Bartow, the County seat. The Winter Haven Area Transit Service (WHAT) was initiated in March of 1999 for fixed route services in that area and has joined LAMTD and Polk County Transit Services in taking the necessary steps to establish the Polk Transit Authority.

As of 2007, LAMTD's bus service, known as the "Citrus Connection," provides fixed route service from 5:45 a.m. to 7:15 p.m. on weekdays and Saturday service from 7:15 a.m. to 6:15 p.m. on 21 fixed routes (see Illustration III-21, Lakeland Area Bus Routes). LAMTD provided almost 1.5 million one-way passenger trips in fiscal year 1999/2000, and more than 1.6 million in fiscal years 2006/2007. As shown in Table III-18, ridership has grown by slightly more than 18 percent from 1997 to 2007.

**TABLE III-18  
LAMTD RIDERSHIP TRENDS**

Fiscal Year	Passenger Ridership (Thousands)		
	Citrus Connection	Handy Bus	LAMTD Total
1997	1,242	83	1,325
1998	1,386	97	1,483
1999	1,393	106	1,499
2000	1,359	113	1,472
2001	1,389	124	1,513
2002	1,487	127	1,614
2003	1,510	122	1,632
2004	1,520	119	1,639
2005	1,538	132	1,670
2006	1,549	116	1,666
2007	1,516	112	1,627

Source: Polk County TPO, 2007.

Service is provided at a minimum frequency or “headway” of every hour for each stop on each route; 30 minute frequency exists on the Florida Avenue/98 North bus route and is desired on other key routes. (See Illustration III-22, Lakeland Area Bus Routes with High Stop Activity.) Some of the bus routes operate at a minimum headway of up to 120 minutes due to limited ridership and some routes maintain fluctuating headways with shortest headways occurring during peak hours.

## TRANSIT PASSENGER FACILITIES

In addition to operating its main transit transfer terminal in Downtown Lakeland, the Citrus Connection operates a park-and-ride facility located beneath the In-Town Bypass at the intersection of Main Street and Rose Street. Opened in 2007, the In-Town Bypass Park-and-Ride Facility contains 36 automobile parking spaces, numerous bicycle racks, a bus pullout and water fountain. The park-and-ride lot was funded with grant dollars provided by the Florida Department of Transportation and has been designed to be the future northern trailhead for the Fort Fraser Trail, once it is extended into Downtown Lakeland. The In-Town Bypass Park-and-Ride Facility is served by the Citrus Connection’s Route 22XL (Bartow Express) and Route 12 (Winter Haven Connector). It is also located in close proximity to Lakeland’s AMTRAK passenger rail station and Lake Mirror Park, the hub of the City’s Lake-to-Lake Bikeway Network.



In-Town Park & Ride Lot

## Transit Shelters

The Citrus Connection maintains three types of transit shelters within the Lakeland area. Shelters must conform to minimum structural design standards and color schemes as approved by the LAMTD Board and City Commission through an executed agreement. The standard shelter color includes a green roof with black frame, with the exception of the South Florida Avenue Transit Corridor. Along South Florida Avenue Transit Corridor, transit shelters must include a terra cotta roof color with black frame. Depending on adjacent Roadway Typology, bus pullout lanes may be required at the time of transit shelter installation. Depending on location, bus pullouts are incorporated into the design of required right-turn lanes to minimize cost and right-of-way impacts. Bus pullouts currently exist at Watson Clinic (US 98 at Bella Vista Street) and Arbor Oaks (SR 33 south of Interstate 4) and are currently being designed into the SR 33 four-lane project scheduled for construction in 2011 between Interstate 4 and Old Combee Road.

**Community Shelter Program:** The Citrus Connection has initiated a program through which local individuals and businesses can sponsor the purchase and installation of transit shelters throughout the Lakeland area, at an estimated cost of \$16,000 each (in 2009). Small placards recognizing the individuals/businesses for their generosity are placed at

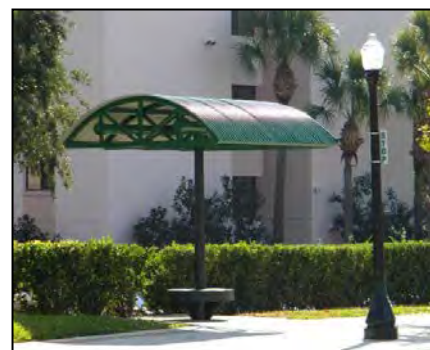
each shelter it sponsors. The Community Shelter Program is an important way to engage the community in support of the local transit system.

*Type I Shelters* are structures that offer protection on three sides and include bicycle parking, route information and trash receptacles as part of a new standard design that has been included in the City's Engineering Standards Manual. Type I shelters are installed by the Citrus Connection as part of its bus stop improvement program with District, State, Federal and/or private funds. They are also installed by the private sector if required by the City during the development review process to obtain zoning or concurrency approval. As of 2010, Type I shelters are concentrated in central Lakeland and the South Florida Avenue Transit Corridor between Downtown Lakeland and Carter Road in Mulberry.



Type I Transit Shelter

*Type II Shelters* are umbrella-shaped structures that were installed during the early 1990s in high-activity locations throughout central Lakeland with right-of-way constraints. Due to their limited size, Type II shelters do not typically include bicycle parking or trash receptacles; these shelters are no longer installed.



Type II Transit Shelter

*Transit Superstops* are larger transit shelters and/or bus operation areas found at stops with very high-stop activity, typically located within major retail centers. In 2009, transit superstops existed at Lakeside Village within the Oakbridge DRI and at Wal-Mart Supercenters on South Florida Avenue at Imperial Boulevard (Lakeland) and Carter Road (Mulberry). Transit superstops include bicycle parking, trash receptacles and route information.



Transit Superstop

No matter what type of transit shelter is located near a business or project site, the accompanying critical element that should be present is a navigable, safe sidewalk or sidepath system to and from the transit shelter from the bus, the building or along the street. The City has adopted a sidewalk ordinance to require new sidewalks for new residential development and non-residential development and redevelopment. This goes to the notion of making the City a more “walkable” place for all residents, including those who wish to safely access and use transit services.

## Bicycle Accommodations

The ability to accommodate bicycles is an important way to improve transit system accessibility for those who must travel considerable distances to access a transit stop or destination after leaving the bus at the end of the trip. The current LAMTD fleet includes racks on the front of each bus to accommodate two to three bicycles. In 2009, the Citrus Connection transported approximately 44,000 bicycle placements onto its buses. Type I transit shelters include bicycle parking facilities as part of their standard design.

The City of Lakeland's *Land Development Regulations* requires the installation of bicycle parking for most non-residential development projects adjacent to existing and planned transit routes, the Lake-to-Lake Bikeway or roadways with on-road bicycle lanes. A bicycle rack design must comply with standards contained within the *Land Development Regulations* and City Engineering Standards Manual. For very large retail or employment center projects, covered bicycle parking must be provided, including lockers, bicycle shelters or space within the principal building. In order to make bicycle, pedestrian and transit modes more viable in Florida's subtropical environment, it is important for support facilities such as showers to be included in the design of large employment center projects. To that end, the City has required the inclusion of shower facilities in the zoning conditions for large office/employment-oriented development projects in northwest Lakeland and will be working to include standard requirements in the City's *Land Development Regulations* for future application.



Bicycle Parking Facilities

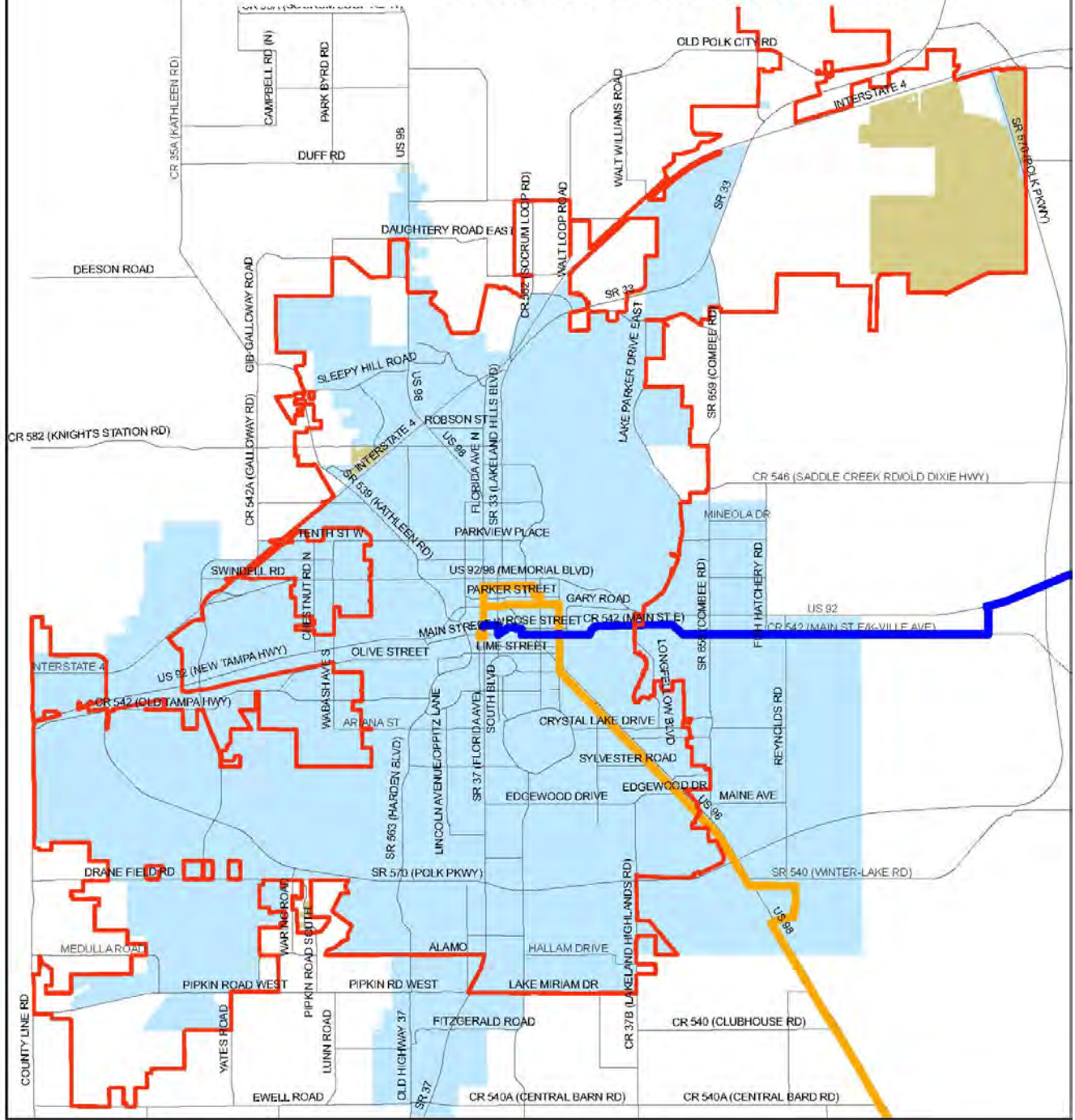
## Transit Stop Accessibility

The City's *Land Development Regulations* requires that new non-residential developments generating less than 300 peak-hour trips construct "pedestrian boulevards" to provide safe connections between principal building entrances and adjacent transit stops. These pedestrian connections can be sidewalks or striped crosswalks, depending on site conditions and development type being constructed. Larger developments are required to coordinate with LAMTD to ensure that transit vehicles can safely navigate around the development site, with minimal conflicts with other vehicles.



Transit Stop Accessibility:  
South Lakeland VA Clinic

# ILLUSTRATION III-20 LAMTD DISTRICT BOUNDARIES AND CONNECTORS



Source: Polk County Property Appraisers, 2009



**Connector Routes**

- Bartow Express Route (Lakeland)
- Lakeland - Winter Haven via Auburndale

LAMTD

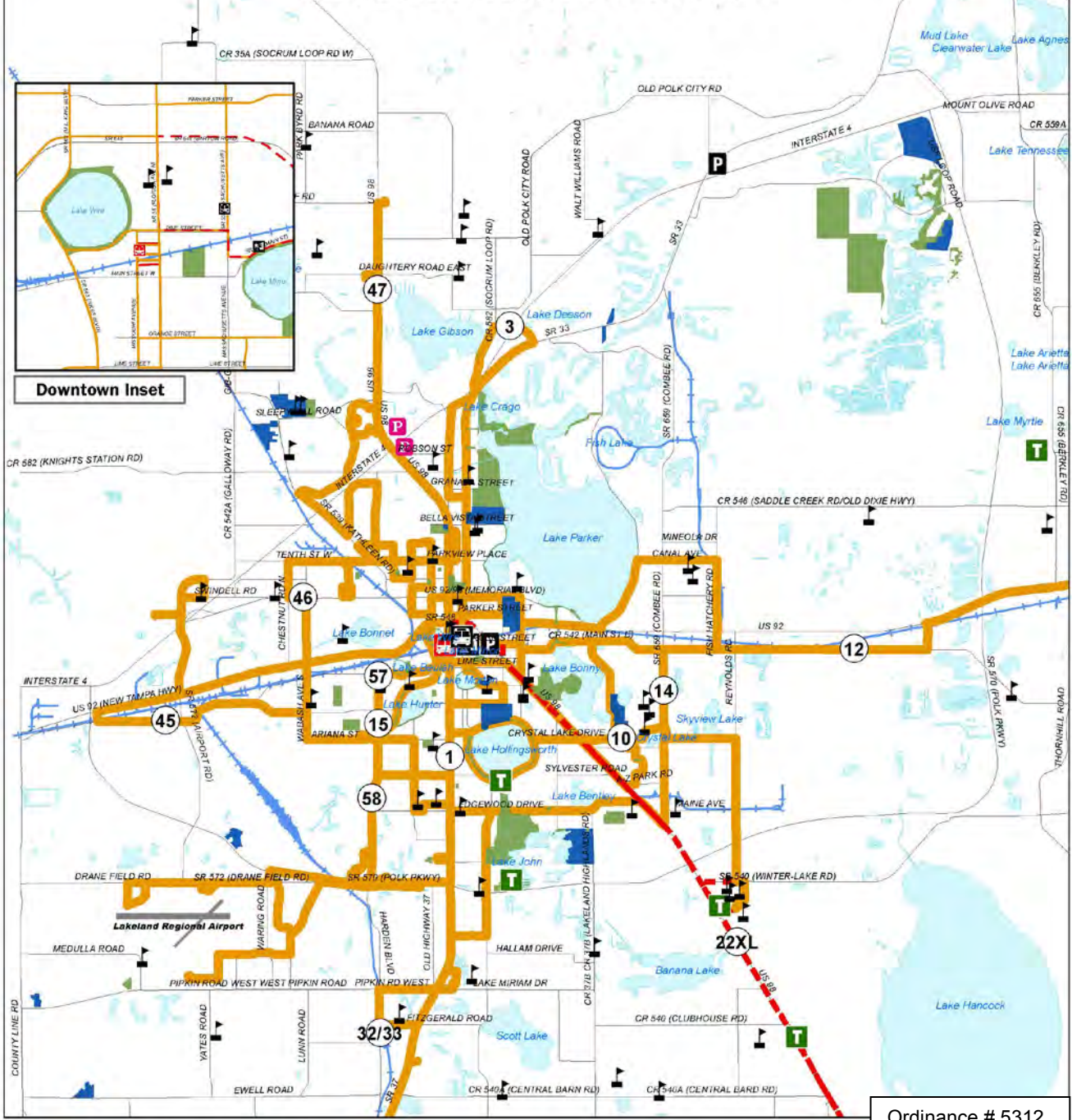
2008 Expansion

Lakeland City Limits



lced\maples\comp\plan\trans\III-20 LAMTD & Connectors

# ILLUSTRATION III-21 LAKELAND AREA BUS ROUTES



Source: Lakeland Community Development Department, 2012

Ordinance # 5312  
Adopted 05/21/12

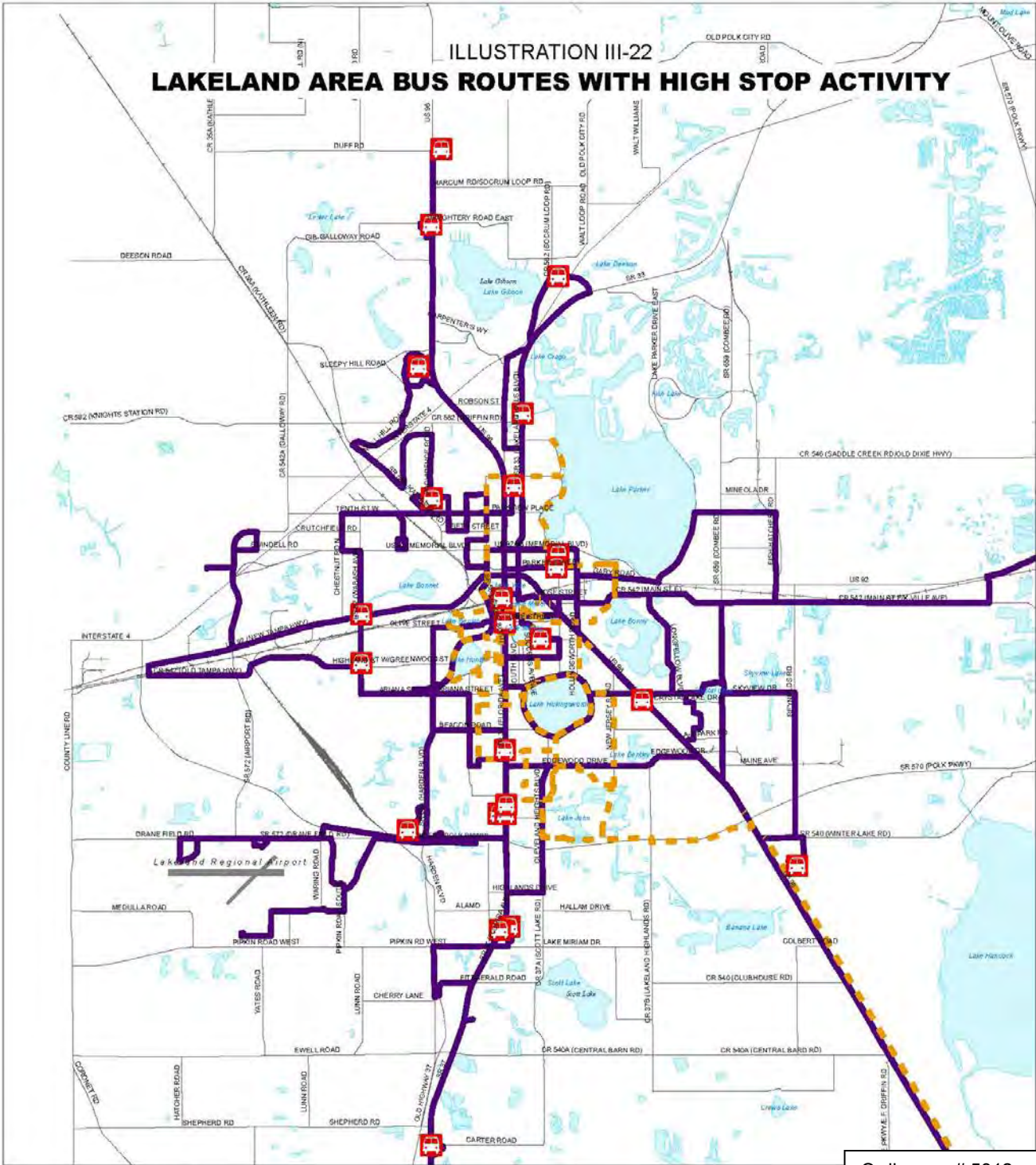
<ul style="list-style-type: none"> <li><span style="color: red; font-weight: bold;">- - -</span> Express</li> <li><span style="color: orange; font-weight: bold;">—</span> Fixed Route</li> <li> City Bus Terminal</li> <li> Regional Bus Terminal</li> <li> Amtrak Train Terminal</li> </ul>	<ul style="list-style-type: none"> <li> Park &amp; Ride Lot</li> <li> Committed Park &amp; Ride Lot</li> <li> Multi-Use Trailhead</li> </ul>	<ul style="list-style-type: none"> <li> Schools</li> <li> Recreational Land Use</li> <li> Public and Institutional Land Use</li> </ul>
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City of LAKELAND  
COMMUNITY DEVELOPMENT

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# ILLUSTRATION III-22 LAKELAND AREA BUS ROUTES WITH HIGH STOP ACTIVITY



Source: Lakeland Community Development Department, 2012

Ordinance # 5312  
Adopted 05/21/12



- Bus Routes
- Bus Stop with Top 25 Highest Activity

— Lake-to-Lake Bicycle Connector



k:\cd\maps\year\comp\_plan\trans\III-22 Bus Routes with High Stop Activity.mxd

LAMTD also operates 15 mini-buses for its Handy Bus paratransit service, offering door-to-door pickup and drop off, for what is referred to as the “transportation disadvantaged”, including elderly and/or disabled patrons, usually with limited incomes. Handy Bus service costs were \$1.50 each way in 2007, with service provided on weekdays and Saturdays. The boundaries for this service are the same as for the regular bus service. Through transit stop improvements and development site designs that comply with the Federal Americans with Disabilities Act (ADA), it will be possible for more of the transportation disadvantaged patrons to utilize fixed-route transit services that are more efficient to operate than paratransit services such as Handy Bus.

## **EXISTING CAPACITY**

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As discussed below, historically, traditional level of service measurements for transit service provision have focused upon ridership levels. As per Rule 9J-5, FAC, governing the minimum content for local government comprehensive plans, a peak hour figure for level of service is required. Based upon the bus capacity and number of buses assigned to each route, a capacity figure per route can be determined. The Polk TPO’s *2060 Transportation Vision Plan* states that the standard local fixed-route transit bus has a seated peak-hour capacity of 40 riders. The 2060 Vision Plan also cites that FDOT has established a Transit Quality of Service “D” standard for buses that includes a “load factor” of 1.25, translating a total seated and comfortably standing peak-hour capacity of 50 passengers per vehicle. For those routes with 30-minute headways (frequencies), the assumed peak-hour capacity per route is 100 passengers. No capacity problems are anticipated. A discussion of the multi-modal level of service standards proposed for the Lakeland Area in the planning period are included in the Issues and Opportunities section. Tables and illustrations within the discussion directly address future transit level of service standards recommended for the LAMTD, WHAT (Winter Haven) and Polk County transit service areas.

## **PERFORMANCE STANDARDS**

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Overall, transit services are being provided both efficiently and effectively according to the various performance standards found in the 2008-2017 Transit Development Plan adopted by the TPO in 2007 and shown on Table III-19, LAMTD Performance Standards, FY 2006/07. While the LAMTD exceeded, met or came very close to most of the standards in FY 2006/07, the operating ratio was one standard not met; it was 10% compared to the standard of 20%. During the 2000s, operating ratios decreased due to soaring fuel, insurance and other costs of products necessary to operate a transit system. The TDP addresses this issue by proposing biennial (every two years) fare increases starting in 2009, instead of fare increases every three years as proposed in the 2007 TDP. It should be noted that the 2009 TDP progress report estimates that the FY 2008 fare box recovery ratio for the LAMTD system has increased to 11%. While short of the 20% stated goal, this recent increase is a step toward meeting that goal.

**TABLE III-19  
PERFORMANCE STANDARDS**

PERFORMANCE STANDARD	OBJECTIVE/POLICY	FY 2006/07 PERFORMANCE
Marketing	Policy 2.1A – The LAMTD shall allocate at least 2% of the total operating budget for marketing efforts.	1.2%
Service To Densely Populated Areas	Objective 2.3 – Provide a level of fixed-route service to densely populated areas as follows:  Population density per sq. mile ≥ 4,000 90% of population less than ¼ mile from route	90%
	Population density per sq. mile ≥ 2,000 and < 4,000 95% of population less than ¼ mile from route	94%
Operating Ratio	Objective 3.1 – Achieve an operating ratio (Farebox Revenue/Total Operating Expenses) of at least 20%.	10%
Maintenance Cost	Objective 3.2 – Hold maintenance cost to less than 20% of total operating cost.	12%
Administrative Cost	Objective 3.3 – Hold administrative cost to less than 20% of total operating cost.	9%
"On-Time" Performance	Objective 4.1 – Achieve an "on-time" performance rating of 90% at the route and system level.	85%
Accident Rate	Objective 4.2 – Less than 2 accidents per 100,000 miles of revenue service.	3.81/100,000
Spare Ratio	Policy 4.3B – The LAMTD shall maintain a spare ratio of 20% for its fixed rate service (vehicles required for maximum revenue service compared to vehicles available for service).	20%

**Source:** Polk County TPO, Polk Consolidated Transit Development Plan 2008-2017; August, 2007.

## DEMOGRAPHIC-BASED TRANSIT POTENTIAL

Trip generators/attractors are shown in Illustration III-21, Lakeland Area Bus Routes, and in Illustration III-23, Citrus Connection Major Trip Generators, which indicates the average number of boardings on a daily basis. The highest amount of boardings typically occur at major retail centers (such as Lake Miriam Square, Town Center, Wal-Mart Supercenters and Lakeland Square Mall) and public facilities (such as at Town Center, Property Appraisers Office in Bartow and Polk County Health Department).

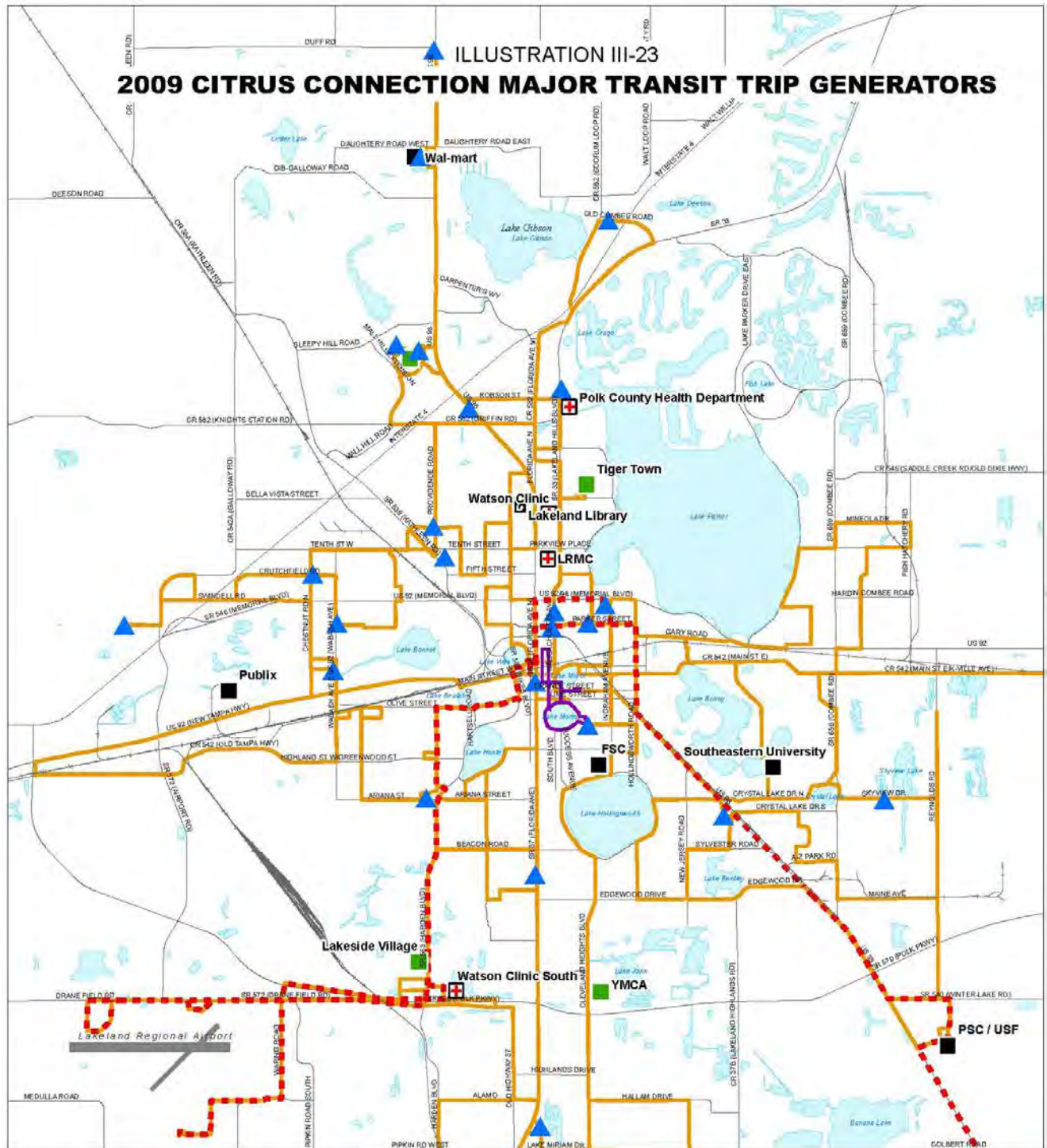
The 2008-2017 Consolidated Transit Development Plan (TDP), adopted in 2007, included an analysis of socio-economic data to determine relative transit potential in the LAMTD and surrounding areas. Block Group data from the 2000 Census were used to examine the following factors, each of which was weighted and converted to a numeric composite value:

1. Youth (<16) population (15% weight)
2. Elderly (>65) population (15% weight)
3. Female population ( 5% weight)
4. Population density (15% weight)
5. Dwelling unit density (10% weight)
6. Very low income status (15% weight)
7. Per capita income (10% weight)
8. Ethnic origin (non-white) (15% weight)

A high transit potential for a Block Group was indicated for that factor if it ranked in the upper third (above 67th percentile) of all Block Groups, a medium potential if it ranked in the middle third (between 33rd and 67th percentile), and a low potential if it ranked in the lower third (below 33rd percentile). The Polk County TPO updates this data periodically and Illustration III-24, Lakeland Area Transit Potential, identifies the results of the year 2005 version of the analysis.

Based on 2007 Polk County TPO estimates, LAMTD served a population of approximately 110,000 persons. Although other demographic characteristics have not been estimated for the entire LAMTD, the US Census Bureau 2006 American Community Survey data for the City of Lakeland provide the best available indication of socio-economic characteristics relevant to transit need. (The analysis in the *Consolidated Transit Development Plan*, discussed above, was based on relative values only.)

- **Poverty and income status:** Of the total population 13,765 (14.78%) persons were estimated to be below poverty level. 42,979 households, 14,431 (33.58%) had an annual household income of less than \$25,000.
- **Vehicle ownership:** Of a total of 42,979 occupied housing units in Lakeland, 4,784 (1.11%) of such households did not own at least one vehicle.
- **Youth and elderly population:** Of the total population in 2006, 20,361 (20.26%) were age 16 and under and 21,334 (21.23%) were age 65 and over.
- **Special needs:** Of 77,727 persons age 16 and over, 4,196 (5.40%) had a mobility limitation.
- **Non-white population:** Of the total population in Lakeland, 31,192 (31.04%) were non-white.



Source: Lakeland Community Development Department, 2010 and Citrus Connection, 2009



Generators and Attractors

- Library
- Medical
- Shopping / Recreational / Civic
- Other

- Fixed Route Bus
- Express Bus
- Trolley
- High Stop Activity Locations



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# Existing Transit Routes with Transit Potential



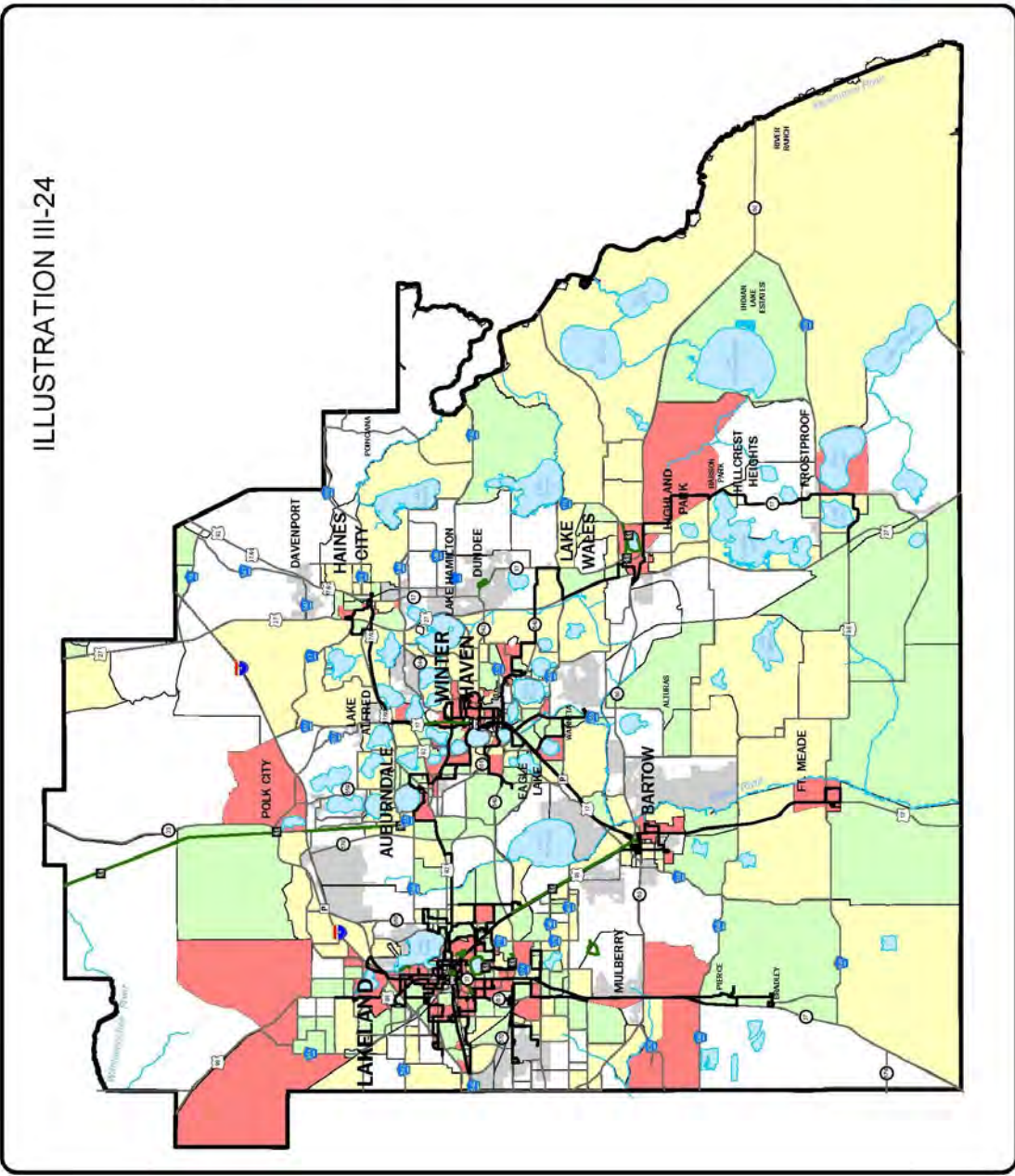
## Legend

- Transit Potential**
  - High
  - Medium High
  - Medium
  - Low
- Transit Routes**
- Other Map Features**
  - Multi-use Trails (Existing & Committed)
  - Transit Terminal
  - Multi-Use Trailhead
  - Park & Ride
  - Major Roads
  - Hydrology
  - City Limits
  - County Boundary



ADOPTED  
December 8, 2005

ILLUSTRATION III-24



## **FUTURE TRIP GENERATORS & EXPANSION OF DISTRICT**

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Five Lakeland area Developments of Regional Impact (DRI) are expected to generate more riders for LAMTD and ultimately Polk Transit Authority systems, including:

- The Lakeside Village retail center within the Oakbridge DRI (Southwest Lakeland), opened in 2005;
- The Publix DRI corporate headquarters (Southwest Lakeland), opened in 2003;
- The proposed Lakeland Central Park DRI (Southwest Lakeland), approved in 2008;
- The Bridgewater DRI currently under development in Northeast Lakeland; and
- Williams DRI and the adjoining Florida Polytechnic University Campus opened for classes in 2014.

The Lakeside Village, Lakeland Central Park and Williams DRI have been required to include extensive bicycle/pedestrian networks and building design elements to encourage greater transit use. The Williams DRI Development Order, amended in 2007, includes a requirement for a transit transfer center that serves future Interstate 4 express bus service and provides connectivity between transit routes from the Lakeland and Winter Haven area. The Lakeside Village mall project has installed an on-site transit superstop with bicycle parking and an information kiosk as required in the updated Oakbridge DRI Development Order.

Other large developments concentrated in northern or southwestern Lakeland are also expected to be major trip generators and affect transit routing and ridership, including Centinel Commerce Center (Mall Hill Drive), Parkway Corporate Center (Drane Field Road) and Gresham Village (West Pipkin Road at County Line Road).

Through the development review process, the City has required private property owners to submit annexation petitions to the LAMTD Board for its action and subsequent action by the Lakeland City Commission. In 2008 and 2009, annexation petition requirements were concentrated in the northern and southwest areas of Lakeland, most notably the Williams Development of Regional Impact and parcels within Parkway Corporate Center.

If the November 2010 referendum initiative to establish a dedicated sales tax funding source for the Polk Transit Authority is approved, Polk County would see its first countywide transit service area, as shown in Illustration 25. In the event that this referendum fails, LAMTD annexations are anticipated in the Kathleen Road corridor in northwest Lakeland to enable the provision of service to planned employment and residential centers.

Several new road projects are currently being implemented within the Lakeland area and are expected to be open to traffic within the next five years. These new corridors will provide potential new routes for additional or more efficient transit service, and include:

- **University Boulevard:** A new four-lane roadway connecting the new Polk Parkway interchange to State Road 33 at FirstPark Boulevard North. University Boulevard will provide access to the new Florida Polytechnic University campus in Lakeland and will provide a parallel route to Interstate 4 for trips between northeastern Lakeland and the Auburndale areas. University Boulevard will be a primary route for any fixed-route bus service that is initiated to FPU and will serve a transfer center that is a requirement of the Williams Development of Regional Impact (DRI). University Boulevard design includes a 12-foot wide multi-use trail that will ultimately connect Lakeland's Lake-to-Lake Bikeway and Tenoroc State Preserve with the TECO-Auburndale and General Van Fleet State Trails. Construction of University Boulevard and new Polk Parkway interchange began in 2010, with completion occurring by early 2012.
- **Edgewood Drive Extension:** A new two-lane corridor between the South Florida Avenue/Edgewood Drive intersection and Harden Boulevard/Grasslands Boulevard intersection. The Edgewood Extension will address a long-time gap in the central Lakeland street grid system, providing a more direct connection to the Oakbridge DRI and relieving congested sections of SR 37 (South Florida Avenue) and SR 563 (Harden Boulevard). The Edgewood Extension will provide another corridor for fixed-route bus service operated by the Citrus Connection and Polk Transit Authority and will include bicycle lanes and a 10-foot wide multi-use pathway (west of Lincoln Avenue) to enhance multi-modal transportation options in central Lakeland. Construction of the Edgewood Extension is scheduled to begin in early 2010 and be open to traffic in 2012.

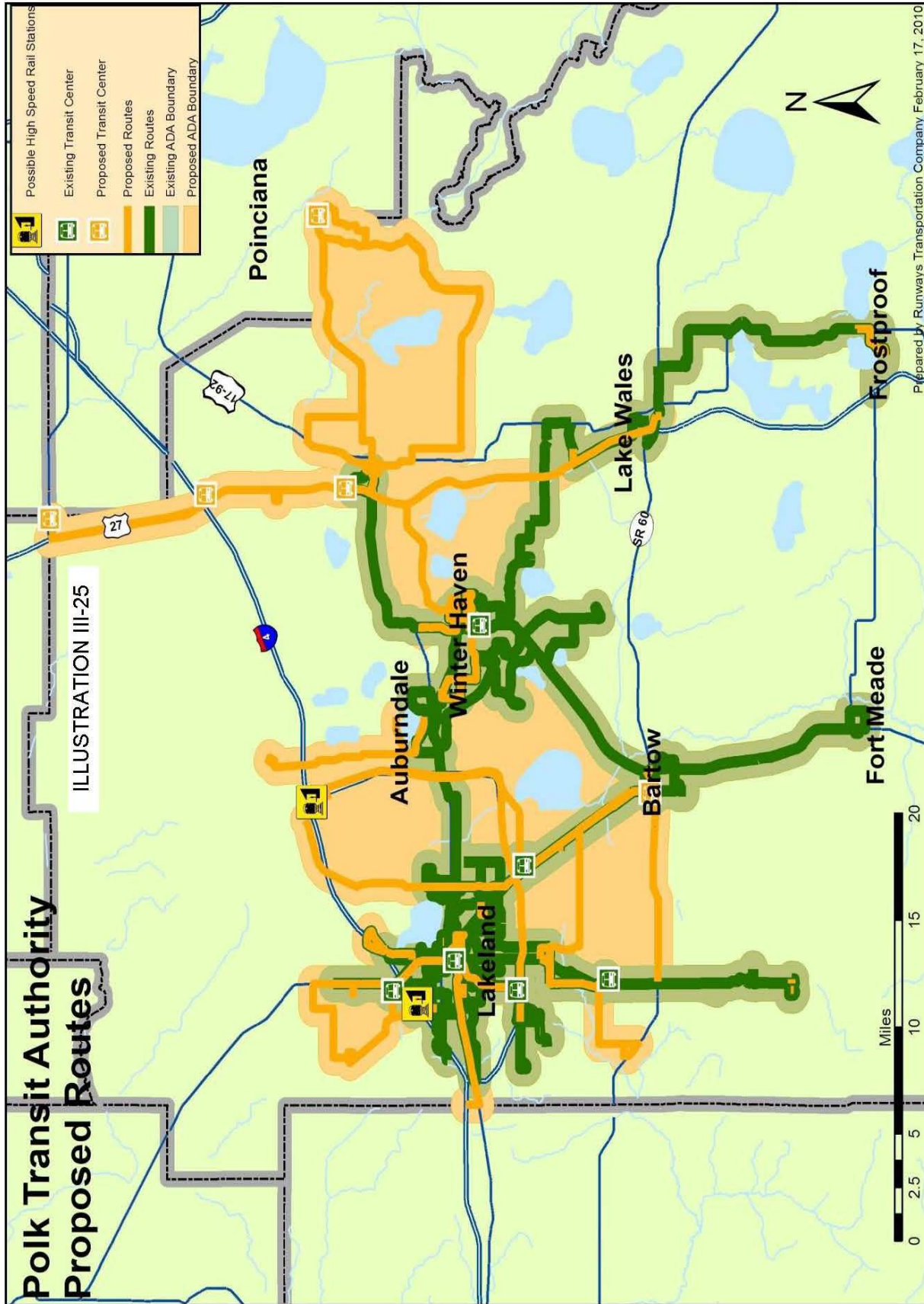
Additional future road projects are being planned for implementation within the next 5-20 years, including:

- **North-South Route (SR 563) Extension:** New four-lane limited-access arterial connecting S.R. 37 to Harden Boulevard at the Polk Parkway. Limited access right-of-way has been acquired by FDOT for Phase I of this new roadway between West Pipkin Road and Polk Parkway; however, the construction phase is no longer programmed in the FDOT Five-Year Work Program due to a \$118 million cost estimate (provided in 2009). Once completed, the North-South Route would provide an alternative high-capacity corridor through the Lakeland area to SR 37 (South Florida Avenue).
- **Wabash Avenue Extension:** New two- or four-lane urban collector ultimately connecting Kathleen Road at Fairbanks Street to Harden Boulevard south of the Polk Parkway, creating a new north-south corridor through Lakeland to relieve congested parallel routes such as SR 563 (Harden/Sikes Boulevard) and SR 37 (South Florida Avenue). A Project Development and Environment (PD&E) Study is currently being conducted for the south end of the Wabash Extension corridor, between Ariana Street and Harden Boulevard. The Oakbridge Development of Regional Impact has been required to construct two stub-out connections to the future Wabash corridor to provide enhanced connectivity to the residential and retail



components of this development. At this time, the PD&E is being funded with transportation impact fee revenues and it is expected that a design or right-of-way phase will be programmed in the City's Five-Year Capital Improvement Program if the Wabash Extension is still determined to be feasible upon the PD&E Study's conclusion. While the Wabash Extension is expected to be primarily funded with local impact fee and gas tax revenues, the City expects this corridor to be eligible for Federal funding to supplement local funding sources.

- **Crevasse Street – Lakeland Park Drive Connector:** New two-lane collector road between US 98 and Lakeland Park Drive near North Socrum Loop Road. In 2008, the Lakeland City Commission adopted a preferred alignment and typical section for this new east-west connection to improve traffic circulation in north Lakeland. This new corridor will not only remove local traffic from Interstate 4, it will also provide a new route for the North Lakeland Circulator Service that was identified as a feasible transit need in the 2007 TDP and multiple access points for Interstate 4 Express Bus service. The project is not yet funded but early design would include a 10-foot wide multi-use path for much of its length to enhance bicycle and pedestrian connectivity to adjacent residential and recreational areas.



## PLANNED SERVICE IMPROVEMENTS

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The operation of three separate transit systems within Polk County presents significant challenges regarding the coordination and funding of those services. A patchwork of local and grant funding sources are obtained to operate successful connector transit routes between Lakeland, Bartow and Winter Haven. None of those funding sources are permanent except for the ½ mill property tax that's been dedicated to Lakeland area services since the early 1980's. Lack of adequate funding for the non-Lakeland transit services and the dwindling funding capacity of the Lakeland ½ mill, leaves open the possibility of future transit services being significantly and adversely impacted. This is a critical issue given the need for transit to reduce dependence upon single occupancy vehicular trips, encourage energy efficiency, and support mixed, higher density and intensity land uses within the Central City Transit Supportive Area (CCTSA.) The City's Future Land Use Element also proposes higher densities and mix of uses in key Transit Oriented Corridors or TOCs.

Following the completion of the Countywide Transit Study in 2003, the Polk TPO embarked on the development of a "Consolidated Transit Development Plan" (TDP) for services operated by LAMTD, WHAT and Polk County with a main goal of establishing a coordinated framework for a countywide transit system that could ultimately be operated by the Polk Transit Authority. In 2007, the TPO adopted a major update to the TDP that included financial plans for the operation of existing transit services and the expansion of service to include new locations, greater frequencies, extended service hours, Sunday service, premium services (such as express routes with limited stops) and local circulator routes in the vicinity of large activity centers around Polk County.

In the Lakeland area, the following proposed new fixed-route, circulator and premium transit services were adopted in the 2007 TDP and 2030 Long-Range Transportation Plan (LRTP) as transit needs; however, each requires a dedicated funding source for implementation. Each of these services is expected to be feasible by Fiscal Year 2010/11 should funding be available:

- Fixed-Route and Circulator Services
  - North Lakeland: Fixed-route service with 60-minute frequencies in vicinity of Lakeland Square Mall, Shoppes of Lakeland, and lodging district on Socrum Loop Road.
  - Florida Polytechnic University Campus: Fixed-route service with 30-minute frequencies from Downtown Terminal to FPU campus in northeastern Lakeland, via SR 33 and University Boulevard.
  - Medical Circulator: Fixed-route service with 60-minute headways between Downtown Lakeland and medical activity centers within Mid-Town CRA area, including Watson Clinic and Lakeland Regional Medical Center. This service can be coordinated with existing fixed-route service in area to achieve overall 15-minute frequencies in central core of Lakeland.

- Premium Services
  - Bus Rapid Transit (BRT) from Downtown Terminal to Lakeland Square Mall: Service with 15-minute headways via US 98 on dedicated transit facility or within roadway with signal prioritization.

The following regional premium transit services are also included in the 2007 TDP and 2030 LRTP, with origins and/or destinations within the Lakeland area. Each of these services is expected to be feasible by Fiscal Year 2013/14 assuming funding is available:

- Premium/Express Transit Corridors
  - SR 37 (South Florida Avenue) between Mulberry and LAMTD Downtown Terminal: Direct bus service with 30-minute frequencies.
  - US 92/SR 544 between LAMTD Terminal and WHAT Terminal: Direct bus service with 30-minute frequencies.
- Interstate 4 Express Bus Service
  - Walt Disney World Express: Service with 60-minute frequencies between SR 559 and Walt Disney World
  - Plant City Express: Service with 60-minute frequencies between Socrum Loop Road and Plant City.
  - Downtown Tampa Express: Service with 60-minute frequencies between Socrum Loop Road and Downtown Tampa.

### **PLANNED PARK-AND-RIDE AND TRANSIT TRANSFER FACILITIES**

Park-and-Ride facilities like those that exist beneath the In-Town Bypass, the Highland City Trailhead or at the Interstate 4/SR 33 (Exit 38) interchange provide an important interface between local and regional transit services. In addition to providing parking for regional transit patrons, these facilities can also be staging points for car- and vanpooling participant pick-ups. In support of planned regional transportation initiatives such as the Interstate 4 Express bus service, the Polk TPO has included the following planned park-and-ride transfer centers in the 2030 LRTP:

- Interstate 4 @ Socrum Loop Road
- Interstate 4 @ US 98
- Interstate 4 @ County Line Road
- US 98 @ SR 570 (Polk Parkway)/SR 540 (Winter Lake Road)

The City has also included a requirement in the Williams DRI Development Order for a transfer center that can serve Interstate 4 Express Bus service and as a connection point between local bus routes between the Lakeland and Winter Haven areas.

In order to be effective for express bus service, the park-and-ride transfer centers should be designed to expedite boarding of the transit vehicle, with such elements as a pre-payment

kiosk, boarding/alighting platform and easy ingress/egress to Interstate 4 or the Polk Parkway.

An additional park-and-ride lot has been included in the 2030 LRTP at a location on US 98 in the vicinity of Daughtery, Marcum and Duff Roads at the northern extent of the Citrus Connection route network. This facility is envisioned to include a parking facility with a transit information kiosk with route and system information.

## **FARES AND FISCAL RESOURCES**

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When the 2007 TDP was adopted, LAMTD charged a one-way cash fare of \$1.00 for adults, 75 cents for students (Grades 1-12), 50 cents for senior or handicapped citizens, and no charge for children under 5 who ride with an adult. As of 2010, the fare for adults increased to \$1.25, \$1.00 for students, 60 cents for senior or handicapped citizens and no change for children under seven riding with an adult. In addition, LAMTD offers rider passes at discounted rates. According to the Polk County TPO, LAMTD, like most transit systems, has four key categories of revenues: federal, state, local and system generated (primarily farebox).

System generated funds include revenues from passenger fares and advertising; local funds include revenue sources such as general appropriations and property taxes from LAMTD assessments. Federal and state revenue sources include a variety of programs but generally, as transit systems grow, there is an increased reliance on local and system generated revenues. This is primarily due to the finite amount of available federal and state funding and restrictions on the use of federal funds for use in paying operating costs (i.e. vs. capital and equipment costs).

Also, once the urbanized area, as defined by the U.S. Census and served by the transit district, exceeds a population count of 200,000, significant federal funds for operating costs are eliminated. This is due to federal transit funding rules based upon the theory that once a transit system is servicing such a large population, the local population (or local governments serving that population) should support the majority of the costs to operate the system. This allows the federal government to focus on funding capital needs of these larger systems and funding or subsidizing the operating costs of smaller and sometimes relatively young or new transit systems.

The Lakeland Urbanized Area (UA) had a Year 2000 population of 199,487 residents (2000 Census). In February 2008, the FDOT's Office of Policy Planning estimated that the Lakeland UA had already surpassed the 200,000 population threshold, with 239,546 residents. Based on this information and the possibility that the Lakeland and Winter Haven UAs could be combined following the 2010 Census, it is almost certain that LAMTD and PTA will lose Federal operating funds for fixed-route transit services in the Lakeland area.

According to the LAMTD, in fiscal year 2006/07, LAMTD had over \$9.9 million in revenues that were derived as follows:

- 22% Federal Funds
- 10% State Funds
- 15% System Generated
- 53% Local (District) Funds.

Federal and state funding comprised 32% of the total revenues for LAMTD and system generated funds were the smallest revenue source at 15%. This may be compared to more mature transit systems with a larger population base such as the Orlando area's LYNX fixed-route bus system, where in FY 2007 system generated funding comprised 20% of revenues and local funding sources comprised 59 percent of the revenues. On the other end of the spectrum, the WHAT system for Winter Haven derived an average 90.8% of its revenues from federal and state resources and 9.2% from local and system generated revenues since its start-up in March 1999. The local and system generated revenue are expected to increase to 12.7% of overall revenues in FY 2010 due to increased investments by various municipalities within the WHAT service area.

Table III-20 shows forecasted revenues and expenses with a balance (deficits shown in parentheses) for the LAMTD system for fiscal years 2007/08 through 2016/17. The LAMTD system is expected to face an annual operating deficit where available revenues are less than operating and capital expenses. While potential district boundary expansions may add to the revenue base, it will be critical that voters in Polk approve a 2010 fall referenda for a ½ penny sales tax for countywide transit services. Otherwise, given the ramifications of the 2010 census, the LAMTD will be faced with huge cuts in federal operational funding (at least 50%). Thus, transit services will likely need to be significantly cut since the 0.5 property tax millage in Lakeland is not enough to sustain the system. Even under the best of scenarios, revenue sources like farebox revenue and federal and state revenues are likely to remain relatively flat in proportion to costs and grant revenues are unpredictable resources, i.e. not annually dedicated on a long term basis.

**TABLE III-20  
LAMTD REVENUE & OPERATING EXPENSE FORECAST**

<b>REVENUE</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>
FEDERAL SECTION 5307	\$2,317,959	\$2,287,498	\$2,256,123	\$2,223,806	\$2,190,521	\$1,130,916	\$1,197,121	\$1,267,298	\$1,341,686	\$1,420,537
STATE BLOCK GRANT	\$770,367	\$793,478	\$817,282	\$841,801	\$867,055	\$893,066	\$919,858	\$947,454	\$975,878	\$1,005,154
PROPERTY TAXES	\$3,704,319	\$3,815,449	\$3,929,913	\$4,047,810	\$4,169,244	\$4,294,322	\$4,423,151	\$4,555,846	\$4,692,521	\$4,833,297
ADVERTISING REVENUE	\$174,900	\$180,147	\$185,551	\$191,118	\$196,851	\$202,757	\$208,840	\$215,105	\$221,558	\$228,205
OPERATING ASSISTANCE	\$106,000	\$109,180	\$112,455	\$115,829	\$119,304	\$122,883	\$126,570	\$130,367	\$134,278	\$138,306
PASSENGER FARES	\$932,800	\$1,056,862	\$1,088,568	\$1,121,225	\$1,270,348	\$1,308,459	\$1,347,712	\$1,526,958	\$1,572,767	\$1,619,950
<b>TOTAL</b>	<b>\$8,006,345</b>	<b>\$8,242,614</b>	<b>\$8,389,893</b>	<b>\$8,541,589</b>	<b>\$8,813,323</b>	<b>\$7,952,402</b>	<b>\$8,223,252</b>	<b>\$8,643,027</b>	<b>\$8,938,687</b>	<b>\$9,245,448</b>
<b>EXPENSE</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>
EXISTING ROUTE SERVICE	\$5,907,572	\$6,262,026	\$6,637,748	\$7,036,013	\$7,458,174	\$7,905,664	\$8,380,004	\$8,882,804	\$9,415,772	\$9,980,719
EXISTING PARATRANSIT SERVICE	\$2,337,792	\$2,478,060	\$2,626,743	\$2,784,348	\$2,951,409	\$3,128,493	\$3,316,203	\$3,515,175	\$3,726,085	\$3,949,651
PLANNING AND TECHNICAL ACTIVITIES	\$225,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000
CONTINGENCY	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
<b>TOTAL</b>	<b>\$8,620,364</b>	<b>\$9,015,086</b>	<b>\$9,539,491</b>	<b>\$10,095,361</b>	<b>\$10,684,583</b>	<b>\$11,309,157</b>	<b>\$11,971,207</b>	<b>\$12,672,979</b>	<b>\$13,416,857</b>	<b>\$14,205,370</b>
<b>REVENUE – EXPENSE</b>	<b>(\$614,019)</b>	<b>(\$772,472)</b>	<b>(\$1,149,598)</b>	<b>(\$1,553,772)</b>	<b>(\$1,871,260)</b>	<b>(\$3,356,755)</b>	<b>(\$3,747,955)</b>	<b>(\$4,029,952)</b>	<b>(\$4,478,170)</b>	<b>(\$4,959,922)</b>

Source: Source: Polk Transportation Planning Organization, Polk Consolidated Transit Development Plan Years 2008-2017; August, 2007.

## EXISTING LOCAL PREMIUM TRANSIT SERVICES

*South Florida Avenue Transit Corridor.* The Florida Department of Transportation (FDOT) provides approximately \$65,000 per year to the Citrus Connection for enhanced transit services in the South Florida Avenue corridor between the Downtown Terminal and Carter Road at the Mulberry Wal-Mart Supercenter. The South Florida Avenue Transit Corridor service has a specific marketing brand, with distinct bus stop signage and shelter color (terra cotta instead of green). Policy decisions regarding the South Florida Corridor service are made by a Transit Advisory Group within the grant requirements established by the FDOT.



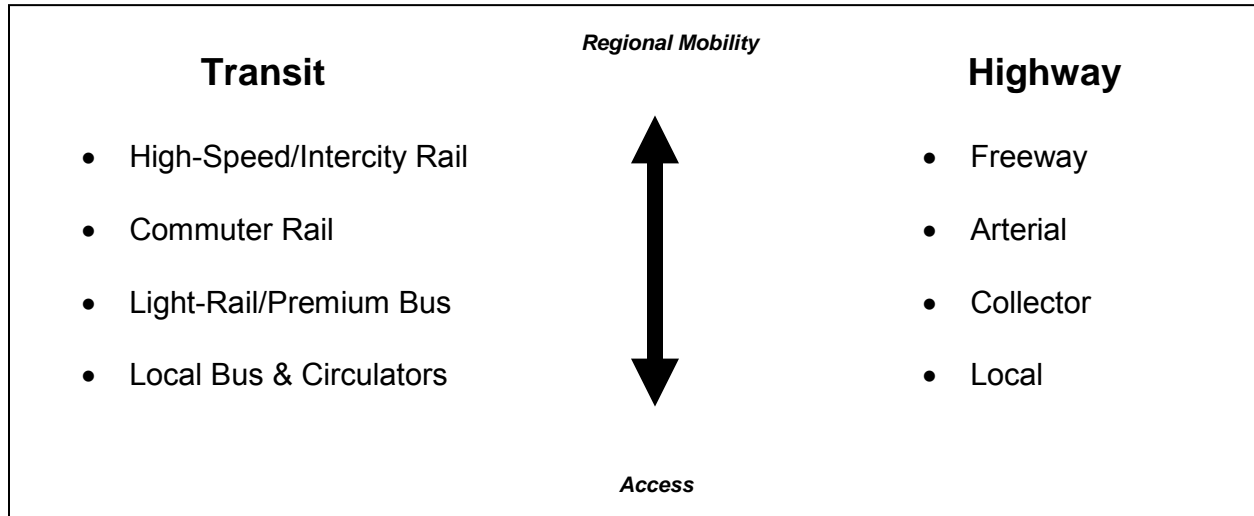
*Bartow Express:* The Citrus Connection operates hourly peak-hour express transit service along the 13-mile US 98 (Bartow Road) corridor between the In-Town Bypass park-and-ride facility and Polk County Government Complex in Downtown Bartow. Since its inception in 2000, the Bartow Express has been one of the most heavily used routes in the Citrus Connection transit network. In 2010, the City, FDOT, Citrus Connection and Polk TPO are participating in a “Bus Rapid Transit” Feasibility Study along the US 98 corridor (south of the Polk Parkway) to establish a conceptual design for a dedicated busway adjacent to the Fort Fraser Trail or physically separated lanes in each direction of US 98 within the study area, in support of the premium transit service identified in the 2030 LRTP and facilities planned in the US 98 Master Plan and CSX Rail Corridor Management Plan.

## REGIONAL AND STATEWIDE TRANSIT PLANNING

Lakeland and Polk County are located in the middle of a major travel corridor that extends across Central Florida from Daytona Beach to Sarasota (including the Tampa Bay and Orlando Metropolitan Areas) and is an integral part of an emerging world super-region that encompasses much of Peninsular Florida. Interstate 4 is the spine of Central Florida’s transportation network, directly serving Downtown Tampa, Downtown Orlando and major attractions such as Walt Disney World, SeaWorld and Universal Orlando. Traffic congestion on Interstate 4 continues to be one of the biggest challenges facing the Central Florida super-region, caused by tourism, regional through trips between cities (including commuters) and local traffic within the municipal areas. Mass transportation is essential to providing the necessary connectivity to the Interstate 4 communities and can offer a cost efficient alternative to both the gas conscious consumer and the FDOT road building program.

As with roadway functional classification definitions, there is a hierarchy of mass transit options that serve specific travel demands. As mass transportation plans and programs are discussed and implemented throughout Florida, it is important for the public to understand the different transit options under consideration and the markets served by each.





- **High-Speed Rail:** Intercity passenger rail between large metropolitan areas, with speeds typically in excess of 120 mph in sealed corridors with no at-grade crossings and a limited number of stops along the route. The high-speed rail travel market typically competes with commuter airlines for regional trips in excess of 200 miles. In the U.S., AMTRAK's *Acela Express* serves areas between Washington, D.C. and Boston, and operates hourly peak-hour service with speeds reaching greater than 150 mph.
- **Intercity Rail:** Passenger rail service between large metropolitan areas, typically separated by distances of 100-200 miles. Intercity rail service has few stops and typically provides connections to metropolitan commuter, heavy- or light-rail systems or bus systems. Throughout the United States, intercity rail is operated by agencies such as AMTRAK.
- **Commuter Rail:** Passenger rail to a downtown center of an urbanized area from suburban or exurban locations or other smaller central city areas within the same travel market area. Service is primarily operated during morning and afternoon peak commuting periods and is operated with typical diesel or self-propelled locomotives. An example is the Tri-Rail system in Southeast Florida.
- **Heavy and Light-Rail:** More localized passenger rail service, within a city or metropolitan area with more frequent continuous service throughout the day than commuter rail service. Heavy rail typically covers long distances at higher speeds



than light-rail. Miami's MetroRail and Atlanta's MARTA systems are the closest examples of heavy-rail systems in the Southeastern U.S. As of 2010, the closest example of a light-rail system is in Charlotte, North Carolina.

- **Bus Rapid Transit (BRT):** BRT lines include premium, high-frequency bus service within dedicated facilities in street rights-of-way in urban locations. Transit stops are designed for faster passenger boardings and alightings, with raised platforms and external electronic fare payment kiosks.
- **Premium Bus/Express Bus:** Express bus service is typically provided between downtown areas within a metropolitan area, with larger motor coaches designed for greater comfort over longer distances. Service is provided with a very limited number of stops, compared to regular bus service within a city. The Hillsborough Area Regional Transit Authority (HARTLine) and Pinellas Suncoast Transit Authority (PSTA) jointly operate such a service between Downtown Tampa and Downtown St. Petersburg. HARTLine operates express bus service between Thonotosassa Road in Plant City and Downtown Tampa.
- **Circulator Bus Service:** A circulator bus service focuses on trips typically within a municipal area between key destinations such as employment, education, retail or institutional uses, with fairly high frequencies at least during peak times. This service may be provided by trolley, mini bus or other cost efficient means.



### **PREVIOUS TRANSIT PLANNING AND ENGINEERING STUDIES (1980s – 2005)**

Explosive growth within the Interstate 4 corridor has increased the need for alternative transportation modes serving intercity travel. Dating back to the early 1980s, regional and statewide planning studies have been conducted to demonstrate the need and establish support for passenger rail service between Tampa and Lakeland or from the Tampa Bay Area to Florida's East Coast via the Interstate 4 corridor or CSX "A" Line parallel to US 92. In 1993, the Tampa Bay Commuter Rail Authority (TBCRA) concluded that commuter rail service was viable between Tampa and Downtown Lakeland via the CSX "A" and "S" Lines through Brandon in Hillsborough County. In 1995, the TBCRA and Hillsborough Area Regional Transit Authority conducted a more refined Major Investment Study (MIS) for commuter rail service between Tampa and Lakeland; however, the results of this study were less optimistic due to existing land uses in adjacent corridors.

Throughout the mid-1990s, numerous studies were conducted of cross-state high-speed intercity rail services, including a Florida High-Speed Rail effort that led to the selection of Florida Overland Express (FOX) as the vendor to construct and operate such a system. Implementation of the HSR system did not occur at that time and a subsequent "Coast-to-Coast" rail evaluation was conducted to determine the best technology or service type

between Tampa Bay and Brevard County. In 2000, Florida voters approved a State Constitution amendment requiring the construction of high-speed rail service by 2003 leading to the preparation of a detailed Project Development and Environment (PD&E) Study as part of the system implementation process. In 2004, Florida voters repealed the high-speed rail constitutional amendment; however, the Florida Department of Transportation completed the PD&E Study that received Federal Transit Administration (FTA) approval in 2005.

### RENEWED EFFORT IN REGIONAL TRANSPORTATION (2005-2010)

During the mid- and late-2000s, regional visioning efforts were conducted in the Tampa Bay (*OneBay*), Orlando (*How Shall We Grow?*) and Heartland (*Heartland 2060*) areas to derive long-term sustainable land use development patterns that are supported by the local communities. Several transportation initiatives were derived from these visioning efforts and are discussed below.

*Tampa Bay Area Regional Transportation Authority (TBARTA):* In 2007, the Florida Legislature created TBARTA (ss. 343.90-343.976, Florida Statutes) as the agency responsible for planning, financing and implementing a regional transportation system serving Citrus, Hernando, Pasco, Pinellas, Hillsborough, Manatee and Sarasota Counties. As of 2010, Polk County is not a member of TBARTA; however, it can be added in the future if a request is initiated by the Board of County Commissioners and Legislative action is taken to amend the TBARTA statutes. TBARTA's mid- and long-range master plans include a wide range of transit services, from express bus service to light-

and commuter rail in high demand corridors within the region.

Polk County and the City of Lakeland have been involved in the TBARTA master planning process, identifying regional anchors to be served by premium transit such as Downtown Lakeland, the adjacent Medical Corridor and US 98/Interstate 4 interchange area, and providing feedback regarding model land development regulations for station areas. As shown in the illustration above, TBARTA adopted a Long-Term Master Plan (horizon year 2060) in May 2009 that includes express bus service operated within dedicated express lanes on Interstate 4 west of Kathleen



Road, connecting to express bus service with 15-30 minute frequencies along Kathleen Road between Interstate 4 and Downtown Lakeland. Commuter rail is also included between Tampa and Downtown Lakeland via the CSX "A" Line that also traverses the Orlando metropolitan area. TBARTA's Mid-Term Master Plan (horizon Year 2030) does not include a commuter rail connection between Lakeland and Tampa, but does include the express bus services contained in its Long-Term Master Plan. TBARTA has established a Transportation and Land Use Working Group (TLUWG) to develop model transit-supportive development regulations for use by local governments within the Tampa Bay Area. The activities of the TLUWG are coordinated with the One Bay regional visioning effort administered by the Tampa Bay Regional Planning Council. Upon invitation from TBARTA, the City of Lakeland has actively participated in the TLUWG and the development of TBARTA's Master Plan.

*SunRail:* In 2009, the Florida Legislature authorized FDOT to purchase approximately 61 miles of the CSX "A" line between DeLand in Volusia County and Poinciana in Osceola County, near the Polk County line for commuter rail service to ultimately connect those communities with Downtown Orlando. To minimize conflicts between SunRail and CSX's existing freight operations within this corridor, freight traffic is restricted from the "A" Line while SunRail is in operation, with that freight traffic being diverted to CSX's more westerly "S" Line between Central Florida and Jacksonville. SunRail service is scheduled to begin in late 2012 or early 2013 between Debary (Volusia County) and Sand Lake Road (Orange County), with half-hour service being planned for peak travel times and two-hour frequencies during non-peak times. Service throughout the entire 61 mile corridor (DeLand to Poinciana) is scheduled to begin in 2014.

*Florida Department of Transportation Rail Traffic Evaluation Study:* FDOT completed its Rail Traffic Evaluation Study in 2009, addressing three primary objectives associated with the relocation of freight traffic from the CSX "A" line through Orlando to the CSX "S" Line through Lakeland and Ocala:

- Evaluate operations of grade crossings within Polk County;
- Determine market potential for commuter and intercity passenger rail service in the Interstate 4 corridor; and
- Identify routes and associated costs for developing a new freight corridor through Central Florida around Downtown Lakeland.

Through this study, FDOT concluded that approximately 72,000 daily trips would be made between Tampa and Orlando in Year 2010, with over 49,000 daily trips being projected between Tampa and Lakeland, and over 19,000 daily trips being made between Lakeland and Orlando. This study evaluated potential Year 2030 ridership associated with intercity passenger rail services along Interstate 4 and CSX "A" Line routes between Tampa and Orlando. The Interstate 4 alignment was expected to have fewer stops than service on the CSX corridor, which was primarily evaluated as the extension of planned services operated by TBARTA and SunRail. This study concluded that Year 2030 intercity rail ridership levels

would be comparable with successful services in operation in peer corridors such as Chicago-Milwaukee and Oakland-Sacramento. The Aviation and Rail Sub-Element includes more detail regarding FDOT's analyses and conclusions for consideration in future funding requests.

*Polk 2060 Transportation Vision Plan:* The Polk Transportation Planning Organization conducted a countywide transportation vision exercise that incorporated the land use recommendations derived from the "OneBay" and "How Should We Grow?" programs and applied them to population and employment projections through Year 2060 for incorporation into the TPO's 2060 visioning process. Some of the expected growth between 2009 and 2060 was concentrated within activity centers and hubs throughout Polk County, such as Downtown Lakeland, Lakeside Village and the Medical Corridor north of Downtown Lakeland within the Mid-Town CRA. Premium transit corridors were identified, which will provide frequent high-capacity transit services between the identified activity centers. In the Lakeland area, those premium transit corridors include:

- Interstate 4: Express Bus and High-Speed Rail
- Polk Parkway: Bus Rapid Transit and Transfer Centers
- US 98: Bus Rapid Transit and Possible Light-Rail
- Florida Avenue (SR 37 and US 98): Bus Rapid Transit, Busway and Queue Jump Facility
- US 92/CSX Rail Line: Local, Express, BRT and Commuter Rail

Implementation of the transportation corridor improvements contained in the TPO's 2060 Vision Plan can be incorporated through stand-alone projects funded with State and/or Federal funding grants or incorporated into the design of major highway projects that require significant right-of-way acquisition, either along adjacent routes or new corridors. For example, US 98 is under design in Year 2010; the FDOT will conduct a Bus Rapid Transit Feasibility Study for the US 98 corridor between the Polk Parkway and CR 540A. This study should determine available options to construct separate mass transit facilities in the future, including a dedicated busway adjacent to the Fort Fraser Trail or physically-separated transit only lanes within the ultimate eight-lane section of US 98.

*Florida High-Speed Rail:* In 2009, President Obama announced his "Vision for High Speed Rail in America" and the 10 new corridors that would compete for a one-time \$8 billion Federal funding allocation and \$1 billion/year in appropriations for a five year period. The State of Florida submitted three funding applications, including approximately \$2.6 billion for the construction and operations of a high-speed rail line within the median of Interstate 4 between Downtown Tampa and Orlando International Airport by January 2015. The funding application also included \$30 million for a planning and alignment analysis for a proposed future Orlando-Miami segment of the High-Speed Rail system.

FDOT's Interstate 4 Master Plan ultimately anticipates a 10-lane cross-section with six regular travel lanes, four regional travel lanes serving high-occupancy vehicles with limited interchanges within the Tampa, Lakeland and Orlando areas, and a 44-foot wide envelope to serve high-speed intercity passenger rail. FDOT has purchased right-of-way for Interstate and rail improvements consistent with the I-4 Master Plan at a substantial investment. In 2010, President Obama announced that Florida would receive \$1.25 billion for a "down payment" on the construction phase of the Tampa-Orlando segment since much of the right-of-way had already been purchased by FDOT and this corridor was seen as construction-ready. In order for the Florida High-Speed Rail project to be successful, appropriate local and regional transit connections must be available at the selected station locations, with dedicated funding sources being available to ensure connectivity to these systems and coordination with TBARTA, SunRail and Polk Transit Authority Master Plans. On February 23, 2010, the Polk Transportation Planning Organization recommended two priority station locations for further evaluation by the FDOT and Federal Railroad Administration, including its top priority within the Williams DRI adjacent to the new Florida Polytechnic University campus and as its second priority a station site located near the Interstate 4/Kathleen Road interchange. The ultimate location of the high-speed rail station will have an impact on frequencies and routing of connecting transit services from the Lakeland and Winter Haven areas.

## **TRANSPORTATION DEMAND MANAGEMENT**

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Transportation Demand Management (TDM) strategies typically focus on reducing morning and afternoon peak-hour roadway congestion through public and private programs aimed at enticing commuters to use transportation alternatives to the single-occupant vehicle such as car- or vanpooling, walking, bicycling, taking transit and/or telecommuting from home. Through such programs, employers may provide employees with transit passes as part of their benefit packages, vans for employees commuting from the same general area and/or designated parking spaces near building entrances for carpool program participants. These programs may be offered by employers with or without a public funding subsidy. Land development regulations can also require the inclusion of specific facilities such as bicycle parking and showers/changing rooms within large employment center projects to encourage commuting by bicycle. Nationally, some jurisdictions have adopted trip reduction ordinances to formalize their commitment to TDM strategies and many communities have established Transportation Management Associations (TMAs) that serve as clearinghouse for TDM services in a metropolitan area or concentrated business district.

## **BAY AREA COMMUTER SERVICES**

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Bay Area Commuter Services (BACS) provides ride-matching and other commuter assistance services in the Tampa Bay Area. In the past, BACS' newsletters routinely included ads from commuters requesting carpool partners from locations as far west as Pinellas County to employment centers in the County Line Road corridor and West Lakeland. In 2010, BACs merged with the TBARTA organization.

## FDOT COMMUTER SERVICES PROGRAM

In 2007, FDOT District One established its “Commuter Services” program for the 12 counties it serves in Central and Southwest Florida, including Polk County. Through the Commuter Services program, FDOT has developed a ride-matching database for program participants seeking partners within its service area. Commuter Services also works with employers to establish programs that meet their employees needs and provides resources for marketing materials to support the program. Perhaps the most important aspect of the Commuter Services program is the ability for participants to receive a “guaranteed ride home” in the event of an emergency that prevents them from using mass transit or carpooling after they have reached work. The ability to get home or another location in the event of an emergency is often cited as a reason for not utilizing transit or carpooling. FDOT has programmed \$1.5 million/year to fund the Commuter Services program, including the guaranteed ride home service. The City joined as a program partner in 2009 and is currently working with FDOT to craft a TDM program that meets its employee needs. The City has also been working with Commuter Services staff to develop model TDM program requirements for development review through the zoning and concurrency approval processes. For example, the City required the dedication of “carpool only” parking spaces, bicycle parking spaces and the installation of a transit shelter during the concurrency review for the Keiser University campus expansion project within Interstate Business Park. Through the DRI review process, the City has required Publix Supermarkets to conduct a one-day informational Transportation Expo as part of its new headquarters project and required the Oakbridge DRI to contribute toward the cost of a transit information kiosk at Lakeside Village. TDM requirements are now routinely required as part of Planned Unit Development zoning ordinances developed for large employment centers throughout Lakeland, including Centinel Commerce Center, Interstate Exchange and Landmark Commerce Center in the Kathleen Road corridor.



Bank of “carpool only” parking spaces at Keiser University  
on Interstate Drive

## PORT FACILITIES

As the City of Lakeland is located in Polk County, an inland county, there are no deepwater seaports or related facilities.

## AVIATION FACILITIES

### HISTORY

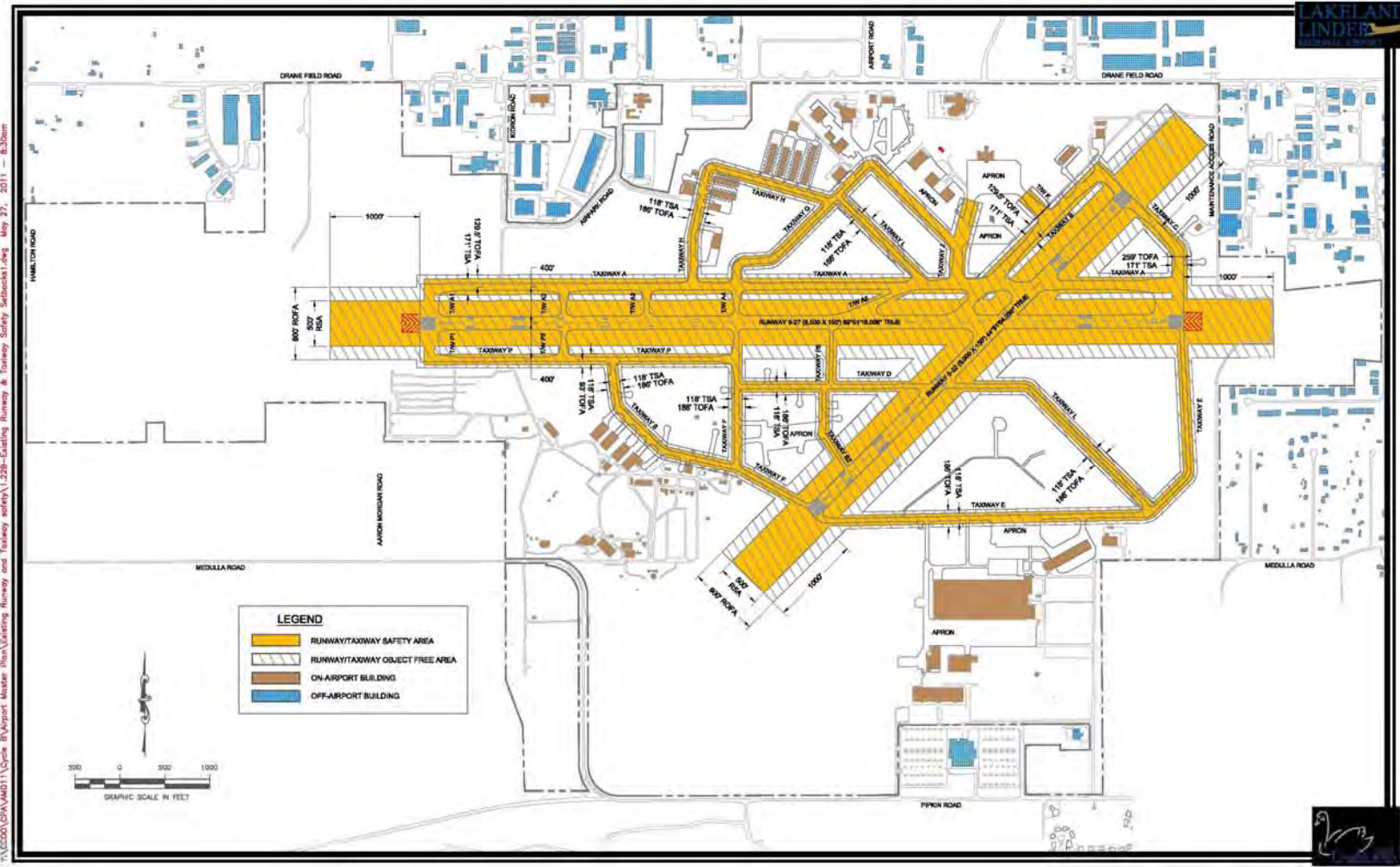
The information on local aviation facilities is based on the 2010 Lakeland Linder Regional Airport Master Plan Update. The emphasis of the policies contained in the Master Plan is directed toward sound management of the airport land uses, facilities, and the surrounding lands and environments.

The City's original airport site was located on the westerly bank of Lake Parker and was referred to as "Lodwick Field". This original site is now developed in housing and City of Lakeland recreational areas. The City purchased 640 acres of land and began construction of the present airport just prior to World War II. The facility was named "Drane Field" and the site is situated on a tract approximately four miles southwest of Lakeland's central business district. National Airlines used the airport to serve Lakeland in the early years. In 1942 the City turned the airport over to the Federal government which completed construction of the runways and used the facilities to train 4,000 cadets. Additional lands were acquired by the Federal government and, following World War II, the airport was deeded back to the City. The present airport, referred to as "Lakeland Linder Regional Airport" serves as a full service general aviation airport and is a FAA Part 139 certified Airport for commercial operations.

Based on information provided in the Florida Department of Transportation's Florida Statewide Aviation Economic Impact Study released in March 2010, Lakeland Linder Regional Airport and related industries have a total employment of about 1,200 with a payroll of over \$44 million. Of Florida's 102 general aviation airports, Lakeland's Airport had the 13<sup>th</sup> highest total annual economic output, in excess of \$162.5 million. As of 2010, a number of large employers have located in the southwestern portion of Lakeland, due to the area's proximity to Interstate 4, the Airport and other significant transportation facilities such as SR 570 (Polk Parkway). Existing major employers include Publix Supermarkets Corporate Headquarters Development of Regional Impact (DRI) on Airport Road at the Polk Parkway, GEICO Direct's Regional Headquarters on West Pipkin Road, the Parkway Corporate Center planned unit development on South Pipkin and Drane Field Road, Ruthven Airpark on Kidron Road and the Firmenich Corporation on Drane Field Road and Kidron Road. Future planned employment centers include the Lakeland Central Park DRI on Airport Road at the Polk Parkway and a business park development planned by Central Florida Development, LLC on West Pipkin Road.



# ILLUSTRATION III – 26 EXISTING FACILITIES



Y:\CDD\CPA\011\Cycle B\Wpport Master Plan\Existing Runway & Taxiway Safety Setbacks1.dwg May 27, 2011 - 8:30am



Ordinance # 5283  
 Adopted 12/19/11

FIGURE 1.22B  
 EXISTING RUNWAY & TAXIWAY SAFETY SETBACKS

## EXISTING FACILITIES

The City owns over 1,700 acres of land at and surrounding the Lakeland Linder Regional Airport facility. The City acquired lands surrounding the airport primarily as a means to ensure future land use compatibility as well as to meet future expansion needs. The Lakeland Linder Regional Airport (LAL) is classified by the FAA in the National Plan of Integrated Airport Systems (NPIAS) as a reliever airport (Site No. 03283.\*A). The Continuing Florida Aviation Systems Planning Process organization (CFASPP) lists Lakeland as being a reliever airport for both Tampa International and Orlando International Airports. The purpose of a reliever airport is to reduce congestion caused by general aviation (GA) and military traffic at larger commercial service airports. LAL also serves the aviation needs of the Polk County area. The airport serves general aviation, corporate aviation, commercial and charter operations and flight school operations in addition to the annual Sun 'n Fun Fly-In and Convention, which is the second largest airshow for experimental aircraft in the country. The continued development of Lakeland Linder Regional Airport is compatible with the Polk County Comprehensive Plan and the Florida Aviation System Plan (FASP). There are no known major environmental constraints that would prevent continued development of the airport.

Information regarding the Lakeland Linder Regional Airport facility was completed during the Master Plan Update and addresses the period of 2009 through the year 2029. The Airport completed a full Master Plan Update in 2010. The following is an inventory of on-ground facilities and a visual depiction of the airport layout plan is found in Illustration III-26.

The LAL Terminal was originally constructed as a two-story 27,260 square foot building located on a 13 acre tract of land fronting State Road 572 (Drane Field Road). The building features office space for airport administration, one large and one small conference room, a restaurant, flight planning and weather information area, car rental area, and space designed for future services/offices. In 2011, a 2,000 square foot terminal expansion and reconfiguration project was completed in advance of regularly-scheduled passenger flights being operated by DirectAir. This project included the construction of ticket counters, passenger holding area, security screening facilities and baggage claim facilities for arriving passengers. The parking area is located on the north side of the terminal building and consists of approximately 275 parking spaces with 10 reserved for handicapped parking. The terminal building also features a 185 foot section of curbside area with an access loop that transitions through a 30-foot wide covered walkway, providing a convenient drop-off or pick-up area. The terminal layout is depicted in Illustration III-28. In 2011, the fixed-base operator (FBO) facilities were relocated from the terminal to a new 3,600 square foot building constructed just to the southwest of the terminal.



Passenger Terminal: Lakeland Linder Regional Airport

The air traffic control tower (ATCT) is located adjacent to the airport terminal. Built in 1980, this structure contains the ATCT cab, which is typically manned by two to three controllers, and the ATCT Manager’s office. The ATCT is operational daily between 6:00 a.m. and 10:00 p.m. The airport layout is depicted in Illustration III-26. A new ATCT site selection study is being conducted; however, construction is pending funding.

There are two Airport fuel storage areas. One is located just west of the main terminal building and the other is further to the west and includes a self-serve tank. The fuel tanks are maintained by the FBO. There are two 100LL AvGas tanks (one 12,000 gallon and one 15,000 gallon) and a total of three Jet A tanks (one 12,000 gallon, and two 15,000 gallon tanks).

Aircraft based at LAL are stored in enclosed hangars or parked in tie-down spaces. A full inventory of aircraft based at LAL is provided in Chapter 4.0 of the Master Plan (Table 4.8) and the 2025 Florida Aviation System Plan (FASP). The airport has 24 conventional hangars on site, some of which are Airport-owned and some of which are privately-owned. The Airport-owned hangars vary in size from approximately 3,000 square feet up to approximately 40,000 square feet. The hangars are leased to both aviation and non-aviation related businesses and individuals. The Airport also has a total of six T-Hangar buildings. Four of the T-Hangar buildings are designated as the “City T-Hangars” which identifies them as Airport-owned while the other two are designated as the “Executive T-Hangars”, identifying them as privately owned on Airport-leased land. There are a total of 65 units in the City T-Hangar Buildings equaling approximately 64,800 square feet.



The primary airport apron areas designated for aircraft parking are located in various places around the airfield; these locations include:

Aircraft Parking	Size (estimated square yards)
Terminal Building Ramp	14,800
Tower Ramp	11,700
Hanger 1, 2, & 3 Ramp	31,700
Hanger 6 Ramp	14,900
War Bird Ramp	23,280
Airside Center Ramp	11,900
Lakeland Police Department (LPD) Ramp	2,500
South Ramp	17,900

Maintenance Facilities for the airport are located on the eastern side of the airfield. The building is approximately 3,750 square feet and is used for maintenance office space and to house equipment needed to maintain the airfield. A second maintenance facility is located on the south side of the Airport. This facility houses additional equipment and provides an overflow storage area.

The electrical vault that serves the entire airfield is located adjacent to the airport maintenance facility on the east side of the airfield. The vault consists of an 818 square foot building that houses nine regulators, an emergency generator, and ancillary electrical equipment. There is ample room for expansion within the electrical vault. The electrical vault is in excellent condition.

In 2007, the Hilton Garden Inn opened its 105-room hotel north of the passenger terminal on the Airport's main entrance on Don Emerson Drive at Drane Field Road.

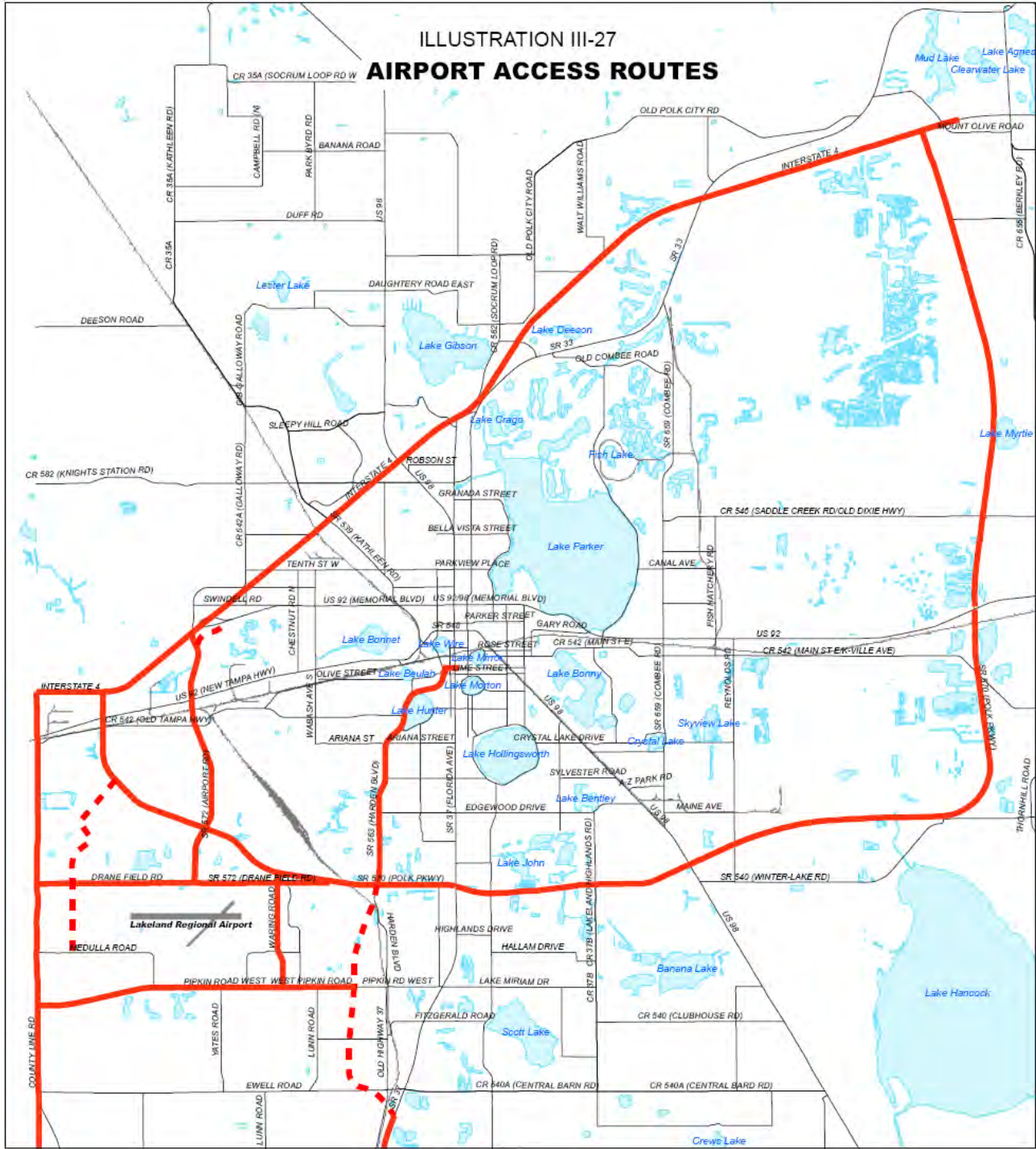
Central Florida Aerospace Academy (CFAA) of Kathleen High School, a full-time high school program located on the southwest side of the airfield on the Sun n' Fun campus, opened in 2008. The academy responds to the needs of industry by placing emphasis on teamwork, individual achievement, skill development, creativity, and innovation, as well as critical thinking. Students who attend the academy participate in coursework in Aerospace Engineering, Avionics and Aerospace Technologies as well as their general high school curriculum. A new headquarters for the CFAA was completed in 2011 on Medulla Road just south of the main entrance to the Sun n' Fun campus.



The Lakeland Linder Regional Airport's Aircraft Rescue and Firefighting Facility (ARFF) Station #7 became operational June 4, 2007, providing immediate firefighting and other emergency response (including hazardous incidents) operations to the Airport. According to the criteria listed in FAR Part 139.315, LAL is listed as having Index A ARFF services. LFD currently operates an Oshkosh Striker 1500 emergency vehicle as its primary response vehicle for airport emergencies. The fire equipment staging area is located near the intersection of Taxiways "B" and "C". The primary staging area for off-airport emergency assets is located at the intersection of Drane Field Road and Airport Road at Gate 1. Fire hydrants are located in the terminal area. Additional hydrants are located in the adjacent Airpark, Sun 'N Fun area, Lakeland Air Center and along Drane Field Road and Medulla Road.

As will be discussed in the Issues section, the LAL will seek to continue to acquire properties surrounding the airport in order to manage development near the airport and to maintain land use compatibility, protect clear zones (see Illustration III-26) and to enhance the current Lakeland Airside Center Business and Aviation Complex which includes aviation related businesses. Funding for such acquisitions are typically included in the City's adopted 5 year Capital Improvements Plan.

# ILLUSTRATION III-27 AIRPORT ACCESS ROUTES



Source: Lakeland Community Development Department, 2010



### Airport Access Routes

- Existing
- - - Future



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## SURFACE ACCESS

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### ROADWAY

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The Lakeland Linder Regional Airport is accessed by vehicular transportation using the network of streets in the area. Illustration III-27 depicts the airport access routes. The most direct existing access from the Lakeland Central Business District (CBD) is via State Road 563 (Harden Boulevard), North Parkway Frontage Road and SR 572 (Drane Field Road). SR 563 is a four-lane “Type I” controlled-access roadway where adjacent development is required to construct cross-connections or joint-driveways to maintain long-term efficiency of this corridor. The Polk County Long-Range Transportation Plan includes a four-lane extension of SR 563 (North-South Route) between the Polk Parkway and West Pipkin Road as a partially-funded project. The SR 563 Extension has been completed through right-of-way acquisition but the project construction phase was removed from the Florida Department of Transportation’s Five-Year Work Program in 2005 due to increased costs and reductions in available funding. However, Harden Boulevard, south of the Parkway will have a second southbound lane added from the Parkway area to West Pipkin Road, including a realignment of the intersection of Harden Boulevard and West Pipkin Road, a project funded by the Polk County Harden-Parkway Community Redevelopment Area (CRA) and expected to be completed in the fall of 2011.

From Interstate 4, the most direct route to the City’s Airport and terminal, is via SR 570 the Polk Parkway, a limited-access tolled expressway. SR 572 (Airport and Drane Field Roads) provides access between the Polk Parkway and Airport property via the Parkway’s Airport Road and Waring Road interchanges.

Lakeland-Linder Airport Southside Access Network: Access to the south side of the Airport complex, including the Lakeland Airside Center, adjacent GEICO Direct Regional Headquarters and Sun ‘N Fun facilities is available via County Line Road and West Pipkin Road (from Tampa) and Waring Road/West Pipkin Road (from Orlando). The City and Polk County have aggressively pursued intermodal and economic development grant funding through the State of Florida to improve the safety and capacity of these important access routes.

- County Line Road: In 2011, Polk County commenced the construction phase of a four-lane improvement on the final section of County Line Road between Ewell Road and State Road 60, completing this direct, multi-lane corridor located between Interstate 4 and State Road 60, two designated Strategic Intermodal System (SIS) facilities. Since the early 1990’s, County Line Road has been steadily improved to accommodate freight and commuter travel demand using State and Federal intermodal and economic development grants. County Line Road is designated as a “Type I” controlled-access facility within the City. In 2010, the City of Lakeland continued pursuing the development of a coordinated access management plan for County Line Road, with participation from Polk County and the City of Plant City.

- Waring Road: In 2002, the Lakeland City Commission approved the Waring Road Alignment Study, ultimately planning a full four-lane corridor between the Polk Parkway and West Pipkin Road, east of the Airport. In 2010, the City completed Phase I of this plan, constructing a two-lane extension of Waring Road (within a four-lane right-of-way envelope) from its southern terminus at Old Medulla Road to West Pipkin Road. To address concurrency failures at the Waring/Drane Field Road intersection, the City requested funding through the Polk TPO's Congestion Management Program for the addition of a dedicated southbound right-turn lane. Design and construction funding was awarded, with construction being funded in FY 2012/13 of FDOT's Five-Year Work Program.
- West Pipkin Road: In 2002, the City completed a four-lane extension of West Pipkin Road between Medulla Road and County Line Road. This four-lane road helps to divert through-traffic from Medulla Road, located west of the Airport, that has two 90-degree turns and a substandard cross-section. In 2009, Polk County completed the design phase for the continuation of a four-lane eastern section of West Pipkin Road; this section is located east of Medulla Road to Old Highway 37. Right-of-way acquisition for the four-laning east of Medulla Road will occur as opportunities arise; construction was not programmed in the 2010-2015 five-year County work program. West Pipkin Road has been classified as a "Type I" roadway between County Line Road and the planned SR 563 Extension; the intent is to control access from adjacent development and preserve new capacity added with these on-going roadway expansion projects.
- Southwest Lakeland Sector Plan Connector Network: In 2008, the Lakeland City Commission approved the "Southwest Lakeland Sector Plan", which identifies needed collector road improvements adjacent to the Airport and planned development along the County Line Road corridor. This plan includes improvements to Hamilton Road, ultimately creating a two-/three-lane corridor between Gateway Boulevard and Medulla Road that meets current design standards, and the construction of a service road running parallel to County Line Road between West Pipkin Road and Medulla Road. These future connector roads are intended to serve local traffic needs, thereby preserving capacity on County Line Road for freight and other types of regional through-traffic, and can be constructed as stand-alone capital improvement projects and/or be required components of private development projects within the study area. For example, the City is working with Publix Super Markets to construct a short extension of Gateway Boulevard (east of Whitten Road) as part of its on-going distribution center expansion project in order to provide a secondary access to the development site, eliminating the need for a second driveway onto County Line Road, and implementing an important part of the Gateway Boulevard extension to the vicinity of the Polk Parkway.

## TRANSIT AND SHUTTLE SERVICES

Lakeland Linder Regional Airport is served by the Citrus Connection's Route #57 (Kidron/Flightline), which provides hourly service during the morning and evening peak periods. Route #57 stops at the Airport terminal area and Airside Center complex, providing travel options for employees and business travelers in the Southwest Lakeland area. In 2011, the City submitted a petition to annex the western part of the Airport's property into the Lakeland Area Mass Transit District (LAMTD). While that action will not generate additional ad valorem tax revenue for LAMTD, it will set the stage for the District's annexation of future employment centers west of the Airport, such as in the Hamilton Road corridor.

In June 2011, the Lakeland City Commission executed a permit agreement with H&H Shuttle Services to administer passenger shuttle services at the Airport. They propose to dedicate five vehicles to the Lakeland area using two fourteen-passenger buses with wheelchair access similar to such services at other major airports. The primary destinations to be served by the shuttle service include Downtown Lakeland, The Lakeland Center and Lakeside Village (at Oakbridge).



While the Florida High-Speed Rail Program was terminated by the State of Florida in 2011, Lakeland Linder Regional Airport is well-positioned to take advantage of future high-speed rail, conventional passenger rail and/or express bus services that are operated along the Interstate 4 and SR 570 (Polk Parkway) corridors as identified in the Polk County 2060 Transportation Vision Plan, the TPO's Long-Range Transportation Plan and Tampa Bay Area Regional Transportation Authority (TBARTA) Master Plan.

## EXISTING SERVICE DEMAND AND SYSTEM NEEDS

According to the LAL 2010 Master Plan Update (Table 2.21B), there were 165 aircraft based at LAL, approximately 74 percent of which were single engine aircraft, 14 percent were multi-engine aircraft, seven percent were jets and almost five percent were helicopters.

In regard to total aircraft operations for the Lakeland Linder Regional Airport, there were 96,833 total operations in 2007; this figure does not include operations during hours that the ATCT was closed.

Existing regulations at the City level (land development regulations) and County level (Joint Airport Zoning Board, JAZB or JAZBA, Board of Appeals) continue to ensure compatibility between adjacent proposed land uses and the LAL. Longer term facility needs requiring



funding from the City of Lakeland are outlined in the City's adopted Capital Improvement Plan.

## **FORECAST OF AVIATION DEMAND**

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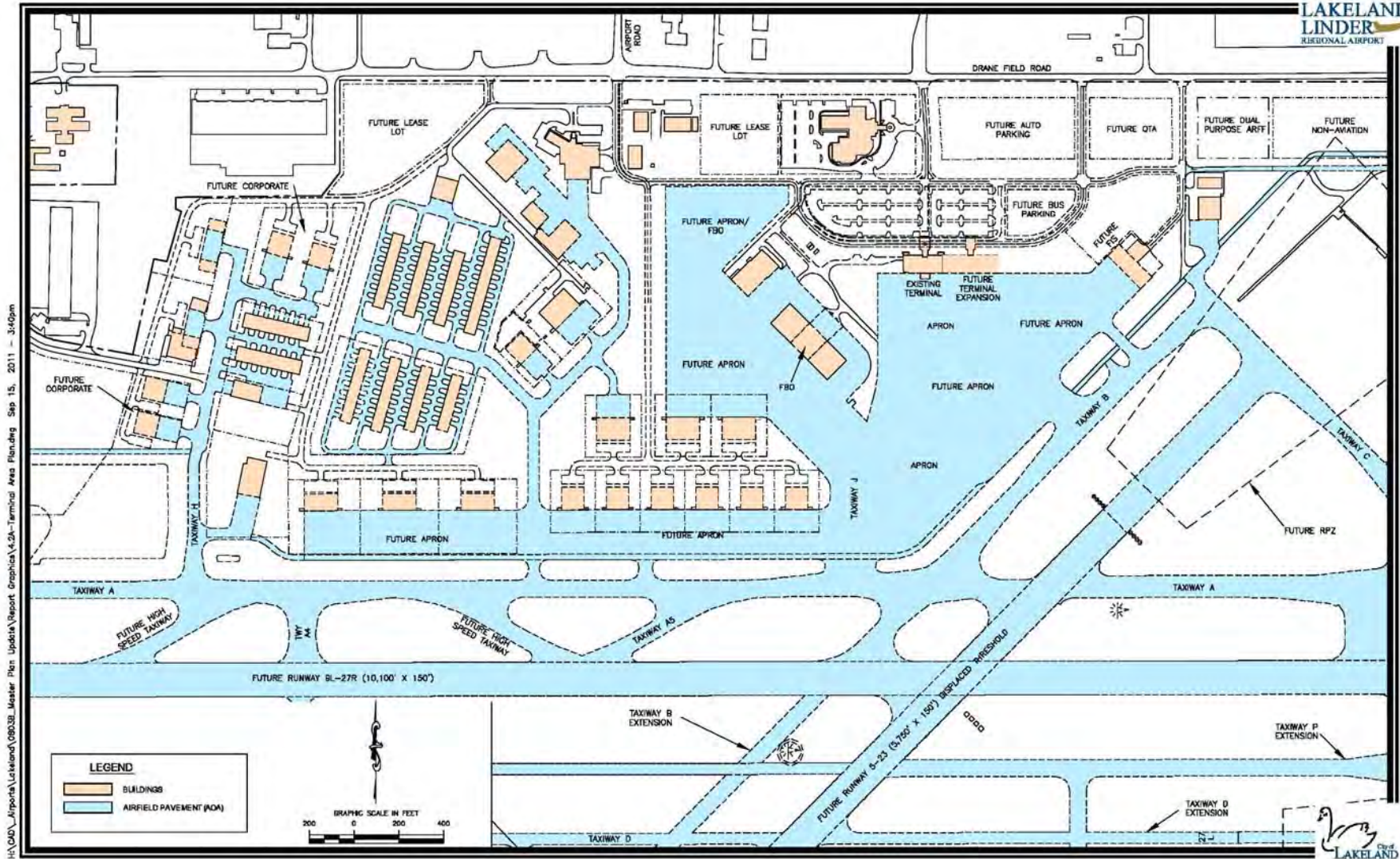
It is the policy of the City of Lakeland to encourage continued development of the airport. The Lakeland Linder Regional Airport Master Plan depicts the recommended improvements which will enable the airport to meet forecasted aviation demand and serve a variety of current and potential users. The plan also identifies areas of land acquisition needed to meet development standards and other requirements. Illustration III-28, Terminal Area Plan Concept, is focused upon the terminal building area, whereas the airport's preferred campus layout for the entire airport is shown in Illustration III-29.

Past forecasts were based on a number of assumptions which did not come to fruition, such as a strong national and local economy throughout the 1980's and the expansion of commercial service. Actual activity levels based on LAL tower records are shown in Table III-21.

The various forecasts of aviation activity at LAL, are detailed in Chapter 2 of the 2010 Airport Master Plan. The general aviation activity forecasts shown in Table III-21 are based on projections calculated according to different methods and sources including a constant level of Operations Per Based Aircraft (OPBA), an increasing level of (OPBA), LAL's share of the U.S. general aviation market, FDOT forecasts (2009) and FAA Terminal Area Forecasts (TAF – 2009). The Master Plan concludes that the "U.S. Market Share" projections are preferred since they represent a gradual and reasonable increase in general aviation activities of approximately 1.7 percent average annual growth throughout the planning period, assuming that LAL will see an increased share of the U.S.'s general aviation activity due to its proximity to key Central Florida cities and the low cost of business at the Airport.

The forecasts included in Table III-21 do not include military or air taxi/carrier operations. Projections are unavailable from the military or FAA for military operations and were assumed to remain constant throughout the forecast period.

ILLUSTRATION III-28



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Ordinance # 5283  
Adopted 12/19/11

FIGURE 4.2A  
TERMINAL AREA PLAN

# ILLUSTRATION III-29 FUTURE AIRPORT LAYOUT

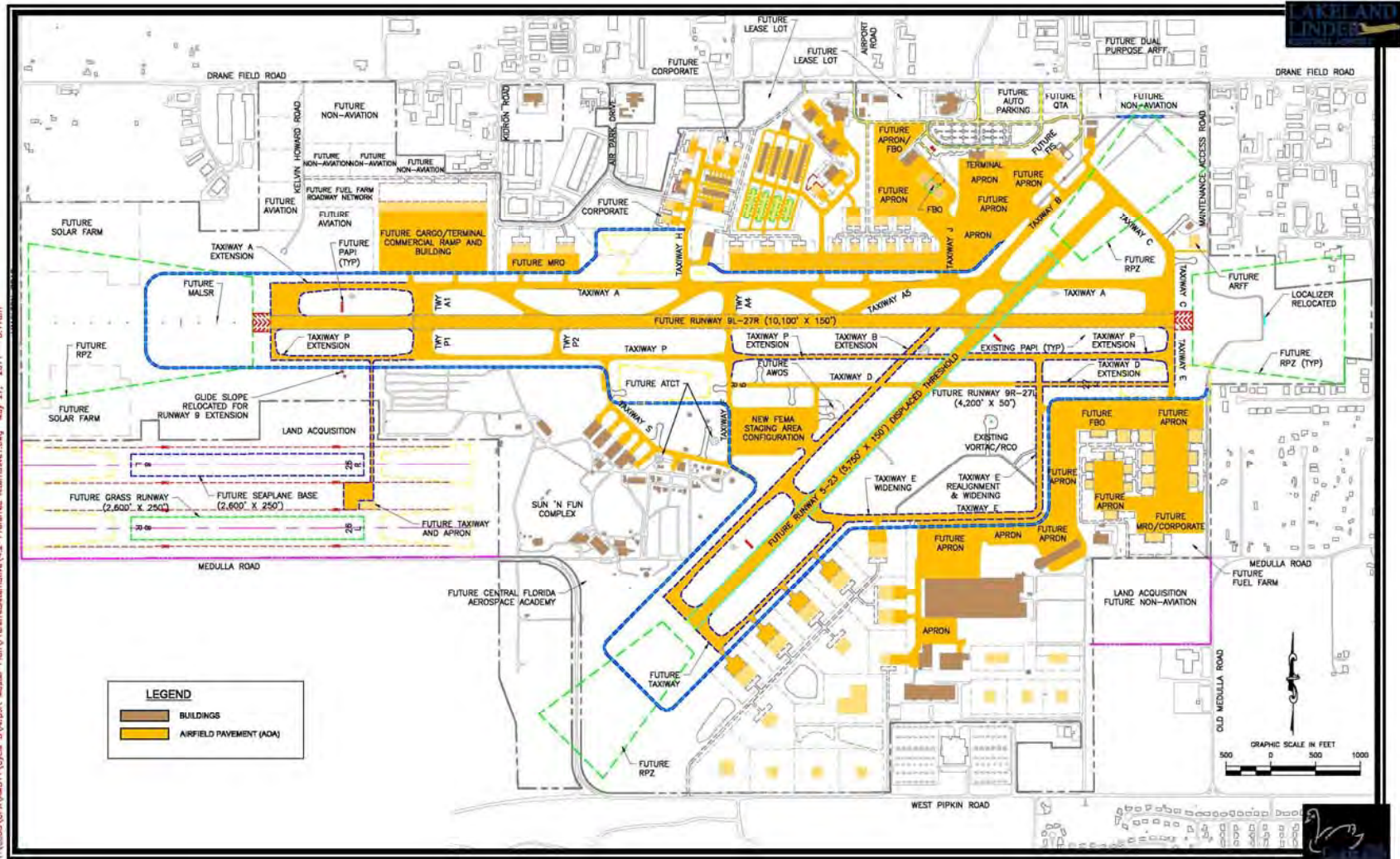


FIGURE 4.2  
PREFERRED ALTERNATIVE

**TABLE III-21  
AIRPORT OPERATIONS FORECASTS\***

<b>YEAR</b>	<b>Historic</b>	<b>Constant OPBA</b>	<b>Increasing OPBA</b>	<b>U.S. Market Share (preferred)</b>	<b>FDOT (2009)</b>	<b>FAA TAF (2009)</b>
1999	216,566					
2000	197,144					
2001	198,521					
2002	140,815					
2003	132,555					
2004	129,781					
2005	103,979					
2006	105,776					
2007	137,789					
2008	121,786				118,175	
2009	96,833	96,833	96,833	96,833	121,129	96,833
2014		107,000	109,100	103,200	137,047	93,952
2019		118,100	122,900	112,700	155,056	99,926
2024		130,300	138,400	121,600	175,431	106,324
2029		143,900	155,800	134,900	198,484	113,181
2010-2029 CAGR		2.0%	2.4%	1.7%	2.5%	0.8%

Sources: 2010 Airport Master Plan Update prepared by AmHerst Consulting and Page One Consultants; Wilbur Smith Associates; Airport Records; FDOT; FAA; TAF

\* Forecasts represent local and itinerant general aviation activity, and exclude military, air taxi and air carrier commercial operations.

As the attached graph (Illustration III-30) shows, the amount of local air traffic was impressive in the late 1990's. However, following national trends, local air activity slowed after the terrorist attacks on September 11, 2001 and was further complicated by the general economic recession in the country. Military traffic, corporate operations and commercial service have been identified as future growth areas. Additionally, the annual Sun 'N Fun Fly-In alone involves approximately 15,000 landings and take-offs over the week-long event.

As of 2011, several large design and construction projects are under development and/or will begin in the near-term at LAL. The following projects were expected to be completed in 2011 or early 2012:

- An Air Traffic Control Tower Site Selection Study;

- An Airport Weather Observing Station, to provide 24-hour, up to the minute weather information;
- Construction of a Regional Pond on the north side of Taxiway A and re-design of the surge basin located south of Taxiway P;
- Realignment of Taxiway H;
- Security upgrades will include new access controls and fencing;
- Taxiway lighting upgrades, as funded by FDOT;
- ATCT navigational equipment and rotating beacon upgrades;
- Runway 27 and Taxiway P Safety Area improvements;
- Taxiway B Extension is anticipated to start construction by summer 2012;
- Expansion of parking facilities to accommodate long-term and rental car parking associated with new commercial passenger service.
- A solar project which will provide five megawatts of power from ground-based silver antenna rays located on the far west end of the Airport by Hamilton Road. In 2011, the project site was annexed into the City and received necessary land use and zoning approvals.

Identified future system needs include moving the Instrument Landing System (ILS) from Runway 5 (northeast-southwest orientation) to the longer Runway 9 (east-west orientation), extending Runway 9 to a length of 10,100 feet, extending Runway 5 southward to a length of 5,750 feet, constructing a new air traffic control tower, expanding apron areas, development of specific areas designated for cargo and extending Taxiway B and converting Taxiway D to a utility runway. A 2,600 foot long grass runway and 2,600 foot long seaplane base are planned to the south of Runway 9/27 in the 2010 Master Plan (Figure 4.4G). Per the 2010 Master Plan (Chapter 5), recommended future improvements at the Lakeland Linder Regional Airport may have to be evaluated to determine impact on environmental factors such as water quality/drainage and increased impervious surfaces in compliance with requirements such as those detailed in the National Environmental Policy Act (NEPA).

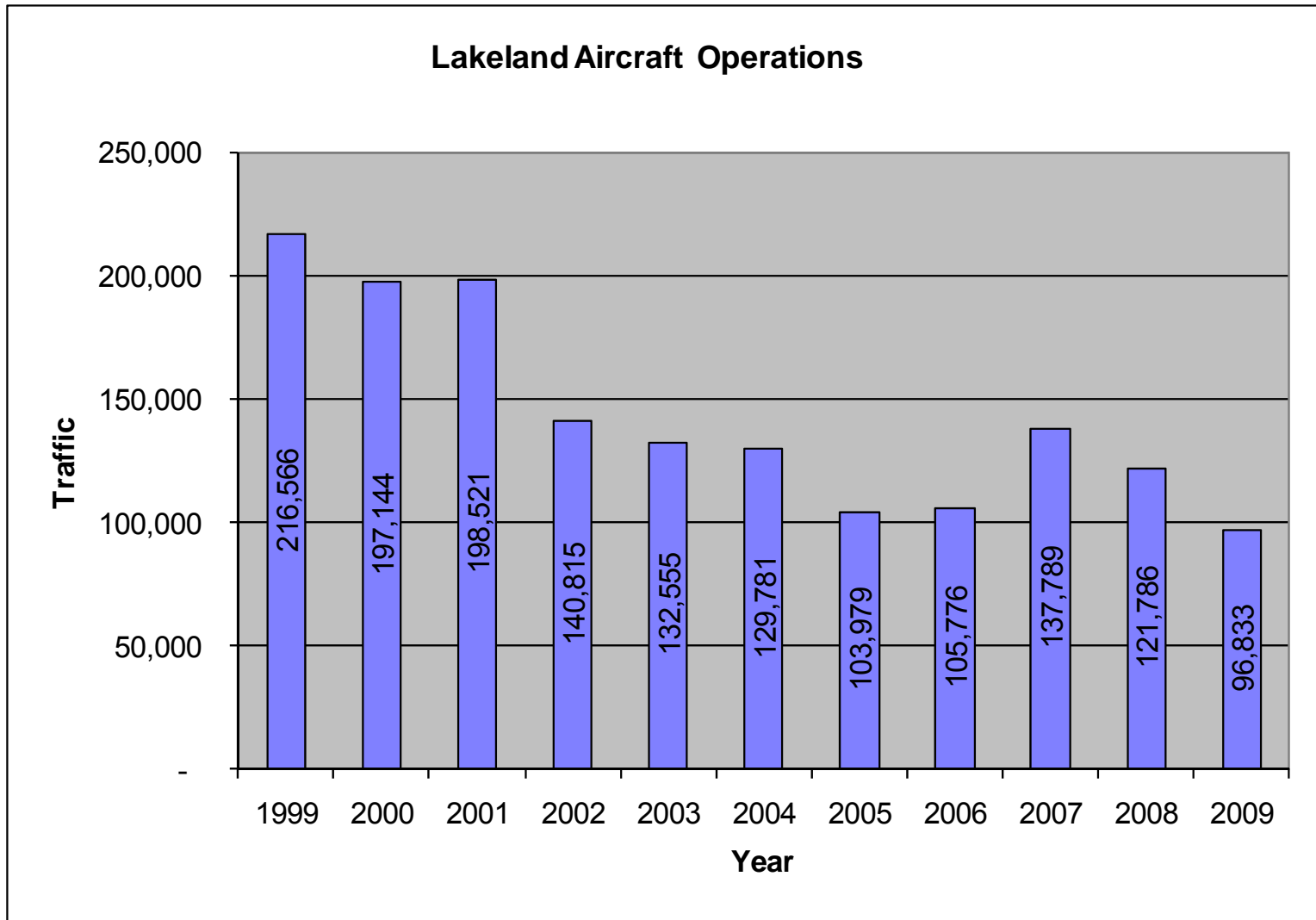
In terms of building area planning on Airport property, implementing the Master Plan elements noted above will shift the Runway Protection Zone for Runway 5/23 back onto Airport property allowing for additional non-aviation development opportunities along its Drane Field Road frontage.

Future noise contours in year 2029 indicate no anticipated significant future problems with the slightly enlarged noise contours due to airport improvements as shown in Illustration III-31. As a general policy guideline, however, the City and County should discourage future residential development within the Airport Noise Sensitive Zone (see

Future Land Uses on Illustration III-32.) Although residential use within the 65 DNL contour is not specifically prohibited, experience has shown that residential encroachment under airport approach paths leads to controversy which could be avoided with appropriate land use controls and public education. For example, developers of residential projects in the vicinity of the Airport are required to legally notify future property owners that the airport exists and has pre-existed the new development. The LAL Airport Airspace Plan shows an area of concern which has a radius of about 2.5 miles in any direction from the airport (see Illustration III-33). Land use compatibility for factors of airport noise, tall structures, and off-site impacts of proposed uses (smoke, light, etc.) should be generally considered in this radius. The City can specifically refer to JAZB regulations, which control these impacts, as part of its development review process.

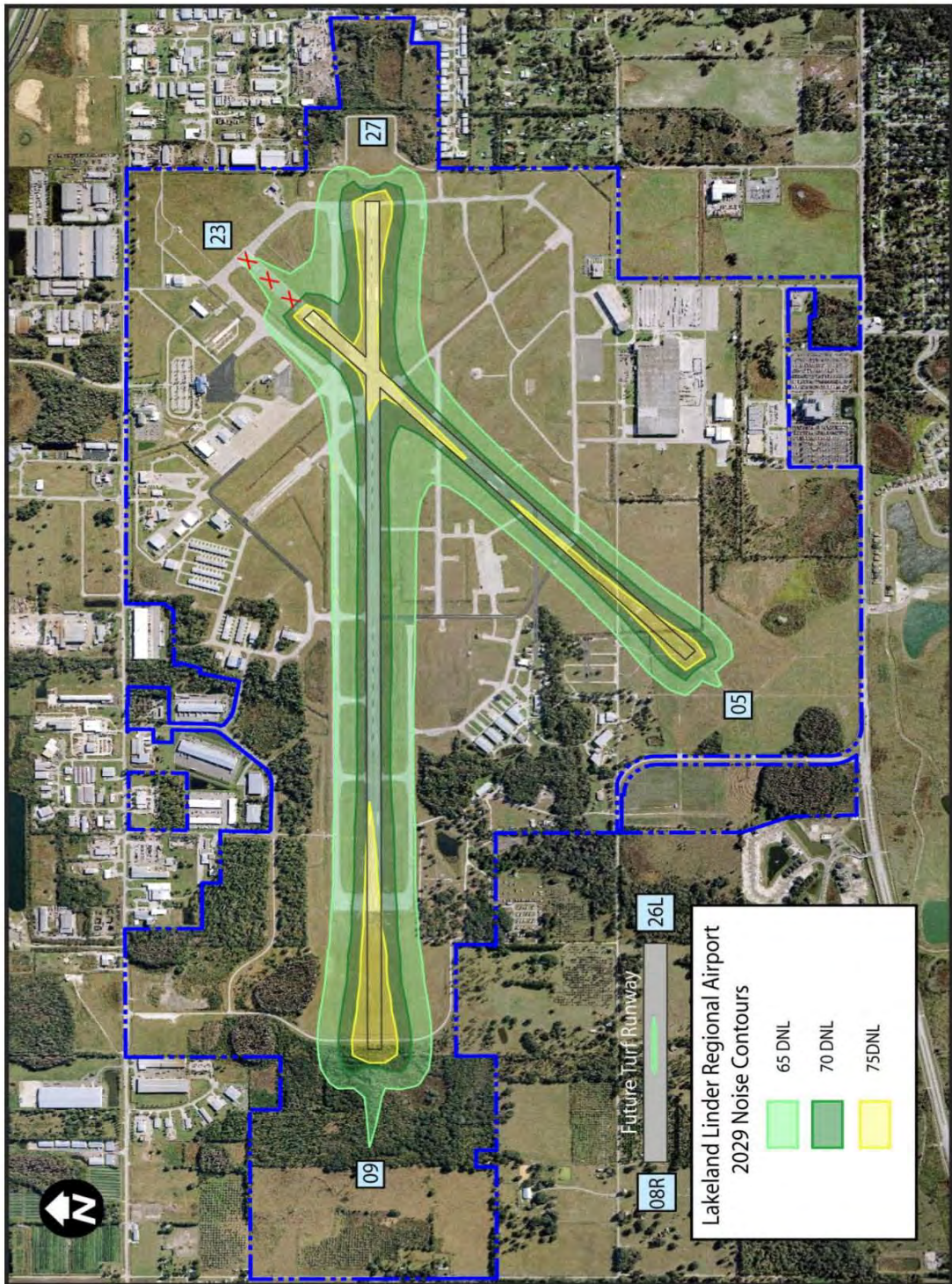
The City of Lakeland has been vigilant in protecting the Airport's airspace with the result that there are no identified airspace obstructions in the Lakeland Planning Area. In the larger Polk County area (outside the Lakeland Planning Area), the Department of Transportation has identified a few airspace obstructions, including cell towers within the County Line Road corridor.

ILLUSTRATION III-30



Source: Draft LAL Master Plan, 2009 Update

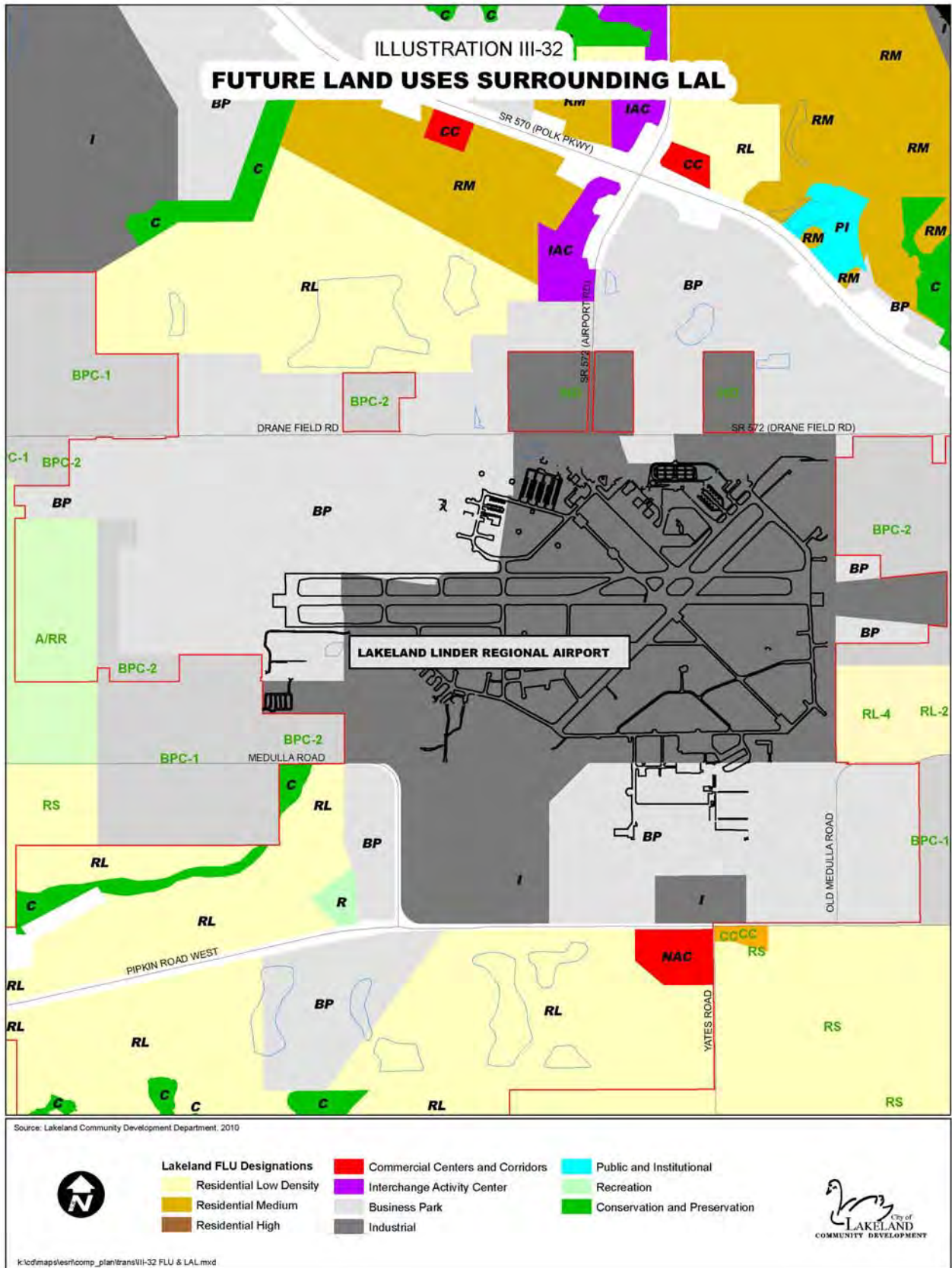
ILLUSTRATION III-31  
 Future Lakeland Linder Regional Airport Noise Contours, 2029



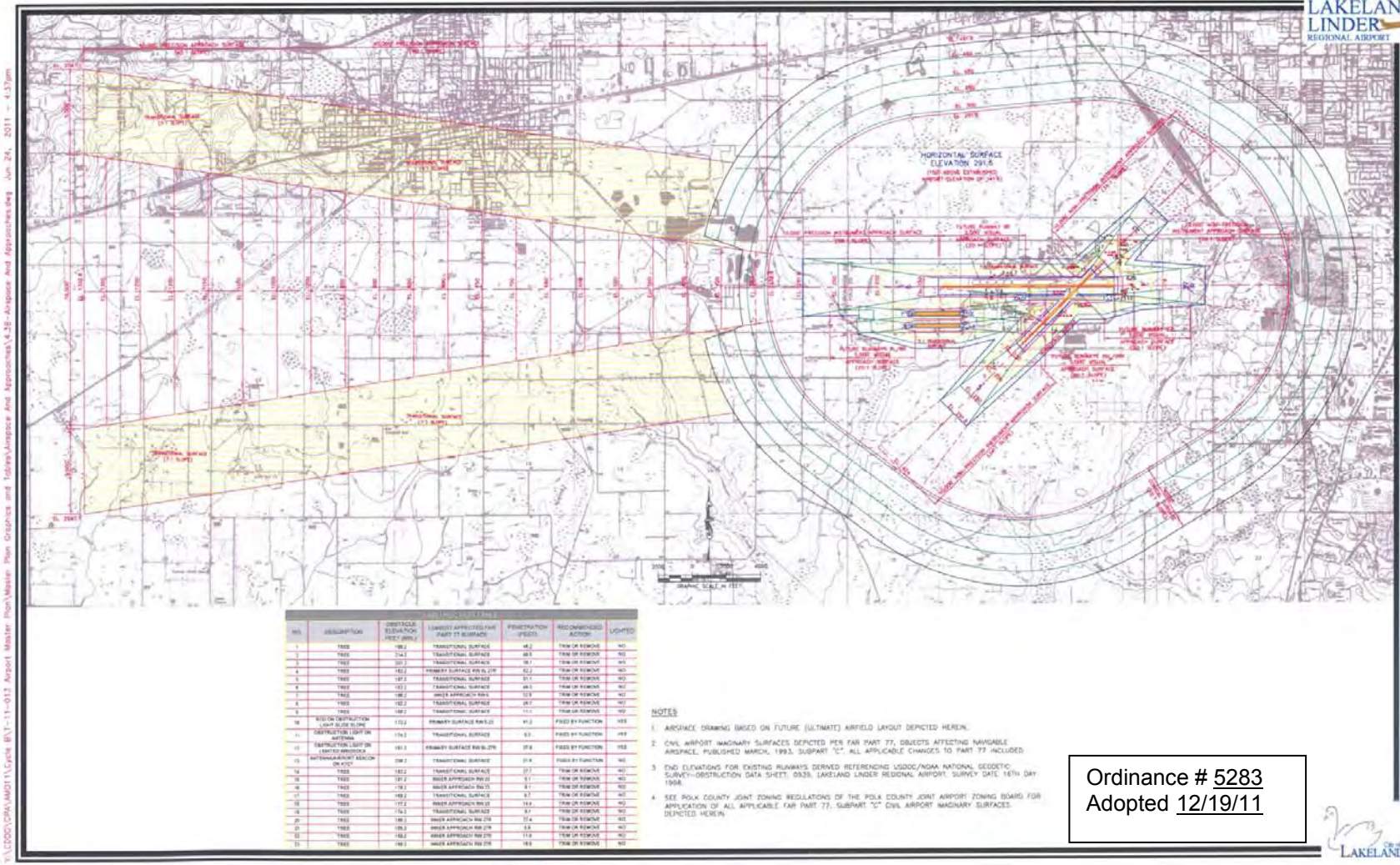
Source: Page One Consultants, Wilbur Smith Associates, FAA INM

Ordinance # 5283  
 Adopted 12/19/11





# ILLUSTRATION III-33



**Ordinance # 5283**  
**Adopted 12/19/11**



FIGURE 4.3B AIRPORT AIRSPACE PLAN

## **RAIL FACILITIES FOR FREIGHT AND PASSENGERS**

The summary of findings for the rail portion of this element addresses both freight and passenger rail.

### **FREIGHT RAIL**

#### **CURRENT RAILROAD OPERATIONS**

CSX Transportation Inc. and its business unit, CSX Rail Transport, are responsible for the operation of train service over the rail network and the maintenance of rail right-of-way and engineering activity in Polk County and the Lakeland Urban Area. The CSX's transportation network spans approximately 21,000 miles with service to 23 eastern states and the District of Columbia, and connects to more than 70 ocean, river and lake ports. The company also manages assets related to train operations including yards, tracks and locomotives.

Winston Yard, owned and operated by CSXT and annexed into Lakeland in 1997, is a "classification" facility where rail cars arrive on trains and are classified or switched to other trains for final delivery. Light repairs and maintenance of both rail cars and locomotives occur at Winston Yard, which is located northeast of Lakeland Linder Regional Airport and comprises about 500 acres, 360 acres of which are dedicated to rail operations. In addition to an average of 21 scheduled trains that operate through the rail yard, several shuttle trains based at the facility operate to and from the Bone Valley located in southwest Polk and beyond to one of the world's largest phosphate deposits. (Note: not all trains accessing Winston Yard travel through downtown Lakeland.) Approximately 135 employees representing a variety of jobs are employed or work from Winston Yard. The facility serves 21 Lakeland businesses and is important to the movement of freight to and from Plant City, Auburndale and Winter Haven, with connections south to Miami and to northern and western points

Phosphate fertilizer has historically constituted the primary cargo of the freights. Paper, pulp board, grain feed, perishables, coal and intermodal/piggyback cargo are also transported on a regular basis. As of 2010, there were no piggyback or intermodal transfer facilities in Polk County; the nearest facility has historically been located in Tampa. These are stations where truck trailers on rail cars could be loaded off to waiting truck rigs. However, as discussed below, such a facility is planned for Winter Haven prior to the commencement of SunRail commuter rail service in the Orlando area.

#### **FDOT RAIL TRAFFIC EVALUATION STUDY**

In 2006, the City of Lakeland learned of a proposed development within the City of Winter Haven called the Evansville Western Railway "Integrated Logistics Center" (ILC) on 318 acres of land north of State Road 60 and east of Rifle Range Road (CR 655). This ILC was reviewed as a Development of Regional Impact (DRI) and is planned to accommodate intermodal freight operations currently housed at similar piggy-back and new automobile

delivery storage facilities in Tampa and the Taft area of Orlando. At the same time, the City of Lakeland learned of an agreement between CSX Transportation (Evansville Western Railway's parent company) and the State of Florida that requires freight rail operations through the Orlando metropolitan area on the CSX "A" Line to be re-routed through Lakeland via the CSX "S" line to Ocala and Jacksonville. This freight relocation would support the ILC project and remove freight traffic from the 61-mile SunRail commuter rail corridor. An additional 930 acres immediately adjacent to the ILC is planned for associated warehouse and distribution facilities. As the Panama Canal is expanded to handle larger cargo ships from Asia that have had to unload at constrained ports in Southern California, it is expected that the Port of Tampa and Port Manatee will see a considerable increase in activity due to their proximity the Canal and access to markets in the eastern United States. Since the "A" and "S" Lines are the only two existing routes to handle rail traffic between Central Florida and neighboring states, long-term rail capacity and adjacent community impacts of additional freight traffic, including the ability to accommodate passenger rail, is an issue that has received a considerable amount of attention throughout the region. The issue is particularly acute in Lakeland, located on the one track that serves a combined "A" and "S" Line for an 11 mile distance between Lakeland and Auburndale.

Due to concerns raised by the City of Lakeland regarding additional freight train and truck traffic generated by the ILC and freight re-routing plan, the Florida Department of Transportation (FDOT) completed a *Rail Traffic Evaluation Study* in 2009 aimed at quantifying future rail traffic impacts in the Lakeland Area and Polk County. This study also examined the potential alignment options for a new freight corridor between the ILC and Coleman in Sumter County. A Grade Crossing Analysis and Rail Relocation Options Analysis was conducted, based on the current and projected freight and AMTRAK train volumes contained in Table III-22. Actual freight rail traffic in the future will be dictated by market demand for goods and fuel costs impacting over-the-road truck freight demand.

**TABLE III-22  
CURRENT AND FUTURE RAIL TRAFFIC PROJECTIONS THROUGH DOWNTOWN LAKELAND**

Approx. Track Location, # of Trains and # of AMTRAK Trains	2008	2010	2030
<i>AR Line (NW of Lakeland)</i>			
<b>Trains</b>	10	18	26
<b>AMTRAK</b>	0	0	0
<i>A Line (through Downtown Lakeland)</i>			
<b>Trains</b>	16	20	27
<b>AMTRAK</b>	2	2	2
<i>A Line (E. of Auburndale)</i>			
<b>Trains</b>	9	5	5
<b>AMTRAK</b>	4	4	4
<i>A Line (W. of Lakeland)</i>			
<b>Trains</b>	14	18	25
<b>AMTRAK</b>	2	2	2
<i>S Line (S. of Auburndale)</i>			
<b>Trains</b>	14	18	25
<b>AMTRAK</b>	2	2	2

**Source:** FDOT Rail Traffic Evaluation Study - 2009

Eight new freight rail corridor alignments were analyzed in the 2009 FDOT *Rail Traffic Evaluation Study* for the vicinity between the new ILC and “S” Line south of Coleman. Table III-23 outlines those preferred alternatives as determined by the City of Lakeland, including relative impacts and benefits of each option. Since CSX will have to agree to use any selected rail relocation alternative, that agreement is assumed to occur only where the relocation represents the most favorable business decision for CSX. Thus, the preferred options identified by the City represent the shortest overall distances between Winter Haven and Coleman. Each alternative route is intended to direct freight traffic around downtown areas such as Lakeland, Plant City, Dade City. Implementation of these freight routing options is expected to provide enough additional capacity to allow passenger rail service along the CSX rail lines between Orlando and Tampa, consistent with FDOT’s *Intercity Rail Vision Plan* and the *Tampa Bay Area Regional Transportation Authority (TBARTA) Master Plan*, and be a more cost effective option to move people throughout Central Florida than the full reconstruction of Interstate 4 between Orlando and Tampa.

**TABLE III-23  
CSX FREIGHT RAIL RELOCATION ALTERNATIVES  
& PREFERENCES OF CITY OF LAKELAND**

ALTERNATIVE	LENGTH	COST (2019 \$\$)	CROSSINGS	RELATIVE IMPACTS AND BENEFITS (some as determined by Lakeland)
<b>Current Plan</b>	79 miles	<i>Unknown</i>	107 total	<ul style="list-style-type: none"> <li>✘ Affected Communities: Lakeland, Dade City</li> <li>✘ Rail Bridge Needed in Downtown Lakeland to Separate Freight and Passenger Rail (\$100 million)</li> <li>✘ Significant Impediment to Future Passenger Rail. Dedicated Track for Passenger Rail is Needed (\$182 million)</li> </ul>
<b>Alternative 1: Van Fleet/TECO</b>	65 miles	\$811.9 million	At-Grade: 36 Grade-Separated: 1	<ul style="list-style-type: none"> <li>✘ Re-location of Van Fleet and TECO Trails</li> <li>✘ Lake Myrtle Park Impacts</li> <li>✘ Green Swamp – Conservation</li> <li>✘ Affected Communities: Auburndale &amp; Polk City</li> <li>✓ Shorter Freight Route</li> <li>✓ Previous Rail Corridor</li> <li>✓ Existing Grade Separated Crossings: Interstate 4, SR 33 and SR 50</li> <li>✓ Minimize Passenger Rail Conflicts</li> </ul>
<b>Alternative 6: Vitis/Polk City</b>	83 miles	\$638.7 million	At-Grade: 34 Grade-Separated: 1	<ul style="list-style-type: none"> <li>✘ Relocation of TECO Trail and portion of Van Fleet Trail</li> <li>✘ Lake Myrtle Park Impacts and Environmental Mitigation (Green Swamp)</li> <li>✘ Affected Communities: Auburndale, Polk City and Dade City</li> <li>✓ Minimal Increase in Freight Route Length</li> <li>✓ Lower Estimated Cost Relative to Other Alternatives</li> <li>✓ Minimizes Passenger Rail Impacts</li> </ul>
<b>Alternative 7: McIntosh Spur</b>	83 miles	\$752.6 million	At-Grade: 27 Grade-Separated: 3	<ul style="list-style-type: none"> <li>✘ Affected Communities: Lakeland, Polk City and Dade City</li> <li>✘ Future Passenger Rail Impediment (Auburndale to Lakeland)</li> <li>✘ New Interstate 4 Crossing</li> <li>✘ Environmental Impacts – Green Swamp</li> <li>✓ Minimal Increase in Freight Route Length</li> <li>✓ Lower Cost for New Track Construction</li> </ul>

**Source:** DOT Rail Traffic Evaluation Study, 2009.

Due to the cost, engineering analyses, coordination and public participation associated with implementing any of these rail re-routing alternatives, the City will request implementation support and funding from the Florida Department of Transportation during updates to the Strategic Intermodal System network plan and annual appropriations and Work Program development processes. As a note, for Alternative #1, the new freight corridor would need to incorporate a relocated and reconstructed General Van Fleet State Trail in order to maintain that critical component of Central Florida’s regional trail network.

### Grade Crossing Analysis

FDOT’s *Rail Traffic Evaluation Study* evaluated the impact of the additional freight traffic that will be re-routed through Polk County and Lakeland as part of the SunRail and ILC projects, including current and projected roadway crossing levels of service at 75 crossings. FDOT’s analysis identified those crossings that are significant for connectivity within the area, where safety upgrades are needed and where level-of-service deficiencies are projected by Year 2030. The analyses assumed that the length of each train would increase from a current 4,000 foot average to 5,800 feet by the Year 2030. Table III-24 summarizes the results of FDOT’s analysis for grade crossings within the Lakeland area. The City has also identified the County Line Road crossing as “significant” due to the amount of trucks that utilize this corridor between Interstate 4 and State Road 60 and its function as a primary access route to Lakeland-Linder Regional Airport.

**TABLE III-24  
FDOT ANALYSIS FOR GRADE CROSSINGS**

CROSSING	SIGNIFICANT	SAFETY UPGRADES NEEDED	LOS DEFICIENCIES (2030)
Sleepy Hill Road	No	Yes	No
CR 582 (Knights Station Road)	Yes	Yes	No
10 <sup>th</sup> Street	No	Yes	Yes
Missouri Avenue	No	Yes	No
SR 35 (Florida Avenue)	Yes	Yes	No
Massachusetts Avenue	Yes	Yes	No
SR 659 (Combee Road)	Yes	Yes	No
Gay Road	Yes	Yes	No
Wabash Avenue	Yes	Yes	No
County Line Road*	Yes*	Yes	No

**Source:** FDOT Rail Traffic Evaluation Study – 2009

\* City of Lakeland staff has identified County Line Road as a “significant” crossing.

During the Summer 2007, five people were killed in two separate incidents where trains struck vehicles attempting to drive around downed crossing gates on SR 572 (Airport Road) and Wabash Avenue. Following these tragedies, Lakeland Police Department and the Florida Department of Transportation conducted an extensive public information campaign through “Operation Lifesaver” to inform motorists of rail crossing hazards and the need to

obey all warning devices at crossings. FDOT also programmed crossing safety upgrades at the Airport Road and Wabash Avenue crossings, including the installation of “four-quad gates” that completely block the rail crossings when the gates are down. Additional crossing upgrades have been programmed by FDOT at the SR 35 (Florida Avenue) crossing in Downtown Lakeland to address safety issues identified in the 2009 *Rail Traffic Evaluation Study*. In addition to Wabash Avenue, that report also identified the need for safety improvements at crossings on Deeson Road, Sleepy Hill Road, SR 659 (Combee Road), CR 582 (Knights Station Road), Missouri Avenue and Gay Road. In 2010, City staff learned of a Rail Crossing Closure analysis commissioned by FDOT Central Office for the Gay and Browning Road crossings east and west of the SR 572 (Airport Road) crossing, respectively.

Since the 10<sup>th</sup> Street rail crossing west of Kathleen Road is expected to operate at a deficient level-of-service by Year 2030 with increased freight rail traffic, the City believes that the planned Mall Hill Extension between Kathleen Road and West Bella Vista Street will provide an important new east-west corridor for traffic between the residential areas in northern Lakeland and employment and intermodal centers in southwest Lakeland. In the event that the Gay and Browning Road crossings are recommended for closure, the City hopes that it can work with Polk County, FDOT and CSX to “bank” those closed crossings in exchange for the creation of the new crossing to accommodate the Mall Hill Extension.



Rail crossing on Massachusetts Avenue in Downtown Lakeland

### **DOWNTOWN LAKELAND QUIET ZONE DESIGNATION**

The new freight corridor alternatives discussed above are intended to address long-term freight-traffic demand between Central Florida deepwater ports and the new ILC and markets throughout the eastern United States. Until freight traffic is re-routed from Downtown Lakeland, there will be a need to mitigate the noise impact of train horns on



existing and future residents within the downtown Lakeland area, particularly during overnight hours.

With authorization from the Federal Railroad Administration (FRA) and through an agreement between the City and CSX, a “Quiet Zone” designation in the Lakeland Downtown will allow for more localized audible warning devices at railroad crossings and restrict horn blowing by trains traversing the designated Quiet Zone area. The estimated \$2 million cost to implement a Quiet Zone through Downtown Lakeland would be funded by the FDOT as part of the agreement between CSX and State of Florida that funds mitigation measures related to the SunRail and ILC projects. The City views the Quiet Zone designation as a component of short-term mitigation for the additional train traffic through Downtown Lakeland until an alternative freight rail route is constructed.

On February 7, 2008, the City received a letter from CSX, committing to making the necessary crossing modifications in order for the Downtown Lakeland Quiet Zone designation to be established. In previous discussions with CSX, these modifications included:



New Downtown residential project, in close proximity to rail

- Closure of New York Avenue crossing to automobile traffic;
- Modifications to Missouri, Florida, Tennessee, Kentucky, Massachusetts and Ingraham Avenue crossings with treatments such as four-quadrant gates, concrete dividers to prevent vehicular movements around downed gates and rail crossing lighting upgrades.

## **PASSENGER RAIL**

The volume and routing of freight rail traffic through Lakeland and Central Florida will have a direct impact on the ability to service the Interstate 4 corridor with intercity passenger rail (including commuter rail) service via the CSX “A” Line through Haines City, Auburndale, Downtown Lakeland and Plant City. This continues to be a significant issue that will most likely be addressed with the construction of a new freight rail corridor between Auburndale and Coleman. Due to projected cost, environmental mitigation and coordination with communities along the preferred alternative routes, it will be necessary for a regional or statewide entity to coordinate the implementation of such an improvement over a multi-year period.

## FLORIDA RAIL ENTERPRISE ACT

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During a Special Session convened in December 2009, the Florida Legislature created the Florida Rail Enterprise within the Florida Department of Transportation to plan, fund and operate a statewide high-speed and passenger rail network, including the interface between such systems and freight systems. The Rail Enterprise must update the statewide rail system plan by January 1, 2011 and update this plan every five years thereafter with direct status reports being provided to the Legislature. The Rail Enterprise has three primary responsibilities that directly relate to Lakeland:

1. It must “work closely” with all affected communities along an impacted freight rail corridor to identify and address anticipated impacts associated with an increase in freight rail traffic due to implementation of passenger rail;
2. In coordination with affected local governments and CSX, finalize all viable alternatives from FDOT’s *Rail Traffic Evaluation Study* to identify and develop an alternative route for through freight traffic moving across Central Florida, including Polk and Hillsborough Counties, which would address, to the extent practicable, the effects of commuter rail; and
3. Provide technical assistance to a coalition of local governments in Central Florida (including counties of and municipalities within Brevard, Citrus, Hernando, Hillsborough, Lake, Marion, Orange, Osceola, Pasco, Pinellas, Polk, Manatee, Sarasota, Seminole, Sumter and Volusia Counties) to develop a regional rail system plan that addresses freight and passenger opportunities, is consistent with the *Florida Rail System Plan* and incorporates appropriate elements from the *Tampa Bay Area Regional Authority Master Plan*, the *Metropolitan Orlando Regional Transit System Concept Plan* (including SunRail) and the *FDOT Alternate Rail Traffic Evaluation*.

The Florida Rail Enterprise Act also establishes the “Florida Statewide Passenger Rail Commission” of appointed officials responsible for monitoring the efficiency, productivity and management of all publicly-funded passenger rail systems in Florida, and providing reports and recommendations to the Legislature on issues involving passenger rail services.

## AMTRAK

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In addition to the CSX freight services, AMTRAK offers passenger service in the Lakeland area. AMTRAK uses the CSX rail lines, however, and all of its facilities are maintained by CSX Rail Transport. In year 2008, AMTRAK was providing Lakeland with train service to Tampa and Miami via the Silver Star route (Jacksonville to Miami) with two stops at the downtown passenger terminal on Lake Mirror during the midday and afternoon hours. Passengers stopping at Lakeland’s train depot can also use AMTRAK’s motorcoach Orlando-Lakeland-Tampa service to access the Silver Meteor service. It is possible that AMTRAK could operate more frequent regularly-scheduled intercity passenger rail service between Orlando and Tampa; however, AMTRAK must be invited to do so by FDOT with appropriate agreements executed between FDOT, AMTRAK and CSX as the track’s owner.

## HIGH-SPEED RAIL

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Central Florida has been waiting for the arrival of a dynamic, high-tech transportation system in the form of high speed train travel since it was first discussed in 1982. The objective was a system which would safely and swiftly link the major population centers of Hillsborough/Pinellas, Orange and Dade counties, with Polk County having a stop at least in Lakeland.

High Speed has been identified as those systems employing trains capable of running at speeds in excess of 120 mph. Speed is not the only factor qualifying the system as "High Speed Rail." The key issue is to provide a competitive trip, both in comfort, convenience and time for comparable journeys between origination and destination points as compared with other travel modes including automobile and airline.

In April 1982, Executive Order 82-34 was issued by Governor Bob Graham creating the Florida High Speed Rail Committee, followed in the 1984 session of the Florida Legislature by a law creating the Florida High Speed Rail Transportation Commission. The High Speed Rail Transportation Commission Act was signed into law by Governor Bob Graham June 14, 1984. This Act is considered a landmark law not duplicated elsewhere in the United States. The act empowered the Governor to appoint a commission to award a franchise for the development, construction, maintenance and operation of a high speed rail system. The FDOT began work with consultants for a master plan for Interstate 4 to an ultimate of ten lanes, four lanes each direction plus high occupancy vehicle lanes and a corridor for high speed rail within the median. This plan required DOT to reconstruct all interchanges/bridges appropriately for high speed rail in the median area.

However, in January 1999, Governor Bush terminated the second attempt by the private sector (Florida Overland Express) to successfully implement proposals made to the Commission. Funds for the project were disbursed for highway projects, specifically the six-laning of Interstate 4 through Polk County.

In 2000, voters approved a State Constitutional Amendment requiring the start of construction on a statewide high-speed rail system by 2003. As the Project Development and Environment (PD&E) Study and Federal Environmental Impact Statements (FEIS) were nearing completion, voters approved the repeal of this Constitutional Amendment in 2004. The PD&E Study and FEIS documents were completed in 2005. During the PD&E Study and FEIS development processes, the Lakeland City Commission formally selected a station site near the Kathleen Road/Interstate 4 interchange as its top priority through Resolution #4313, adopted on October 20, 2003.

On April 17, 2009, President Barack Obama unveiled his "Vision for High-Speed Rail in America", which included a Florida Corridor connecting Tampa-Orlando-Miami as one of ten new corridors and hubs that would be the focus of an initial Federal investment of \$8 billion with \$1 billion/year in additional funding being appropriated annually for a five year period. The State of Florida submitted a \$2.6 billion request for the implementation of the Tampa-

Orlando segment and the necessary Federal planning analyses for the Orlando-Miami corridor. This funding request also included operational and maintenance costs for 16 daily round trips between Downtown Tampa and Orlando International Airport, with intermediate stops in Lakeland, Walt Disney World and International Drive near the Orlando Convention Center. While in Tampa on January 28, 2010, President Obama awarded \$1.25 billion for the Tampa-Orlando corridor within the median of Interstate 4 and Beachline Expressway. It is anticipated that service will begin within the Tampa-Orlando corridor by January 2015.

## **COMMUTER RAIL SERVICE**

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The City of Lakeland was a member of the Tampa Bay Commuter Rail Authority (TBCRA), a multi-county coordinated effort to bring commuter rail services to the cities and unincorporated areas of Tampa Bay. The TBCRA received federal funding to analyze the need for commuter rail in the corridor from Pinellas County to Lakeland in Polk County with Tampa as the “hub” of a potential system. The two aspects funded for study and recommended for system feasibility analysis were a light rail system for Hillsborough County and a commuter rail line on existing CSX tracks from Tampa, via Plant City, to downtown Lakeland.

The proposed commuter line would provide service from Union Station in Tampa to the downtown Lakeland terminal. Startup date for this service was proposed in 2010, with limited service. The full operation of the system was projected for 2015. Commuter rail service was never implemented through the TBCRA.

The City of Lakeland and Polk County also participated in a planning analysis managed by the Tampa/Hillsborough County MPO and HARTLINE, the mass transit provider in Hillsborough County, to produce and implement an “Alternatives for Mobility Enhancement Major Investment Study” (MIS). This study was designed to determine the feasibility and need for modes of future transportation including a “light” rail system (transit fixed guideway) to accommodate commuter traffic in the study region, including between Tampa and Lakeland.

The study generally began on the west at Oldsmar in Pinellas County and extended east through Tampa to Lakeland in Polk County. The collection of base data for the mobility study included input of data from local governments in the study area, as well as input from relevant MPOs, environmental agencies, private sector groups and citizens. The electric streetcar constructed between Ybor City and the Tampa Convention Center was envisioned to be the first phase of a passenger rail network within the Tampa Bay Area. The City of Tampa, HARTLine, Hillsborough County, the Tampa Bay Regional Transportation Authority (TBARTA) and FDOT are developing a coordinated plan for a light-rail system connecting the University of South Florida with the Westshore Business District via the Downtown Tampa High-Speed Rail Terminal (Marion Street near I-275) to provide premium transit connections on the west end of the new Tampa-Orlando High-Speed Rail corridor.

## OTHER STATE AND REGIONAL PASSENGER RAIL PLANNING STUDIES

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A number of other statewide and regional rail planning initiatives were undertaken between 2000-2010, including the Central Florida Technology Transit Corridor Consortium's *Coast-to-Coast Rail Study* between the Tampa Bay area and Port Canaveral and the *Florida Intercity Passenger Rail Vision Plan*, last updated in 2006. The 2006 Vision Plan outlines the steps toward implementing passenger rail service throughout Florida via an "Inland" or "Coastal" route with initial service to Lakeland via the CSX rail line or feeder bus service and long-term rail service via Interstate 4 and a station near the Kathleen Road/Interstate 4 interchange. The 2006 Vision Plan anticipated a system providing 10 million trips/annually with major corridors being served with 8-12 daily trips in each direction at fares that are 60%-70% of comparable airfares. The Tampa Bay-Central Florida intercity travel market had the greatest quantified demand with an estimated 14.2 million person trips in Year 2000, increasing to 48.1 million person trips by Year 2040.

## LOCAL RAIL

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The City constructed a new train station on Lake Mirror in downtown in 1997. The station was designed architecturally to complement the historic Lake Mirror promenade. Lakeland's train station is designed to serve AMTRAK service, and may serve as a future station for commuter rail. The City also received funding for a sidewalk connection it constructed between the AMTRAK station and Citrus Connection terminal along the north side of the railroad tracks, to provide a direct connection between both intermodal facilities. The City also received grant funding through FDOT for a park-and-ride facility located beneath the In-Town Bypass, just east of the AMTRAK Station. The In-Town Bypass Park-and-Ride facility serves Bartow Express and Winter Haven Connector bus services operated by the Citrus Connection and was designed to be a future trailhead for the Fort Fraser Trail, once extended into Downtown Lakeland.

As part of its *2009 Rail Traffic Evaluation Study*, FDOT also prepared an extensive analysis that quantifies the market for intercity passenger rail service between Tampa and Orlando along Interstate 4 and the CSX "A" Line. The "Passenger Rail Options" analysis estimates the number of Year 2010 daily trips within the Tampa-Orlando corridor as follows:

- Tampa-Orlando: 71,951 daily trips
- Tampa-Lakeland: 49,211 daily trips
- Lakeland-Orlando: 19,123 daily trips

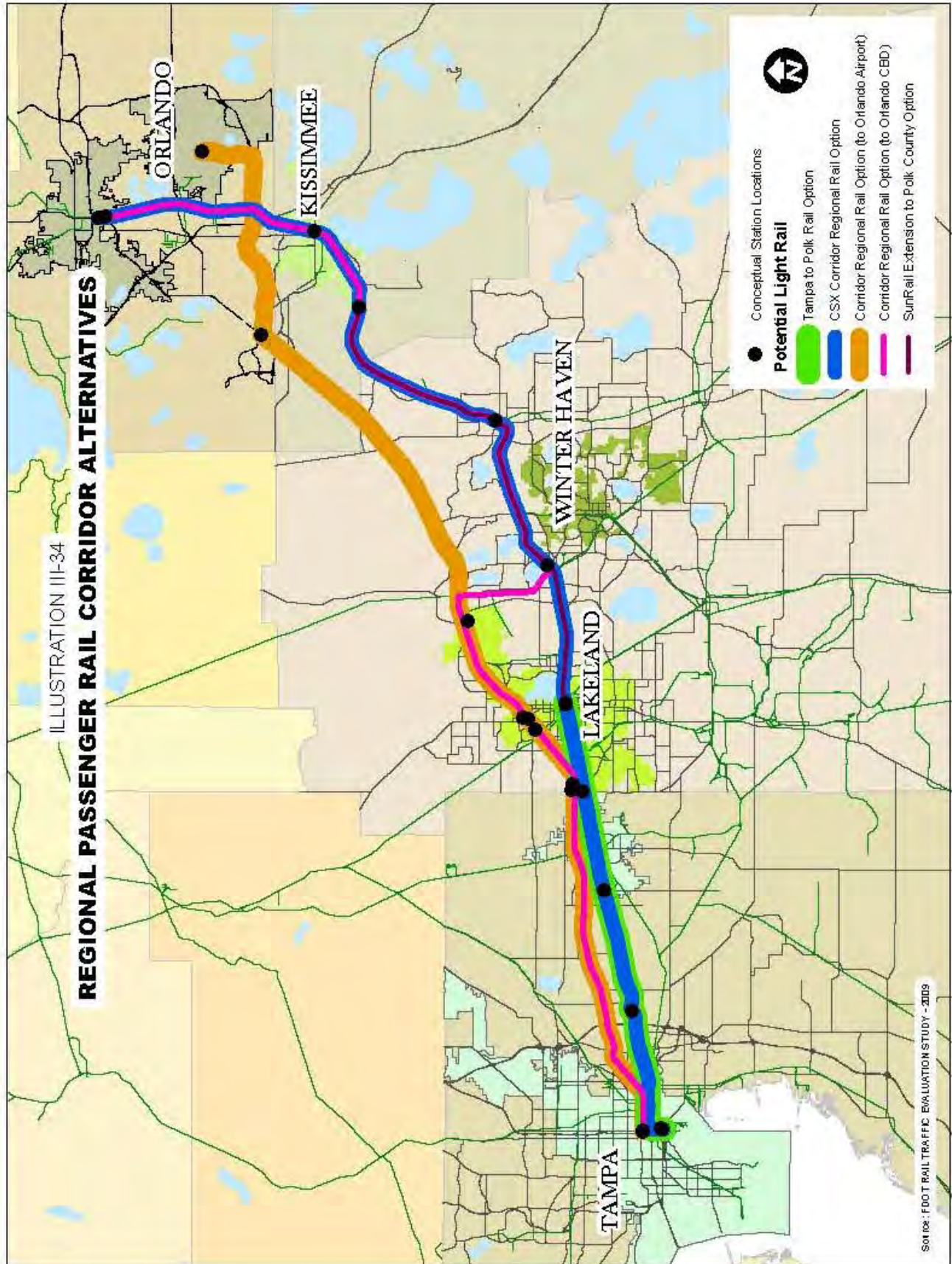
Year 2030 ridership estimates were prepared for the following services within the Interstate 4 and CSX "A" Line corridors (see Illustration III-34):

- Regional Rail
  - CSX Corridor (Downtown Tampa-Downtown Orlando)
    - *Stops: Downtown Tampa, Downtown Lakeland, Kissimmee, Downtown Orlando*

- *Frequencies: 1 ½ hours during peak; 2 ½ hours during off-peak*
- *Top Speed: 79 mph*
- Interstate 4 Corridor (Downtown Tampa-Orlando International Airport)
  - *Stops: Downtown Tampa, Lakeland/Kathleen Road, Polk/Osceola County Line and Orlando International Airport*
  - *Frequencies: 1 ½ hours during peak; 2 ½ hours during off-peak*
  - *Top Speed: 110 mph*
- Interstate 4 Corridor (Downtown Tampa-Downtown Orlando via I-4 west of Berkley Road and TECO Trail/CSX Corridor east to Orlando)
  - *Downtown Tampa, Lakeland/Kathleen Road, Kissimmee, Downtown Orlando*
  - *Frequencies: 1 ½ hours during peak; 2 ½ hours during off-peak*
  - *Top Speed: 110 mph*
- Commuter Rail
  - Tampa-Polk Rail (TBARTA Expansion to Downtown Lakeland via CSX “A” Line)
    - *Stops: Downtown Tampa, Mango, Plant City, County Line Road, Downtown Lakeland*
    - *Frequencies: 15 minutes during peak; 30 minutes during off-peak; 1 hour during late night operations.*
    - *Top Speed: 79 mph*
  - SunRail Extension (DeLand to Downtown Lakeland via CSX “A” Line)
    - *Stops along extension from Poinciana: Downtown Lakeland, Auburndale, Haines City*
    - *Frequencies: 15 minutes during peak; 30 minutes during off-peak; 1 hour during late night operations.*

The estimated ridership for the intercity rail services outlined above was determined to be comparable to similar “successful” operations throughout the United States.

The ridership figures by FDOT shown in Table III-25 rely on local transit connections to station locations within the study corridors. Regardless of funding availability for regional passenger rail service, it will be critical for local transit services operated through the Citrus Connection and Polk Transit Authority to be adequately funded to connect station areas with major employment, residential or other activity areas within the Lakeland area.



**TABLE III-25  
COMPARISON OF REGIONAL AND COMMUTER RAIL CORRIDORS**

COMPARABLE CORRIDORS	MILEAGE	TOTAL DAILY RIDERS (BOTH DIRECTIONS) - 2030
<b><i>Regional Rail</i></b>		
AMTRAK Hiawatha (Chicago-Milwaukee)	86	2,876
AMTRAK Capitols (Sacramento-Oakland)	90	4,461
AMTRAK Piedmont & Carolinian (Raleigh-Charlotte)	173	518
AMTRAK Keystone (Philadelphia-Harrisburg)	104	3,264
<b><i>Commuter Rail</i></b>		
SunRail (Proposed)	61	14,500
Kendall Corridor (Miami, Proposed)	9	3,800
Lackawanna Passenger Rail (Scranton-New York, Proposed)	133	7,040
Quakertown Passenger Rail (Philadelphia, Proposed)	20	4,011
NJ TRANSIT Atlantic City Line (Philadelphia-Atlantic City, 2008 Ridership)	60	3,500
<b><i>Study Passenger Rail Options</i></b>		
CSX Corridor Regional Rail Option	92	3,106
I-4 Corridor Regional Rail Option (to OIA)	86	3,086
I-4 Corridor Regional Rail Option (Downtowns via CSX)	93	3,204
Tampa-Polk Rail Option	31	3,732
SunRail Extension to Polk Option	37	2,130

**Source:** FDOT Rail Traffic Evaluation Study – Passenger Rail Options Technical Memorandum – 2009



## ISSUES AND OPPORTUNITIES

There are numerous issues which must be considered in assuring a safe and efficient multi-modal transportation system which meets the needs of the Lakeland Planning Area. The discussion below addresses the traffic circulation system, mass transit, rail, aviation, and non-motorized issues relevant to the Transportation Element.

### TRAFFIC CIRCULATION

As is true in every urbanized area in Florida, increased development tends to decrease the efficiency of the traffic circulation system. In fact, a 2010 analysis conducted by *Forbes Magazine* identified the nearby Tampa-St. Petersburg-Clearwater and Orlando-Kissimmee metropolitan areas as the worst and fourth-worst locations nationally for commuters based on factors such as urban sprawl and limited transportation options. Such notoriety can negatively affect economic development and employee recruitment in those metropolitan areas, but it may provide Lakeland with an opportunity to demonstrate that it can offer a more balanced transportation system than its regional neighbors.

The Lakeland Planning Area is expected to continue to experience steady growth over the planning period. The City must address an overall connectivity plan in order to effectively plan for all modes of transportation. Any connectivity plan will include key components that seek to provide a safe and efficient transportation system for the community to access. For Lakeland, these components will include the need to:

1. Improve connectivity of and access to roadway, transit (bus & rail), bicycle and sidewalk facilities and connectivity to meet local travel demands. Pursue significant roadway improvements that help reduce congestion and enhance the operational safety and carrying capacity of the network. Emphasize walkability of the community in all places but particularly in transit oriented corridors and the Central City TSA;
2. Support Lakeland Vision strategies for a well-connected, multi-modal transportation system with appropriate and coordinated land use planning. Promote shorter vehicular trips and reduced energy consumption by allowing proximate and complimentary land use mixes throughout the Central City Transit Supportive Area and Transit Oriented Corridors, within project sites where possible, and within the larger city context. Allow for densities and intensities that support economically feasible transit use (bus and rail), where applicable;
3. Cooperate and coordinate with county, regional and state transportation planning efforts in order to improve access and connectivity to multi-modal regional transportation systems and maximize the benefit of public investments in these systems. Ensure regional systems are sensitive to the local vision for the City's future growth and redevelopment;
4. Protect the public's investment in transportation infrastructure through access management and transportation demand management strategies and standards

intended to preserve the capacity and improve efficiency of the existing transportation system;

5. Support the implementation of the “complete street” typology by integrating transit, bicycle and pedestrian facilities into the overall transportation planning, funding, and implementation processes as executed through city, county, regional and state level work programs;
6. Support an efficient network for goods (freight) movement which will stimulate economic vitality and provide appropriate locations for intermodal transfer facilities; and,
7. Ensure a street network that discourages disruption to neighborhood stability and that responds to the demand for safe pedestrian and bicyclist movement.

Giving close attention to each of these issues will help to ensure the development of a full connectivity plan that responds to the needs and desires of Lakeland's residents and visitors.

## **TRANSPORTATION CONGESTION AND PLANNED ROADWAY IMPROVEMENTS**

Congestion occurs on the transportation system when there are more people trying to use the system during a specific period of time than the system can handle with acceptable levels of delay or inconvenience. Transportation system congestion is often a critical issue for urbanized areas. Some of the effects of congestion include impeded mobility and access, air pollution, wasted fuel, and numerous other negative impacts such as stress and time delays for residents and employees. Historically, traffic congestion was viewed as having only one response, the need to widen or build new roadways. This option has become an increasingly unaffordable option in times of limited transportation revenues at the national, state and local levels. Thus, new roadway projects, while still taking up to seven years to plan, design, acquire rights of way for and construct, also now may require multiple revenue source and leveraging. Access, operational and demand management techniques paired with physical improvements to the transportation system are strategies that can be used to alleviate congestion. However, urbanized cities will increasingly need to look toward access and improvements to alternative modes of transportation as a means of giving the public a choice in dealing with the realities of urban traffic congestion.

The Polk Transportation Planning Organization (TPO) developed a "Needs Plan" as part of the development of the Long Range Transportation Plan for 2030. The adopted plan funded approximately 60.5% percent of the cost of building all projects in the Needs Plan. Within the Lakeland Planning Area, the unfunded transportation deficiencies are primarily on State and County roads. The Florida Department of Transportation has targeted statewide transportation investments to roadway segments on the Strategic Intermodal System (SIS). SIS facilities are the highest tier of State roadways, airports, ports and railroads, representing facilities that carry 54% of Florida's total traffic, 68% of truck traffic, 99% of commercial air traffic and virtually all water and rail freight traffic. The 2030 Long-Range Transportation Plan's "Cost-Feasible" Plan was developed according to the State of

Florida's stated policy of allocating 62% of capacity funds to improvements on the SIS in FY 2009/10 and increasing that percentage to 75% by FY 2014/15.

In the last decade, SIS improvements in Polk County included improvements to six-lane Interstate 4 and US 27 (between SR 60 and Interstate 4). Lakeland area roadways that are designated SIS facilities include Interstate 4, SR 570 (Polk Parkway) and US 98 south of the Polk Parkway. Upcoming SIS projects in the Lakeland area include the improvement to six-lane US 98 between the Polk Parkway and Bartow, and a Florida Turnpike Enterprise project included a four-lane improvement to the eastern Polk Parkway, from Interstate 4 south to the new Pace Road interchange on the Parkway. However, no additional SIS road improvements have been identified by FDOT to be cost-feasible in the Lakeland area through Year 2035.

Another revenue option for roadway improvements has been transportation impact fees. The City of Lakeland adopted a transportation impact fee for State, County and City roads in January, 1988 and raised those fees in January, 1991. No fee increases were made for the next decade. Polk County substantially raised its transportation impact fees in 2000 and 2005; however, like many localities in the State, Polk County reduced their impact fees in 2009 given the economic recession. Over the last decade the County took an aggressive stand on funding road improvements for State and County roads, levying the maximum local option gas tax allowed by State law and implementing a 1 mill ad valorem tax to fund countywide transportation improvements. This allowed the County to pursue road improvement projects in the Lakeland Planning Area including widening of segments of Kathleen Road, Griffin Road, CR 540-A, Marcum Rd, and Lakeland Highlands Road.

Over the next twenty years, most of City-collected transportation impact fees could be spent on several projects including improving and extending key existing or future corridors. For example, new southern and northern extensions of Wabash Avenue are being planned to create an alternative north-south corridor that helps to relieve SR 563 (Harden Boulevard) and SR 37 (Florida Avenue). Other projects include extending existing east-west corridors such as Edgewood Drive and potentially Beacon Rd, and creating a new corridor between US 98 and North Socrum Loop via extensions to Crevasse Street and Lakeland Park Drive. City-collected impact fees will also be spent on County roads such as West Pipkin Road and State roads such as State Road 33 and US 92 (New Tampa Highway). Transportation impact fee credits will be allotted to private development that constructs new major roadway network connectors.

Even with City and County efforts to fund transportation improvements in the Lakeland Planning Area, the State and County road systems will continue to have unfunded deficiencies. However, funding is not the only issue. Even with unlimited funds, the number of necessary road improvements in the Lakeland Planning Area could not be constructed in the next five years. On an average, road improvements take from seven to ten years from point of preliminary planning through design and then completion of construction. Some of the County and the metro area needs are due to many years of growth in suburban

unincorporated areas that were approved with only two-lane roadway access; these roads were often former citrus grove routes that have substandard rights-of-way, and therefore the need for improvements and all of the costs of rights of way purchase added to design and construction simply could not be addressed within a five year-budgeting period.

Transportation congestion is often the result of demographic and market forces that are difficult to change. The first step is to examine how actions complement one another over the long run, and how these actions will influence future travel patterns.

A strategy for dealing with transportation congestion needs to contain several components. A program for transportation system improvements must provide cost effective system improvements that are consistent with overall comprehensive plan goals. These improvements can include physical expansion of the highway system, airport runways, bus routes, or sidewalk network, as well as operational changes to improve the performance of the existing transportation system.

In addition, a transportation demand management program must examine ways for managing transportation demand. This is especially important where the opportunity for expansion or operational improvements is limited. Long-term strategies should include coordination of proposed development and impacts of future land uses on travel patterns. The overall strategy must also examine the funding requirements necessary for implementation. In most cases, substantial funding will be necessary to deal effectively with congestion.

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### **CONNECTIVITY PLANNING – BEYOND ROAD IMPROVEMENTS**

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An analysis of the existing and future traffic circulation system indicates the several constrained and backlogged facilities that are, or are expected to be, operating at or below minimum levels of service within the planning period. Tables in the Summary of Findings section listed these segments for 2010, 2015 and 2020. These are segments which will be close to failing, or will fail, even with planned improvements as per the Adopted 2030 LRTP. The issue then becomes whether to limit new development within these areas to prevent future degradation of existing transportation facilities, or to allow lower levels of service on roadway segments within these areas while promoting use of alternative modes of transportation and encouraging urban density infill development, maximizing central city infrastructure and discouraging urban sprawl.

The 2009 Florida Legislature approved SB 360 which established Lakeland as a “Dense Urban Land Area” or DULA. This same legislation allowed the City to become a (citywide) Transportation Concurrency Exception Area (TCEA) in which traditional concurrency standards would no longer have to apply should the city decide it no longer wanted to apply such standards. The idea was to enable urban areas to shift public investment to alternative modes of transportation, where some congestion was inevitable and where road widening/improvements often conflicted with other sound planning objectives such as urban redevelopment, infill, walkability, complete streets, compact urban form and historic

preservation. The focus then could shift to building a community that is supportive of transit use and safe, comfortable and convenient pedestrian movements. Under the new legislation, State agencies would no longer review for level of service and transportation concurrency related issues when reviewing the Plan or amendments to the Plan, including impacts to State facilities. The legislation required a mobility plan to be composed and adopted within two years. Lakeland has been fortunate to have in place for many years now the essential components of a multi-modal transportation system. The connectivity planning discussed here is directed toward enhancing that system and includes a local preference for multi-modal level of service standards. These mobility strategies, once combined, can provide a network of choices for the pedestrian, bicyclists, and transit user.

**Access Management:** Along with the constrained and backlogged roadway segments in the urban core, there are a number of roadway links which provide system continuity between those currently failing links. These segments are typically operating at their minimum level of service, usually LOS D. In order to achieve the objective of increased transit dependence, these links must be considered the same as backlogged and constrained facilities. In order to support the urban infill objective of the Future Land Use Element and to approach the critical congestion factor required for transit and transportation demand management modes to succeed, some roadway congestion must occur. Good access management standards can, however, help prolong the capacity of roadways. In 2005, the LDRs were amended to include access management and site circulation regulations to preserve the efficiency of collector and arterial corridors within the City, as well as improve bicycle/pedestrian connections between commercial buildings and adjacent transit stops.

**Transit Use:** One way to increase roadway facility efficiencies is to increase use of/ridership on bus transit systems using the roads in order to decrease the number of individual automobile travel trips. The Lakeland Area Mass Transit System has existed since 1982 when area voters agreed to up to a half mill tax for transit services in the metro area. However, additional revenue sources will be needed to ensure the continued operation and growth of the Lakeland area transit system.

Once the results of the 2010 Census are released, the Lakeland Urbanized Area (and likely also the Winter Haven Area Transit service) is expected to surpass 200,000 in population, a threshold that requires the re-allocation of Federal operating funding to capital equipment. In order to address the expected operating funding shortfall and finance the establishment of one countywide transit system through the new Polk Transit Authority, in the fall of 2010 voters will be asked to approve the establishment of a half-percent sales tax for countywide transit services. Without this new funding stream, service frequencies throughout the Lakeland area are expected to double and some routes could be eliminated.

In addition to personal mobility and independence, there is much efficiency that can result as a consequence of increased use of a transit system. These efficiencies can include lengthening the life of roadway network capacities, reduced energy consumption, protection

of air quality, and reduction of right-of-way requirements that can divide neighborhoods and communities. These efficiencies can become very significant as a community matures and finds these issues more and more critical to the community's continued development and quality of life.

***Demand Management:*** Demand management is another strategy that can be employed along with transit services to help reduce traffic congestion, especially during peak hour times. The City of Lakeland works with the Polk County Transportation Planning Organization (TPO), Florida Department of Transportation (through its new Commuter Services program), the Citrus Connection and major employers or organizations of employers in the area regarding implementation of Transportation Demand Management (TDM) strategies. These concepts can include car or van pooling, flex time, commuter services, shower facilities and provision of additional bus shelters on key transit routes as well as at the location of new, major developments in order to encourage transit ridership. Implementation of TDM strategies assist the City in providing cost effective transportation improvements and delay or reduce the need for additional roadway construction.

***Land Use Strategies:*** Promotion of compact and contiguous land use patterns is another key element in controlling the cost and maximizing the effectiveness of the transportation system. By encouraging infilling of vacant parcels in developed areas and by limiting leapfrog and strip development in outlying areas, the City is better able to limit sprawl and maximize efficiencies in use of facilities and services necessary to support development and redevelopment. The Central City development intensity area is proposed for re-designation in this 2020 Plan as the “Central City Transit Supportive Area” or CCTSA, in which a high mix of proximate and complimentary land uses is sought. The CCTSA is the portion of the City in which there is a significant historical grid road network, a Lake-To-Lake Bike network, a fairly extensive sidewalk network, a passenger rail terminal, the main local bus terminal and the most frequent transit service. The City has designated “Transit Oriented Corridors” as a land use overlay in which a minimum density of 7 dwelling units per acre is established in order to help support transit use. Moreover, densities of up to 22 dwelling units/acre and 15 dwelling units/acre are allowed within  $\frac{1}{8}$  and  $\frac{1}{4}$  mile respectively of the transit corridors. The City is also pursuing new form based development regulations that will shift building orientation more toward the street rather than away from it, enhancing the walkability of street.

Application of transit friendly design principles in high density and/or mixed use development or redevelopment can also reduce the demand for new roads or transportation improvements by promoting internal trip capture and encouraging use of alternative travel modes such as walking and bicycling. A key component of these principles is the development or preservation of a street grid system that minimizes travel distances between the development and adjacent transportation corridors. This type of development must be incorporated within a comprehensive pedestrian and bicycle friendly circulation system in order to limit increased demand on the existing road network.

**Pathways Planning:** Since the 1990s the City has promoted its Lake-to-Lake Bikeway system, a mostly signed system in which users are encouraged to bike around the city's many lakes in Central Lakeland. The Lake to Lake network continues to have gaps that must be addressed in order to attain more complete connectivity to the lakes and recreation areas in the City and to area regional trail systems like Ft. Fraser Trail and the Van Fleet Trail. The City conducted intensive charette work with the public and stakeholders in 2007 in order to identify key bike/pedestrian pathways, gaps and new linkages. This project also sought to prioritize what improvements were needed in future funding of pathway enhancements. This element contains a map of those prioritized pathways which can be utilized in future capital planning.

**Parking Strategies:** Last but not least, various parking strategies can support improved utilization of available multi-modal systems in Lakeland. The City of Lakeland's Central Business District, within the CCTSA, contains the downtown and "medical corridor" employment centers; added to the west Lakeland industrial oriented employment centers, these two areas constitute the most significant employment centers within Polk County. In 2010, the City's *Land Development Regulations* (LDRs) were amended to introduce parking maximums and to reduce surface parking in commercial developments, providing parking space "credits" for projects that are located on existing and planned transit routes. The LDRs have also been amended to require bicycle parking facilities in most instances and provide greater automobile parking credits for projects with bicycle parking. In 2009 the City joined the Commuter Assistance Program offered by FDOT District One, to encourage bicyclist and driver ride sharing, promote transit use, and offer emergency ride home service to participants. This program uses a database to help pair participants interested in car pooling, van pooling or bike rider groups. One element of the program is to set aside preferred parking spaces in city garages and private sector surface parking lots for program participants.

## **COORDINATION WITH FUTURE LAND USE**

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The City of Lakeland is committed to infill development and redevelopment at densities which will ensure more efficient transportation choices in the future. To effectively utilize alternative modes of transportation to the individual automobile, certain circumstances must occur. To promote mass transit, ridesharing, transportation demand management techniques, bicycle and pedestrian travel, several key factors are required:

1. A critical density
2. Parking restrictions; and
3. Congestion on major routes.

The City has proposed a Future Land Use Map which designates the highest density development to occur in the Central Business District. This district is then surrounded by the Central City and urban development area, which contains two regional activity centers, several community and neighborhood activity centers, and high and medium density

residential uses. Beyond this urban development area most densities fall to medium and low density residential densities. This land use pattern is critical to achieving both a more efficient urban living environment within the City and to encouraging alternative modes of transportation, particularly transit.

Currently, the City of Lakeland allows a large area of the Central Business District to develop without providing on-site automobile parking for individual buildings and businesses. Fringe areas outside the CBD have lower parking space ratios than those located in the suburban fringe areas of the City. The City's *Land Development Regulations* place limits on the amount of automobile parking that can be provided in commercial sites outside of the CBD, requires bicycle parking in most instances and provides automobile parking credits for projects providing bicycle parking and those that are located on an existing or planned transit route. Studies have proven that if you continue to provide surface parking spaces adjacent to employment and business, you will not encourage transit use or make transportation demand alternatives attractive enough to support individual transit usage.

If roadway levels of service are the same for the suburban, the urban development, and the central business district areas of the City, the critical congestion factor will not be reached. Urban travelers must experience some delay in travel time in order to consider another mode of travel. Thus, the City of Lakeland must consider allowing some congestion within the Urban Development, Central City TSA and CBD areas of the City if alternative transportation modes are to be viable. This plan's multi-modal level of service standards are intended to achieve a better future balance of use between vehicular and non-vehicular and transit modes.

### **MULTIMODAL LEVELS OF SERVICE**

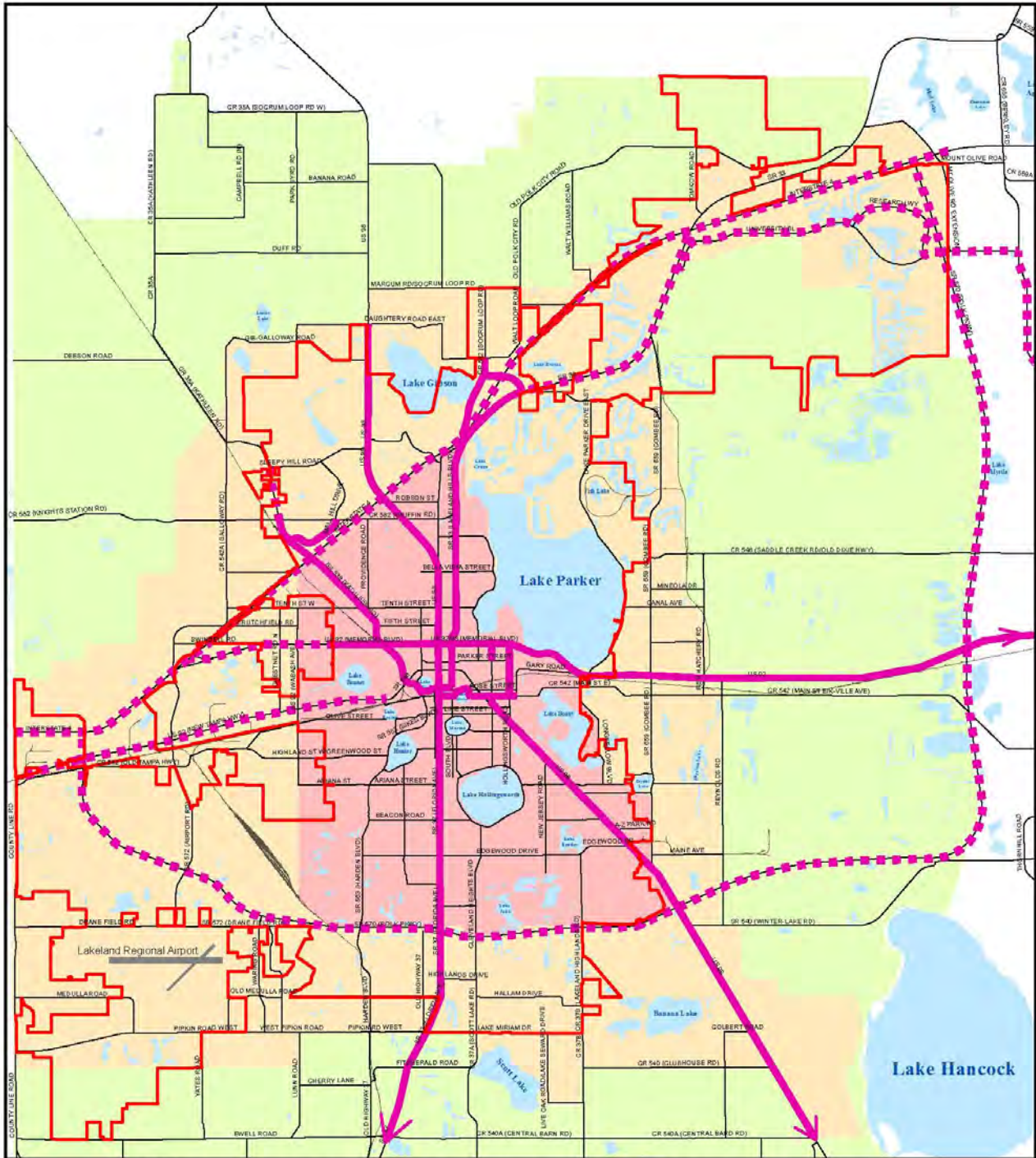
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During the development of the Polk County 2025 Long-Range Transportation Plan (adopted in 2000), the Polk TPO drafted a multi-modal approach to transportation level of service. After review and adoption by the TPO Board, this approach was urged for adoption by all major municipalities in the County in order to ensure that citizens and developers could count on a consistent level of service standard for transportation facilities regardless of which jurisdiction's regulations they were using or reviewing.

The multi-modal level of service standard seeks to recognize that in Polk County there are several areas where transit service is provided, usually with bicycle facilities on the buses and at transit stops, and that transit is connected to the sidewalk (or bike path) networks in the community. If the frequency of bus service is 30-minutes or less and an extensive sidewalk and bicycle path system are present, the multi-modal level of service (LOS) concept indicated that the roadway LOS could be lowered in an appropriate corresponding manner. The concept of multi-modal level of service standards is consistent with the statewide priority to reduce urban sprawl by allowing some additional roadway congestion as an incentive to develop or redevelop within urban centers where most required public services and facilities have been made available. This approach would then maximize the



public investment made into the development of those urban services and facilities. Lakeland has some areas with 30 minute transit service and an extensive sidewalk network and other areas with 60 minute service and fewer sidewalks. Illustration III-35 generally depicts where the multi-modal level of service standards found in policy 4A.1 of the Transportation Element Goals, Objectives, and Policies apply.



**LAKELAND AREA MULTI-MODAL LEVEL-OF-SERVICE STANDARDS**  
**ILLUSTRATION III-35**

- TCEA
- Central City Transit Supportive Area = LOS "E Average"
- Urban Development Area = LOS "E"
- Suburban Area = LOS "D"
- Transit Oriented Corridors - LOS is N.A.(Multi-Modal)
- Long Term Potential Transit Oriented Corridors

Ordinance # 5549  
 Adopted 12/21/15



Date: 7/29/2016  
 Source: Lakeland Community Development Department, 2010 and Renaissance Planning Group, 2007  
 Path: Z:\Comp\_Plan\Transportation\2015-16 MultiModal LOS\_15.mxd

## **CORRIDOR ACCESS MANAGEMENT**

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Significant amounts of money have traditionally been spent on providing additional highway capacity through the addition of lanes to roads. This strategy has proven to be increasingly costly and inconvenient for drivers. In recent years, more of an emphasis has been placed on allocating dollars to Transportation System Management (TSM) projects that focus on relatively low-cost operational improvements that can improve the overall efficiency of the highway network. Such improvements include intersection geometric improvements (e.g. addition of turn lanes) or the coordination of traffic signal timing along a corridor. Another tool that can be used to maintain and improve the operational efficiency of our transportation network is corridor access management. General access management techniques can include the coordination of driveways for joint access which in turn limit the number of median and curb cuts along a highway; corridor access management uses these strategies plus the development of parallel backage or frontage road systems to connect to the local and collector road network as an alternative to accessing a major roadway for short trips to adjacent land uses. While the US 98 Corridor is the only corridor to date with an official multi-jurisdictional agreement to address such access management requirements, other corridors being targeted for some level of formal agreement include County Line Road (I-4 to SR 60; Polk County, Plant City and Lakeland), West Pipkin Road (Polk County and Lakeland), West Memorial Boulevard (Polk County, Lakeland, FDOT), and US 92 East (Gary Road to Saddle Creek; Polk County, Lakeland and FDOT).

### **U.S. HIGHWAY 98 CORRIDOR ACCESS MANAGEMENT DISTRICT**

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U.S. Highway 98, also known as Bartow Road near Lakeland, is the only highway which provides a direct north-south link from Lakeland to Bartow, the County seat. U.S. 98 is an important freight and goods movement route on the Strategic Intermodal System (SIS) network since it links State Road 570 (Polk Parkway, which provides a limited access connection to Interstate 4) with State Road 60, the primary route between the Lakeland area and Florida's Turnpike to Southeast Florida. With the exception of the Highland City area, this corridor had been mostly undeveloped between Bartow and the Polk Parkway. By 2001, there were impending Bartow annexation and development/redevelopment activities underway along the corridor from State Road 60 on the south to CR 540-A on the north. North of CR 540 (Clubhouse Road), a major mixed-use development is being developed within the University Parkway/Banana Lake Selected Area Plan, just south and west of the Polk State College and University of South Florida (PSC/USF) joint campus. The recession has slowed some of the proposed development along the US 98 corridor but long-term development prospects remain significant. While Lakeland City limits as of 2010 did not extend to Winter Lake Road, the City's long-term annexation plan and water service territory do extend to this area. Also, the City has existing water/wastewater service lines in the Highland City area.

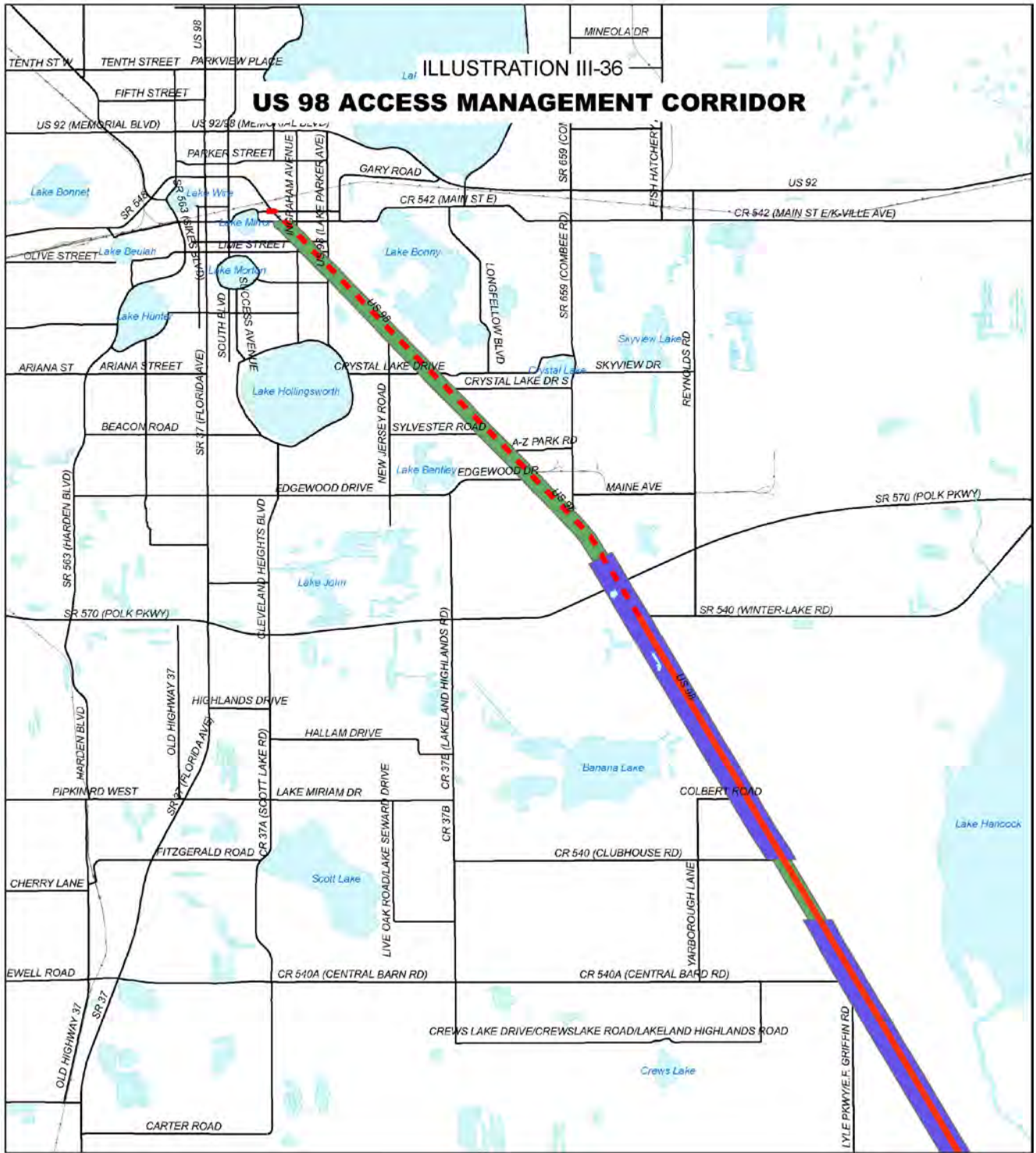
Given these facts, the TPO and City of Lakeland designated this portion of US 98 as a "Transportation Corridor" in the City's Comprehensive Plan, pursuant to Section 337.273, F.S., to provide a number of options to help the City and FDOT to respond to emerging

transportation issues within the corridor by coordinating transportation and land use decisions. One such provision of the applicable statute acknowledges that the “advance acquisition of property to manage land uses in transportation corridors for future use will, of necessity, require acquisition without design plans and profiles, project development, and construction information.” In 2004, the FDOT formally adopted a “Corridor Access Management Plan (CAMP)” for US 98 south of the Polk Parkway, (see Illustration III-36) based on an interlocal agreement executed between the City of Lakeland, City of Bartow, Polk County and the Polk TPO. Through the CAMP, service roads and cross-access provision were required of new development activity, and new crossings of the former CSX rail line, now the Fort Fraser Trail, were prohibited. Many of the median and driveway modifications contained in the CAMP will be implemented as improvements are made to US 98 over time and as new development occurs along the US 98 corridor.

Not only can the implementation of access management measures protect the capacity and function of US 98 for future vehicular travel, they also benefit transit operations, future design for and use of bicycle facilities within the corridor, and will help manage the aesthetics of the gateways to both Lakeland and Bartow found along this corridor.

The Citrus Connection operates its “Bartow Express” fixed-route bus service along the 13-mile US 98 corridor between the In-Town Bypass Park-and-Ride facility in downtown Lakeland and the Polk County Courthouse/Administration Building in Bartow. Maintaining the efficient operation of U.S. 98 will enable the Bartow Express to minimize its run time; thereby maintaining the existing coordination with other transit routes and operations in Polk County such as the Lakeland-Winter Haven Connector Route and the transit services operated by the Polk County Board of County Commissioners. In 2010, the Florida Department of Transportation, City of Lakeland, Polk TPO and Citrus Connection will participate in a “Bus Rapid Transit Feasibility Study” aimed at defining the appropriate dedicated transit facility along US 98 that will enable buses to operate separately from other vehicular traffic. Options to be evaluated include the construction of a dedicated two-way busway adjacent to the Fort Fraser Trail or the construction of physically-separated travel lanes within the ultimate footprint of US 98.

The development pattern along and ultimate design of US 98 will have a direct impact on the 7.1 mile Fort Fraser multi-use trail/bike path that opened to traffic between Winter Lake Road and Bartow in 2006. The Fort Fraser Trail provides direct connections between Downtown Bartow, Highland City, the PSC/USF campus and Polk Nature Discovery Center on the north shore of Lake Hancock. Ultimately, the Fort Fraser Trail is key to recreational plans for each locality within the corridor and would connect to Lakeland’s Lake-to-Lake Bikeway/Greenway, Lake Mirror Promenade, Lake Bonny Park and to other regional trail systems. To minimize the number of motorized-vehicular crossings of the Trail, access management controls imposed prior to major subdividing of large land owner parcels is vital; such access controls were the subject of County proposed land development regulations in the Corridor but intergovernmental coordination and commitment to access management in this corridor will remain essential.



Source: Lakeland Community Development Department, 2010



- Area within 300' of Edge of Pavement
- Area within 500' of Edge of Pavement

- Fort Fraser Trail (existing)
- Fort Fraser Trail (proposed)



kcd\maps\esri\Comp\_Plan\trans\III-36 Hwy 98 Access Management.mxd

## MASS TRANSIT

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### ENHANCING RIDERSHIP

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Mass Transit refers to all forms of high-occupancy and shared-ride services. Within the Lakeland Planning Area, the primary mode of mass transit is a fixed route bus system providing service, generally on an hourly basis or half-hour basis. Buses are the most flexible form of transit since they can be rerouted or rescheduled quickly to meet changing ridership demand. From the City's standpoint, an important issue in providing mass transit for any area has been and will continue to be generating and maintaining an acceptable level of ridership. Transit ridership is typically enhanced by a scenario of medium to high land use densities, mixed land uses (residential and commercial), some limitations in available or convenient parking, and some roadway congestion on major transit routes.

Transit ridership is also impacted by the type of land uses approved. Land use affects the types of transit trips that are taken and the days of the week and times of the day of these trips. The City can support greater use of transit (i.e., an improved modal split between automobile use and transit use) if some roadway congestion is allowed to occur along transit service routes with frequent transit service (30 minutes or less) and if mixed land uses and medium residential densities are encouraged along transit routes. Also, new development must be required to incorporate transit friendly designs in their layout/site plans. Ensuring that downtown parking facilities are leased at market rates and accommodate the basic parking demand while not providing an overabundance of spaces is another strategy to encourage use of transit and any circulator/trolley service. Given that much of Lakeland's downtown area is already developed and that new parking structures are expensive to construct and would compete with many other City fiscal priorities, the parking situation is likely to continue to favor increased use of transit.

Implementation of responsible and proactive growth management policies can support transit as a more attractive alternative mode of transportation for Lakeland residents. A number of land use guidelines and ordinances which favor transit use include a range of zoning and development control measures such as planned unit developments, form based development codes, mixed-use incentives, sidewalk ordinances, traffic impact fees and development requirements. The City proposes in the 2020 Plan to designate Transit Oriented Corridors (TOCs) within the City which contain numerous commercial and other activity centers (see illustration in Future Land Use Element.) The Future Land Use Element identifies a minimum residential density within the TOCs as seven (7) dwelling units per gross acre, which is the minimum density proven in research to be needed to support financially sustainable transit services. The City will allow higher densities in the TOCs and encourage a higher mix of uses to allow for "attractors" of transit trips during various parts of the day. This helps sustain ridership beyond peak hour usage.

In addition, transit friendly design standards are crucial for ensuring the safety and feasibility of a transit stop location for riders e.g., not having to cross a sea of asphalt parking lot with uncontrolled vehicular movements, by having building fronts set close to and face the street,

or by providing a continuous and safe pedestrian-way from the transit stop to the doorway. Providing adequate bus shelters and transit amenities are being addressed through the Citrus Connection's Community Shelter Program with funding donations from the public. Bus shelters are also required through the City's development review process. The Polk TPO's Bus Stop Improvement Program renders a portion of the TPO's Federal funding allocation dedicated to bus stop improvements, improved sidewalk connections and other such "Congestion Management" strategies that support transit usage.

### **FUTURE TRANSIT SERVICES: A REGIONAL APPROACH**

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Transit service is included in the multi-modal public transportation strategy proposed in the Metro Lakeland Vision Plan (2020). The Vision Plan recognized the need for a transportation network which served greater Lakeland while maintaining the integrity of neighborhoods and the quality of environmental resources. The Metro Lakeland Vision document identified six priority issues: education, economic development, quality of life, infrastructure, government and private sector leadership. The report notes that the growing need for public transit is linked to these six issues.

In October 2000 and as part of the Polk County 2025 Long-Range Transportation Plan (LRTP) Update, the Polk County Transportation Planning Organization held a "Transit Summit", a half-day meeting of elected leaders, citizens and transit patrons, and agency staff members to discuss the future or potential of transit services in Polk County. From that event evolved a Countywide Transit Study that contained a strategic funding plan for transit services throughout Polk County and the establishment of a process of consolidating the three separate transit operators in place at that time into one countywide entity. This study also addressed steps to coordinate transit services within Polk County to adjacent counties and existing services operated by HARTLine. With the creation of the Tampa Bay Area Regional Transportation Authority in 2007, there are additional opportunities for transit connections to the entire Tampa Bay Area from Sarasota to Citrus Counties. In addition, LRTP recommended a standard measure for transit services throughout Polk County, including applicable municipalities; this standard is primarily based upon headway (frequency) on the route and rural versus urban area characteristics (see Table III-27, Categories of Transit Service). The geographic areas that each category of service were applied to are shown in Illustration III-37, Lakeland Area Transit Service. This standard for transit services is referenced in the Multi-Modal Transportation Level of Service Standards.

In 2007, the Florida Legislature created the Polk Transit Authority (PTA) to implement countywide transit services that would otherwise have to be coordinated among the three separate Citrus Connection, Winter Haven Area Transit and Polk County systems. Even though Polk County is a Charter County, it was unable to consider a Charter County Transportation Surtax until the Florida Legislature removed restrictions affecting Polk County during the 2009 Legislative Session. The PTA was established with no long-term funding source; therefore, a referendum is scheduled for November 2010 to give residents an opportunity to approve a new half-cent sales tax for transit services. If the sales tax were approved, the half-mill property tax currently being levied within the Lakeland Area

Mass Transit District boundaries for the Citrus Connection system would be replaced with the funds generated by the sales tax. Without the establishment of this dedicated countywide funding source, significant bus route and schedule reductions are expected due to federal rules that apply to operating funding for transit systems. The Census of 2010 is expected to confirm that the Lakeland Urbanized Area's population is over 200,000, the threshold beyond which all Federal operating funds must be allocated to only capital costs for transit systems in such populous areas. Thus, with up to half of its operating revenue cut, service reductions would be essential unless the Countywide sales tax or some alternative operational revenues were available. An example of service cuts might include making routes with 60-minute and 30-minute frequencies reduced to 120-minute and 60-minute frequencies, respectively. The 2005 countywide transit study evidenced demand for expanded hours of service on Saturday and initiation of Sunday service; contrary to such service enhancements, federal operating cuts could likely completely eliminate Saturday service without new operating revenues.

As discussed in the traffic circulation portion of this element, all modes of transportation are considered under the new level of service standards: roads, transit, sidewalks/pedestrian and, to some extent, bicycle use in that the buses have bike racks. These standards, again, would apply throughout the County and in most cities. The multimodal standard indicates that where alternative modes are readily available for transportation, a lower roadway level of service is permissible. This lower standard will occur only where there is a high frequency (30 minute headway) of transit and an existing sidewalk network available. For Lakeland, these alternative modes exist in the downtown and core city area along South Florida Avenue and adjoining streets, and along the medical corridor on Lakeland Hills Boulevard. The theory is that as roadway congestion occurs, alternative modes of transportation will become more attractive to potential users. This, along with appropriate land use densities, can act as a significant factor to support future transit ridership (along with higher fuel prices.) The City must continue to prioritize future sidewalk improvements to consider where there are links missing in the network along the 30-minute routes as another means of support for a multimodal approach to transportation level of service.



**TABLE III-26  
CATEGORIES OF TRANSIT SERVICE**

***FIXED-ROUTE TRANSIT SERVICES***

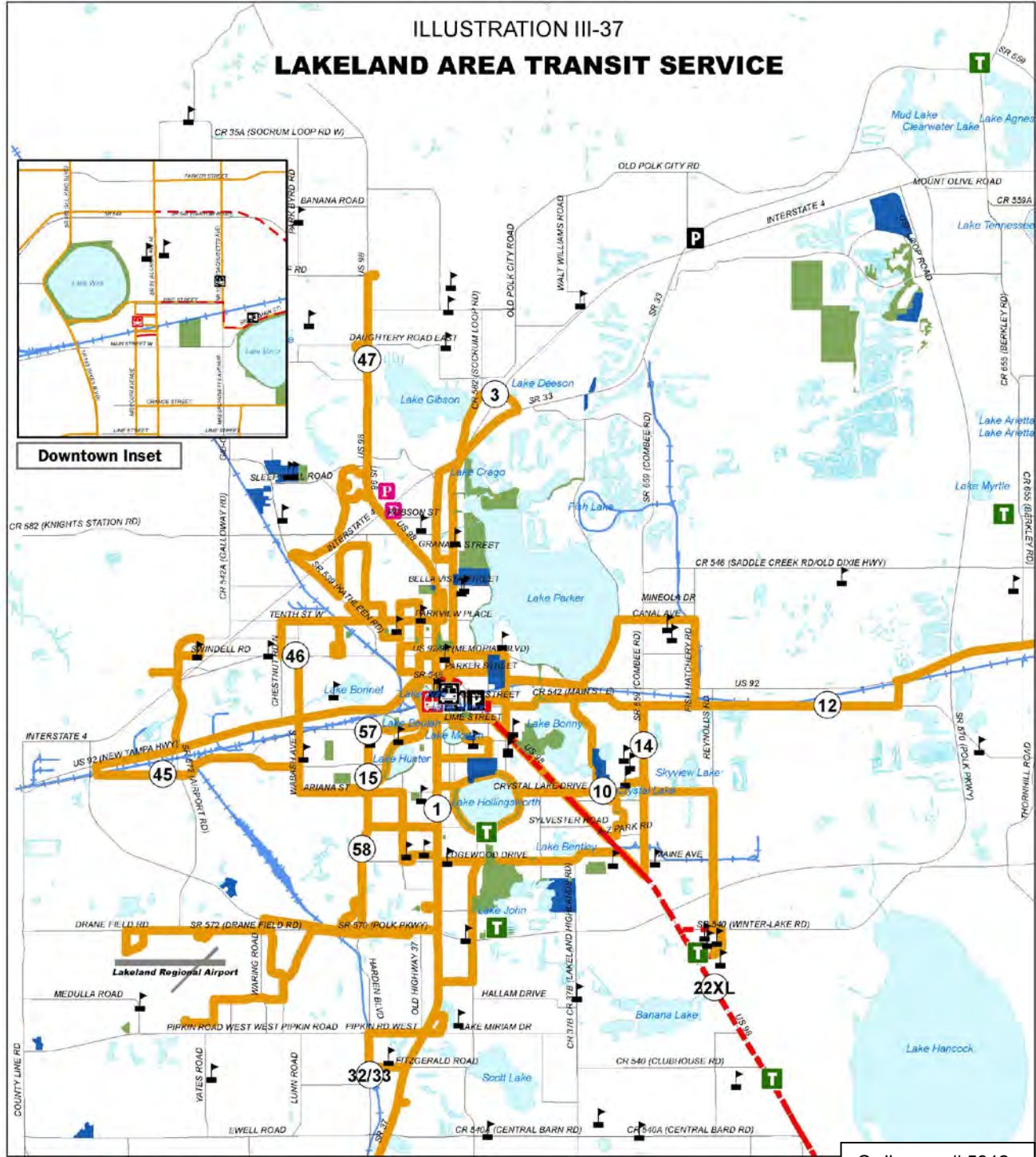
<b><i>CATEGORY</i></b>	<b><i>FREQUENCY OF SERVICE</i></b>	<b><i>GEOGRAPHIC COVERAGE</i></b>
I	Headway ≤ 30 Minutes	Fixed-route services operated within the urbanized areas and providing access to central business district and intense commercial corridors. Routes serve densely populated areas (densities typically greater than 2,000 persons/mile.) Emphasis placed on providing local circulation and land access.
II	30 Min < Headway ≤ 60 Min	Routes operated within urbanized areas with service to densely populated residential areas and outlying commercial districts.
III	Headway > 60 Minutes	Service to/through rural and small urban areas with connection to urbanized areas and transit services available therein. Emphasis placed on mobility and express service.

***DEMAND-RESPONSIVE (DOOR-TO-DOOR) TRANSIT SERVICES***

<b><i>CATEGORY</i></b>	<b><i>DESCRIPTION</i></b>	<b><i>SERVICES</i></b>
IV	ADA Complementary Paratransit Service	Door-to-door service provided to individuals residing within 3/4 mile of a fixed transit route who are unable to use the regular routed service. Level-of-service must be comparable that provided on fixed-route.
V	Other Demand-Responsive Services	Demand-responsive services provided countywide, with emphasis on service to the transportation disadvantaged. This category includes agency-sponsored and non-sponsored transportation services provided under the Coordinated Transportation System.

**Source:** Polk County TPO, Sept. 2000

# ILLUSTRATION III-37 LAKELAND AREA TRANSIT SERVICE



Source: Lakeland Community Development Department, 2012

Ordinance # 5312  
Adopted 05/21/12



- - - Express
- Fixed Route
- City Bus Terminal
- Regional Bus Terminal
- Amtrak Train Terminal
- Park & Ride Lot
- Committed Park & Ride Lot
- Multi-Use Trailhead
- Schools
- Recreational Land Use
- Public and Institutional Land Use



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## BICYCLES AND PEDESTRIANS

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Bicycle and pedestrian travel has seen significant increases over the past two decades. Relatively little consideration had traditionally been given to walking and bicycling as significant components of the transportation system in Florida. Bicycle and pedestrian safety continues to be a significant statewide challenge, particularly in its metropolitan areas. The “Transportation for America” non-profit policy group released its “Dangerous by Design” report listing of the most dangerous metropolitan areas for pedestrians, based on fatalities, metropolitan area population and percentage of commuters walking to work. The four worst national 2007/08 “Pedestrian Danger Indices” were found in Orlando-Kissimmee, Tampa - St. Petersburg - Clearwater, Miami - Fort Lauderdale - Pompano Beach and Jacksonville. The Lakeland-Winter Haven metropolitan area ranked as the sixth most dangerous area in Florida, which was ranked the most dangerous state, nationally. While social and other non-work related pedestrian trips were not factored into this analysis, it is clear that Florida and its municipalities must address pedestrian safety and establish the necessary programs, investments and planning policies to confront this problem.

In recent years, policy changes at the Federal, State and local levels have placed a greater amount of emphasis on developing the much-needed facilities to accommodate non-motorized travel. For example, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and its successors have required that ten percent (10%) of Federal Surface Transportation Program funding be set aside for such “enhancements” to the transportation system as sidewalks, bicycle paths and landscaping. Since the inception of the Transportation Enhancement Program, Lakeland has received \$3.8 million for bicycle/pedestrian improvements within the City. The Polk Transportation Planning Organization also allocates \$4 million of its Federal funding allocation to “Congestion Management” projects that include sidewalks, bicycle paths and transit facilities. An additional \$1 million/year has been allocated to regional trail projects throughout Polk County.

Sidewalks and bicycle lanes have become standard features on State, County and City arterial capacity improvements within the City. For example, the City and County road improvement projects on Sleepy Hill Road, Griffin Road and Lakeland Highlands Road (north of Polk Parkway) have included sidewalks and designated bicycle lanes within their design. Other projects on Lakeland Highlands Road south of the Polk Parkway, the Waring Road Extension and the University Boulevard will include sidewalks and bicycle lanes or bicycle paths. Buses operated by the Citrus Connection include bicycle racks for those who cannot reach the bus stop by automobile. “Type I” transit shelters installed within the City incorporate bicycle parking into the shelter pad design in the event that bicycle parking is not available on the busses at a particular time; in fact, the Citrus Connection transported approximately 44,000 bicycles in 2009. The City has programmed a number of sidewalk, traffic calming, and pedestrian crossing improvements as part of its capital improvement budgeting process, which are intended to improve its bicycle- and pedestrian-friendly environment. Examples of recent sidewalk projects include those installed by the City on Socrum Loop Road and Old Combee Road adjacent to Citrus Connection Route #52. The

City has also installed a sidewalk along both sides of SR 600 (George Jenkins Boulevard) with approximately \$500,000 in Federal funds allocated through FDOT. As City-maintained streets are resurfaced, bicycle lanes are added if the roadway width typically exceeds 30-feet. Bicycle lanes have been added on projects such as Lake Hunter Drive and East Lime Street.

In 2006, construction of the Fort Fraser Trail (Phase I) was completed between SR 540 (Winter Lake Road) and Bartow. In 2010, this premier multi-use trail was extended into the Polk County Nature Discovery Center on the shores of Lake Hancock. The Fort Fraser Trail includes trailhead facilities in Highland City and at the PSC/USF campus. The Highland City Trailhead was funded with FDOT Park-and-Ride Program grant funds and serves as a superstop for the Bartow Express route operated by the Citrus Connection. The City will continue to work with FDOT and the Polk TPO to extend the Fort Fraser Trail into Downtown Lakeland and to link it to the City's Lake-to-Lake Greenway/Bicycle Network. The City is also working to connect the Lake-to-Lake Bikeway network with the General Van Fleet State Trail via the Tenoroc State Reserve and the Williams Development of Regional Impact. University Boulevard constructed in 2010 with American Recovery and Reinvestment Act of 2009 (ARRA) funds includes a parallel 12-foot wide multi-use trail that will connect the Bridgewater DRI, Williams DRI and planned Florida Polytechnic University campus with the Van Fleet Trail and TECO-Auburndale Trails. The City must continue to pursue road improvement and resurfacing projects as opportunities to co-locate sidewalk, bike lane and/or regional trail facilities to achieve a truly multi-modal transportation system in the most cost-effective way possible.

Many of the four-lane undivided collector roads constructed on the periphery of Downtown Lakeland are being converted into two-lane streets with landscaped medians and bicycle lanes through the City's "road-diet" program. Such street conversions have occurred on Martin Luther King Avenue, Ingraham Avenue and Lake Wire Drive. Additional road diet projects are planned on Parker Street and East Main Street with funding from the Mid-Town CRA and the Federal Transportation Enhancement Program as prioritized by the Polk TPO.

The City's *Land Development Regulations* have been amended to require bicycle parking for most non-residential development, particularly those sites that are located on Lake-to-Lake Bikeway or other bicycle routes and existing/planned transit routes. Bicycle rack design and locational standards are included in the LDRs and City Engineering Standards Manual. Requirements for dedicated pedestrian connections between a commercial entryway and transit stop are contained within the Access Management and Site Circulation Standards section of the LDRs. The LDR Parking Regulations have also been amended to set maximum on-site automobile parking space standards and to provide credits for sites with bicycle parking or proximity to existing transit routes with frequencies of 30 minutes or less. Additional LDR amendments will be needed to address Transportation Demand Management (TDM) program requirements such as requirements for shower/changing room facilities in large employment center projects.

## RAIL

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CSX Rail Transport operates the freight rail system in the Lakeland Urban Area through Winston Yard. Freight service availability is a crucial factor to goods movement in the County and State. It is an alternative mode of moving bulk products and as such can help our area attract industry. As of 2010, the amount of goods being transported by rail is down due to current economic conditions. Additional freight traffic through Downtown Lakeland is expected with the re-routing of freight traffic from the Orlando area to accommodate the SunRail Commuter Rail project and additional traffic generated by the planned Integrated Logistics Center (ILC) in Winter Haven. As the Panama Canal widening project is completed and Port of Tampa and Port Manatee position themselves to take advantage of their proximity to the Canal, it is possible that additional trucks will utilize Interstate 4, SR 60 and US 98 through the Lakeland area to access the ILC. The City is concerned that the additional freight traffic through Lakeland will increase noise impacts on existing and future Downtown area residents and will preclude the ability for commuter or intercity rail service to operate on the CSX "A" Line between Tampa and Orlando through Lakeland. With the additional freight traffic that could be expected over the next 10-20 years, the safety and operations of existing at-grade rail crossings will also be an issue that must be addressed.

A number of passenger rail initiatives are underway in Central Florida that will have an impact on the regional and local transportation system. The Florida High-Speed Rail program that has received \$1.25 billion in Federal funding through the President's "Vision for High-Speed Rail in America" must be coordinated with the planned Tampa Bay Area Regional Transportation Authority (TBARTA), Central Florida SunRail and Polk Transit Authority networks.

The location of a Lakeland station for high speed rail (HSR) or commuter rail alternatives will be a key issue and must be guided by the system's technology, existing and short-term ridership projections and connectivity to existing and planned local transportation systems. Presuming that the high speed rail system is located along I-4, the Kathleen area exit has several sites in the vicinity with available land for a station location and has been included in previous environmental studies for the HSR system. An alternative rail station site location is within the Williams DRI. In any future rail system, consideration should be given to interconnections with the existing LAMTD bus system and the Amtrak passenger rail station on Lake Mirror and how these facilities can be connected to future rail systems. The City's downtown bus terminal, which has a pedestrian connector to the Amtrak station, should be linked to new rail station locations with premium transit service in order to optimize multi-modal connections. Future park and ride lots for users of intermodal connections to the transportation network, including any high speed rail system and supporting express bus service, are another concern. These issues require local input to ensure proper planning for integration of high speed rail or light/commuter rail proposals into the existing and planned transportation network in the Lakeland area as well as to assess land use and neighborhood implications. Station siting must address connectivity to these planned local and regional transportation networks to realize an efficient mass transportation network that

stimulates economic development and reduces the burden on cross-state highways such as Interstate 4.

While the light commuter and high speed rail projects receive widespread media attention, the effectiveness of the existing freight rail system should be noted. The CSX Winston Yard and local rail network operate daily with few actual operational problems. The on-site safety at Winston Yard includes few to no injuries at their on-site engine, car and other repair facilities over most of the last two decades. The company has a hazardous materials team in Jacksonville and could contract locally, if needed, for local emergency response to a rail incident. When hurricanes threaten, loaded rail cars are tied (or braked) down and rail traffic may be suspended by a decision of the Tampa Division of CSX. Overall, the system transports tons of bulk products important to our local economy on a daily basis with few operational problems.

Coordination between CSX and local and State agencies is frequently challenged to meet schedules in a timely manner. Common issues include co-locating other utilities in rail right-of-way, finalizing plans for rails-to-trails projects in abandoned corridors such as the extension of the Fort Fraser Trail into Downtown Lakeland, providing adequate cross-sections for bus rapid transit facilities along the US 98/Bartow Road corridor and providing new rail crossings for public access purposes. It is anticipated that coordination between the City and CSX will continue to be necessary on a regular basis.

## **HURRICANE AND EMERGENCY EVACUATION**

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When hurricanes threaten major population centers on Florida's east and west coasts, evacuees crowd major east-west and north-south corridors through Lakeland and Polk County seeking refuge in locations away from the storms' paths. The ability of the regional transportation system to accommodate traffic during these events is stretched to the limit. To provide additional highway capacity during States of Emergency, the Florida DOT has established a "contra-flow" policy for the Interstate and Turnpike system. During contra-flow operations, these limited-access expressways are converted to one-way facilities to accommodate traffic in the direction of the evacuation traffic flow – generally away from the coasts. Use of Interstate 4 for evacuation of coastal populations into Polk and "interior" counties requires substantial lead time to arrange effectively and could significantly impact traffic flows during that lead time. A benefit of a light or high speed rail system is the potential to utilize the system for hurricane evacuation, in addition to the regional road network.

Florida DOT and its Turnpike Enterprise have developed motorist advisory systems along the Interstate 4 and Polk Parkway corridors that include traffic cameras to monitor traffic from traffic management centers in Tampa (for facilities west of US 27) and Orlando (east of US 27) and dynamic message signs to inform motorists of incidents and alternate routes. With funding from Florida DOT, the City of Lakeland also operates traffic cameras throughout major arterial corridors in the City and monitors traffic flow from a traffic management system in Downtown Lakeland. In January 2008, a severe crash on Interstate

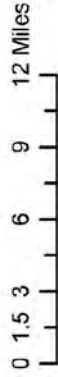
4 closed Interstate 4 in central Polk County for several days, highlighting the need to move traffic on arterial and collector routes that run parallel to Interstate 4 in Polk County. It is important that the City, Florida DOT and Turnpike Enterprise continue to coordinate connections between each agency's monitoring network, allowing signal timing and other operational adjustments to be made when expressway traffic is routed onto the City's arterial and collector system during natural and man-made disasters.

Illustration III-38 contains evacuation routes within the Lakeland area, as designated in the Polk County Local Mitigation Strategy Plan and the Florida Division of Emergency Management.

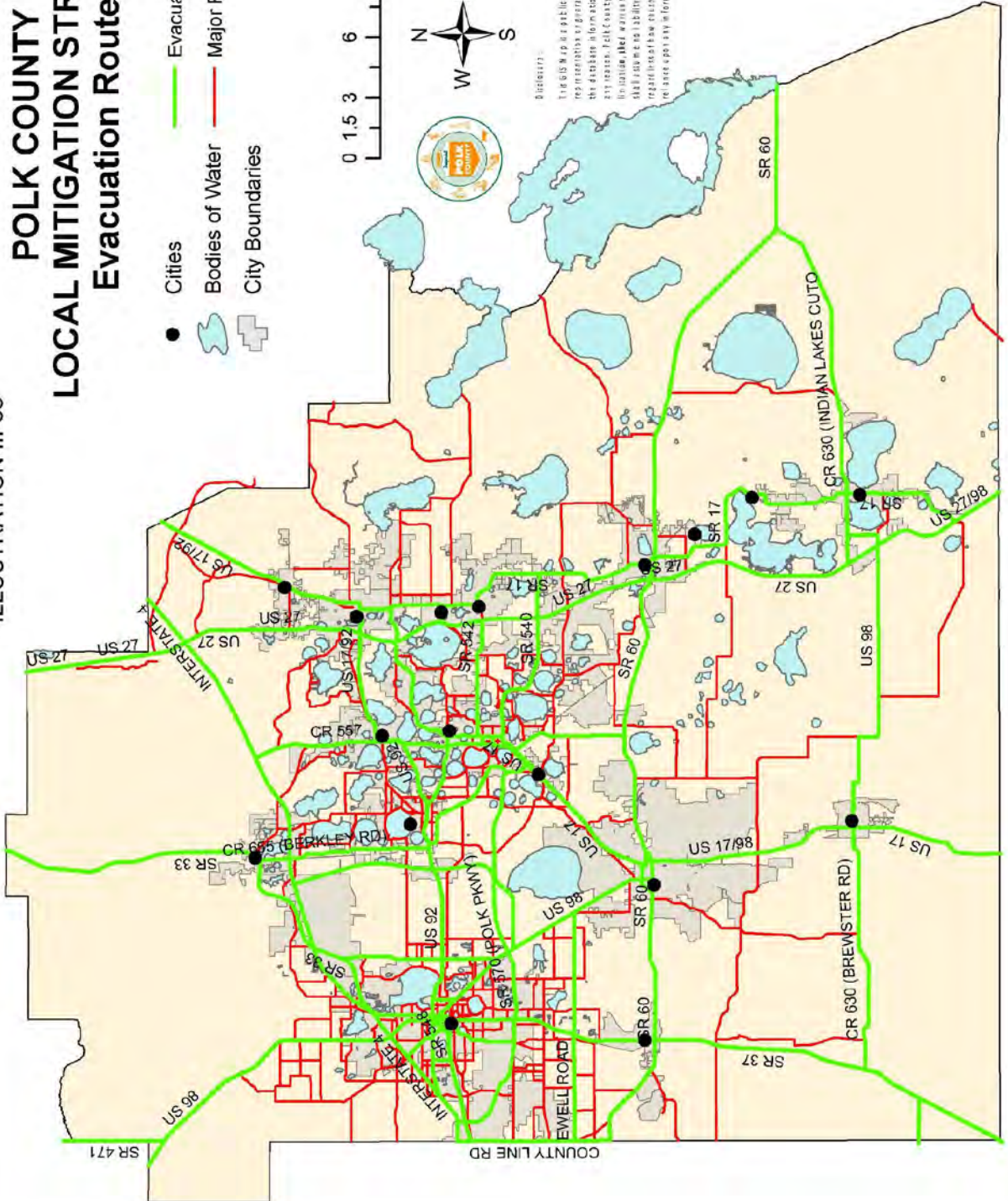
ILLUSTRATION III-38

# POLK COUNTY LOCAL MITIGATION STRATEGY Evacuation Routes

- Cities
- Bodies of Water
- City Boundaries
- Evacuation Route
- Major Road Network



**Disclaimer:**  
The US DOT is a public source of geographic information. The information is provided as a service to the public and is not intended to be used for any purpose other than that for which it was provided. The information is provided as a service to the public and is not intended to be used for any purpose other than that for which it was provided. The information is provided as a service to the public and is not intended to be used for any purpose other than that for which it was provided.





## AVIATION

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The Lakeland Linder Regional Airport currently functions as a full service general aviation facility and is designated as a reliever airport for Tampa and Orlando International Airports. The primary issue is to ensure that the *Lakeland Comprehensive Plan* promotes implementation of the Lakeland Linder Regional Airport Master Plan. The City's Future Land Use Map and intergovernmental coordination with Polk County are two mechanisms available to help ensure long-term protection of this public facility from incompatible land uses. Where lands are not already developed residentially, careful consideration of future uses must be made with the understanding that non-residential uses are normally more compatible uses for an airport. Acquisition of surrounding properties is another local tool used to protect the future needs of the airport. Avigation agreements with proximate new residential developments can address protecting future airport activity from adverse land use compatibility concerns. The City's continued participation on the JAZB (Joint Airport Zoning Board) is also important. Encouraging non-residential land uses such as office, research, light industrial and limited commercial and retail uses appropriate to the Polk Parkway interchange areas and the airport can help protect the significant public investment made to the Airport.

The Lakeland Linder Regional Airport Master Plan, a comprehensive document, addresses identified issues concerning the existing aviation facility and proposed facility expansions. Implementation of the existing master plan will result in the provision of adequate aviation facilities to meet projected demand. The new 27,260 square foot terminal building completed in 2002 tripled the facility capacity for airport users.

Protection and enhancement of the future of the Lakeland Linder Regional Airport is an issue which impacts the local economy. The Airport's activity impacts the local economy and attracts growth; likewise, the Airport in turn is impacted by the local business climate. The Lakeland Linder Regional Airport flight activity substantially increases on a daily basis during the annual seven days of "Sun 'n Fun," a fly-in event for the Experimental Aircraft Association, attracting pilots from all over the nation and the world. Approximately 20,000 take-offs and landings associated with Sun 'n Fun during the weeklong event, which is expected to draw 150,000-170,000 visitors in 2010 and infuse \$27 - \$31 million into the local economy.

Since SR 570 (Polk Parkway) opened, the land uses near the airport have continued to gravitate toward non-residential uses such as warehousing, industrial and office uses. The new Publix Corporate Headquarters complex immediately adjacent to the Airport has increased corporate-related flight activity to this facility. Proximity to the Polk Parkway and hotel development in western Lakeland has also enhanced the Airport as an alternative mode of transportation for business travelers. Even with the development of the Integrated Logistics Center (ILC) in Winter Haven, substantial employment growth is expected around the Airport due to the amount and quality of transportation infrastructure investments that provide efficient access to Central Florida markets, including Tampa Bay and Orlando.

As major office and warehouse/industrial employers such as GEICO Direct, Publix and Rooms to Go gravitate toward west Lakeland and the Airport, the City, County and FDOT continue to take steps to secure grant and other funding sources to implement roadway access improvements to the Airport. These access improvements have been particularly focused on the south side of the Airport and include providing improved connections to the Airside Center.

Past and planned airport access improvements include:

- Extension and four-laning of County Line Road between Interstate 4 and State Road 60;
- Four-lane extension of West Pipkin Road, Medulla Road to County Line Road (this provided an alternative to the circuitous and highly curved route that Medulla Road offered to drivers trying to get to County Line Rd);
- Extension of the 4-lane improvement to West Pipkin Rd. Polk County has completed the design of a four-lane improvement on West Pipkin Road between Medulla Road and Old Highway 37 with future funding for ROW.
- Waring Road Extension, Medulla to West Pipkin Rd. In 2009 the City began the construction phase of the Waring Road Extension between Old Medulla Road and West Pipkin Road to eliminate a substandard and circuitous route to GEICO Direct's regional headquarters.
- Parkway Corporate Center's re-alignment and extension of South Pipkin Rd. A new collector road system was required as part of the Parkway Corporate Center business park project to provide improved connections between Waring Road, Drane Field Road and South Pipkin Road, improving the area's roadway grid to preserve existing and future roadway capacity.
- Future new collector roads connections to the existing street system near the Airport. The Lakeland Central Park DRI is being required to include a four-lane spine road between Airport Road and Old Tampa Highway, in addition to four-laning Airport Road along its project frontage. Adjacent development on the east side of Airport Road will be required to complete the collector road connection to North Parkway Frontage Road, relieving SR 572 (Drane Field Road) near the Airport.
- Other: future widening projects on SR 572 (Airport Road) and improvements to the Drane Field Road/Waring Road intersection will help improve ingress and egress from the Airport and surrounding employment centers. Once road improvements are made in the west Lakeland area, it will be important to control and require coordinated access on these facilities to preserve the capacity and investments that have been made by the public and private sectors.

In 2009, the Citrus Connection provided peak-hour fixed-route transit service to the Airport's terminal area and Airside Center via Route #57. As business activity continues to grow in southwest Lakeland, transit will play a greater role in relieving congestion on Airport access

routes, providing additional travel options between the Airport and nearby employment centers, and improving connectivity to the rest of the Lakeland area for Airport patrons that do not have immediate access to an automobile.

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## GOAL, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to the transportation system. It should be noted that the word "transportation" refers to motorized and non-motorized modes of getting from one location to another. For purposes of definition, goals are generalized statements of a desired end state toward which objectives and policies are directed. Objectives provide the attainable and measurable ends toward which specific efforts are directed. Policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Transportation Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this plan.

**GOAL:** To provide a safe, efficient, financially feasible, multi-modal transportation system which is responsive to community needs, is consistent with future land use policies, is environmentally sound, and fosters economic vitality.

**Objective 1:** By 2020, maintain the current total number of crashes thereby reducing the number of crashes per vehicle miles traveled.

**Policy 1A:** The City of Lakeland will monitor all crash records on a yearly basis to determine accident patterns and high accident locations.

**Policy 1B:** The City of Lakeland will continue to incorporate optimum traffic safety standards in revised land development regulations.

**Policy 1C:** The City of Lakeland will continue to implement a pavement maintenance system which allows all City collector roads to be maintained at the minimum pavement rating.

**Policy 1D:** The City of Lakeland will continue to coordinate and implement safety projects for all transportation modes through its City Traffic Safety Team and participate in the Polk County Community Traffic Safety Team. Special emphasis will be placed on addressing safety problems at high-crash intersections and corridors.

**Objective 2:** The City will utilize access management standards, traffic signal management and related activities to measurably increase the operating efficiency of the roadway system within the City of Lakeland.

**Policy.2A:** The City of Lakeland will continue to evaluate timing sequences on all arterials and work with the Florida DOT to implement optimum phasing at all signals on these arterials.

**Policy.2B:** The City of Lakeland will work with the Florida DOT to ensure that railroad crossing safety and operational improvements are implemented as recommended in FDOT's 2009 *Rail Traffic Evaluation Study*.

**Policy.2C:** The City of Lakeland's citywide access management and site circulation standards shall be applicable to all public arterial and collector roadways in the City and shall be implemented in coordination with the Florida DOT and the Polk TPO. These standards shall also apply to any private roadway that is a component of the arterial and collector network.

**Policy.2D:** The City of Lakeland will continue coordination with the Florida DOT and Polk County to ensure that all transportation system management (signalization, turn lane improvements, etc.) and widening projects within Lakeland are designed to operate at maximum efficiency.

**Policy.2E:** The City of Lakeland will coordinate with the Polk TPO, Polk County, and the Florida DOT to implement roadway cross-sections for each appropriate Roadway Typology as part of the long- and short-range transportation planning and project production processes.

**Policy.2F:** In conjunction with the City of Lakeland's designation of US 98 (Bartow Road) from East Main Street to its southern corporate limits as a "Transportation Corridor" pursuant to Section 337.273 F.S. and Resolution 4345 endorsing the Corridor Access Management Plan (CAMP) for US 98 as adopted by Florida DOT District One in July 2004, the City will use the CAMP in the review of all new and redevelopment proposals for properties located within the City's portion of the US 98 Corridor. Development proposals shall be reviewed for conformity with the CAMP and related City land development regulations, including opportunities to close substandard driveways and opportunities to promote shared or joint access.

**Policy.2G:** The City of Lakeland will coordinate efforts with the Florida DOT and Polk TPO to integrate Intelligent Transportation System (ITS) measures into the Lakeland Regional Advanced Transportation Management System (LRATMS) that are coordinated and consistent with regional traffic management systems installed on Interstate 4 and SR 570 (Polk Parkway). The City will work with FDOT to establish connection points to the Interstate 4 and SR 570 monitoring networks to manage regional traffic flow on the arterial street system in the event a man-made or natural disaster requires partial or full closure of Interstate 4 and SR 570.

**Policy.2H:** The City of Lakeland will work with the Florida DOT and its Turnpike Enterprise to develop access management policies/strategies appropriate to interchange areas located within the City, including for SR 570 (Polk Parkway). At minimum, all development driveways must comply with the standards contained in the City *Land Development Regulations*. The City will also consider the use of the “Interchange Activity Center” future land use designation for areas adjacent to existing and new interchange areas.

**Policy.2I:** Access management techniques such as cross-connections, service roads and/or improvements to parallel corridors with lower classification will be required for new development or re-development activities in roadway corridors with Type I roadway typology in order to minimize or eliminate driveway connections that are unnecessary for reasonable property access.

**Objective 3:** Upon plan adoption, any project requiring a development approval will comply with the Transportation Element and adopted levels of service within this plan.

**Policy.3A:** The City of Lakeland will continue to collect and expend transportation impact fees or mobility fees to ensure new development provides funding to maintain acceptable levels of service. Approximately every three years or as per the provisions of the relevant impact fee ordinance, the City will commence a study of its transportation impact fees to determine if any adjustments are necessary.

**Policy.3B:** The City of Lakeland will review development proposals including those related to Developments of Regional Impact, rezoning and variance requests, subdivision plats, and any project requiring site plan review for conformance with the Transportation Element.

**Policy.3C:** In conjunction with access management and site circulation standards adopted in the City *Land Development Regulations*, the City will require safe and efficient accommodation of bicyclists (including bicycle parking), pedestrians and transit patrons, within applicable commercial, office, and multi-family developments.

**Objective 4:** Per Florida Statutes, as amended, the City declares itself a Transportation Concurrency Exception Area, or TCEA (i.e., citywide) in which State required highway standards are no longer applicable. Within the City’s legislatively allowed Transportation Concurrency Exception Area the City desires to provide a locally preferred and acceptable level of service standard for roadways and multi-modal components of the transportation system, as detailed in the policies below. As a TCEA, the City chooses not to enforce roadway concurrency standards within the Transit Oriented Corridor Overlay as long as other multi-modal facilities and services are sufficiently provided as per policies below, and the volume to capacity (v/c) ratio as set forth in Policy 4A.6 is not exceeded. The standards consider the existing and proposed multi-modal transportation network and the cost feasible



Phase I components of the adopted Polk County Long Range Transportation Plan (see Illustration III-9 of this element).

**Policy 4A.1:** Upon plan adoption, the City of Lakeland will use the following multi-modal transportation level of service standards in reviewing the impacts of new development and redevelopment upon facilities. The 2009 Florida Legislature approved the Community Renewal Act (more commonly known as “Senate Bill 360”); this same legislation provided for and 2010 legislation re-affirmed Lakeland’s ability to declare a citywide Transportation Concurrency Exception Area (TCEA) in which traditional concurrency standards would no longer apply should the City decide it no longer wanted to apply such standards and instead adopt a connectivity plan containing alternative measures and standards to meet future travel demand in lieu of primarily traditional roadway widening projects. The City of Lakeland’s Connectivity Plan is focused upon what transportation projects are planned and funded and therefore the Connectivity Plan is contained in the City’s Capital Improvements Element; however, we note here the Connectivity Plan includes the following strategies:

- Continued annual City funding for sidewalk improvements (see adopted City 5 year CIP);
- Continued annual City funding (including CRA funding) for brick street program, re-paving maintenance program and where economically feasible, incorporation of striping to add bike lane demarcation, and/or to enhance pedestrian crossings and other multi-modal improvements;
- Continued funding of City roadway inventory maintenance updates to enhance the City’s inventory of complete streets by identifying the extent of gaps for pedestrian and bicycle pathways and targeting opportunities to address enhanced connectivity in all roadway maintenance projects;
- Continued requirements for new or re-development to fund and implement on and off site bicycle parking, pedestrian ways, transit shelters and/or transit transfer stops as per the City’s adopted multi-modal level of service standards;
- Increased residential densities along key transit corridors per the Future Land Use Element’s policies for Transit Oriented Corridors (TOCs);
- Improved multi-modal mobility along network roadways through private and public funding of roadway typologies outlined in this Element and transit friendly building and site design for new/re-development through requirements of the Future Land Use Element for the Central City Transit Supportive Area;
- Access Management per Article 26 of the City’s LDRs, and Corridor Management Planning, including where needed, multi-jurisdictional inter-local agreements to establish common standards in a corridor;
- Provisions for expanded transit service through a Polk Transit Authority and Charter County Transit Surtax referendum and/or subsequent transit related revenue initiatives including grants;
- Transportation Demand Management Strategies;

- Implementation of future land use strategies that promote compact, complimentary/mixed use, contiguous and transit-friendly land use patterns within the Central City Transit Supportive Area (CCTSA) and Transit Oriented Corridors (TOC);
- Implementation of Citywide Pathways Plan, including completion of Lake-to-Lake Bikeway Network; and
- Further development of parking strategies that support improved utilization of transit, bicycle and pedestrian transportation modes.

The City of Lakeland has coordinated with the Polk TPO and Polk County to modify its multi-modal level-of-service standards to incorporate these connectivity plan strategies. The table below contains the “Multi-Modal Transportation level of Service Standards – Locally Preferred with TCEA.

**Multi-Modal Transportation Level of Service:**

Approaches for intersections are normally expected to function at the same minimum LOS standard for the road link of that approach. Details of intersection standards will be outlined in the City’s LDRs but shall generally include mast arm traffic control apparatus as well as pedestrian crossing controls as approved by the City. Locally preferred roadway LOS standards are included in the matrix below. However, for the TOC and CCTSA areas, and where roadway capacities are and/or will be exceeded with the proposed development (i.e., where the volume to capacity or v/c ratio will be in excess of 1.0), then the outlined multi-modal (bus, bike, sidewalk etc) improvements are required and intended to help offset the City’s lower road based level of service standards in these areas. Any cap set for roadway volumes would trigger road and/or intersection improvements *in addition to* all the multi-modal improvements detailed below. Feasibility of improved transit services refers to operational feasibility as per the transit provider, and/or constructability in terms of right of way needed for any dedicated transit facility.

## Multi-Modal Transportation Level of Service Standards – Locally Preferred with TCEA<sup>5</sup>

Geographic Area	Multi-Modal Standard	Roadway Standard <sup>1</sup>	Mobility & Connectivity Requirements <sup>6&amp;7</sup>
	All standard size transit buses to have bike racks on bus.		Meet COL Access/Site Circulation, Maximum Parking & Sidewalk Land Development Regulations (LDRs); Target: Implement Roadway Typology
Transit Oriented Corridors Overlay (TOC) & Activity Centers within TOC	<p>Transit Service (≤ 30 min in peak times)                      Bus Rapid Transit (BRT) Service, Where Feasible                      Premium or Circulator Service (≤ 15 min headways), Where Feasible</p> <p>Sidewalk/Bike Lane Network: Direct Access to Site &amp; Within Corridor</p> <p>Rail Service, As Applicable</p>	"E" <sup>2&amp;3</sup>	<p>All: Transit shelter or bench &amp; bike parking</p> <p>Address sidewalk or bike route gap, as applicable in corridor</p> <p>Employment &amp; Retail Centers: superstop (=larger or multiple shelters);                      Mixed Use Commercial Centers: transit transfer center &amp;/or park &amp; ride lot</p> <p>Bus Pull Out Lane, where recommended;                      TDM Strategy, if applicable</p> <p>Grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Connections to multiple streets as per City LDRs. Where connections to multiple streets are not feasible, auto/bike and pedestrian cross-access between adjacent properties required. Direct connections required to adjacent uses within master planned developments.</p>
Central City Transit Supportive Area (CCTSA)	<p>Transit Service (≤30 min. in peak times)                      Sidewalk/Bike Lane Network Access</p>	"E" <sup>3</sup>	<p>Transit Shelter/bench &amp; Bike Parking; superstop, transfer center and/or park &amp; ride facilities required where appropriate.                      Address Sidewalk &amp; Bike Path Gaps within ¼ mile, as applicable                      TDM strategy, if applicable</p> <p>Required maximum block length as per LDRs. Grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Connections to multiple streets as per City LDRs. Where connections to multiple streets are not feasible, auto/bike and pedestrian cross-access between adjacent properties required. Direct connections required to adjacent uses within master planned developments.</p>
Urban Development Area (UDA)	<p>Transit Service (≤ 60 minutes in peak times)                      Sidewalk/Bike Network Access in ½ mile</p>	"E"	<p>Transit Shelter/bench &amp; Bike Parking; superstop, transfer center and/or park &amp; ride facilities required where appropriate.                      Provide Multi-Use Sidepaths as appropriate                      Provide Bike/Trail linkages</p>

Geographic Area	Multi-Modal Standard	Roadway Standard <sup>1</sup>	Mobility & Connectivity Requirements <sup>6&amp;7</sup>
UDA Continued			<p>Transit transfer or superstop, as applicable, for activity center &amp; interchange land uses</p> <p>Internal grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Direct connections required to adjacent uses within master planned developments. Where applicable, developments must be configured to accommodate publicly-privately funded connector roads in the Transportation Element that relieve nearby collector or arterial roads.</p>
Suburban & Rural Development Areas <sup>4</sup>	Transit Service Where Feasible Sidewalk / Bike Network Connections if within ½ mile	“D”	<p>On-site trails/sidepaths, as appropriate Shelters for Active Transit Route</p> <p>Internal grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Direct connections required to adjacent uses within master planned developments. Where applicable, developments must be configured to accommodate publicly-privately funded connector roads in the Transportation Element that relieve nearby collector or arterial roads.</p>

<sup>1</sup> LOS is measured for the peak hour/peak direction using the average of the two highest peak hours

<sup>2</sup> COL mobility strategies as per above chart shall be required in TOCs; in addition, the roadway Volume/Capacity ratio may have a cap per other policies in the Transportation Element; Roadway Standards based on service volumes and adopted highway LOS standard as given in the Polk TPO’s Roadway Network Database or service volumes obtained through more detailed roadway segment analyses required through the City’s development review process.

<sup>3</sup> LOS may be measured on an averaged corridor basis for facilities with common trip ends.

<sup>4</sup> Major Developments, e.g., large PUDs and DRIs or their equivalents may have specific transportation standards and requirements applied through a development order.

<sup>5</sup> Improvements funded by the Transportation Regional or County Incentive Grant Programs are restricted to State LOS standards. The City will work with the Florida DOT regarding mobility issues for Strategic Intermodal (or FIHS) system facilities within the TCEA (TCEA does not require FDOT approval.)

<sup>6</sup> Grid network also includes modified design and layout configurations that provide multiple efficient routes for access and circulation.

<sup>7</sup> These are examples of Mobility & Connectivity Requirements intended to help meet the above Multi-Modal Standards; it is not an all inclusive list, i.e., other improvements, including enhanced transit services, may be necessary to meet the City’s standards (see also Policy 4A.7).

**Source:** Lakeland Community Development Department, 2010.

**Policy 4A.2:** The City shall update its adopted Mobility funding plan and update the adopted Capital Improvements Element as necessary for those strategies identified in the City's TCEA Connectivity Plan, including relevant strategies listed in Policy 4A.1 and which specifically address potential funding sources as follows:

- Commitment of City Transportation Fund resources in the Capital Improvement Program for sidewalk, pathway, and/or Lake-to-Lake Bikeway projects in accordance with policies established in the Transportation Element;
- Commitment of funding from the Lakeland Community Redevelopment Agency for sidewalk, pathway, transit and/or transportation demand management projects consistent with the Transportation Element and redevelopment area plans for the Mid-Town, Dixieland and Downtown CRA districts;
- Implementation of a multi-modal transportation impact fee (which may vary geographically) and/or a mobility fee identified through a study commissioned by the City and/or Polk County and in accordance with any applicable Community Renewal Act requirements.
- In-kind contributions through the inclusion of multi-modal transportation facilities within public improvement projects, including right-of-way acquisition, design and construction phases and routine maintenance activities.
- Submission of project applications for State and Federal discretionary funding sources, particularly those administered and prioritized through the Polk Transportation Planning Organization and commitment of local funding matches in the CIP where necessary.
- Support of increased transit revenues to support transit services in Lakeland via Lakeland Area Mass Transit District-approved strategies that may include expansion of its boundaries and/or an increase in the LAMTD ad valorem tax rate should countywide transit sales tax referendum for transit fail to be approved by voters and/or not be re-attempted.
- Private sector funding of multi-modal transportation strategies, incorporated into land development plans or as required off-site mitigation consistent with the policies contained in the Transportation Element.

**Policy 4A.3:** All new roadways constructed within the City will be designed to accommodate a minimum of Level of Service D and shall observe the applicable Roadway Typology for that roadway segment.

**Policy 4A.4:** Transit related improvements must be approved by the applicable transit authority or transit director; however, City engineering standards and building code shall be followed for construction of proposed transit shelters within the City and coordination shall occur for shelters placed within the maintenance jurisdiction of either FDOT or Polk County.

**Policy 4A.5:** Approaches for intersections are generally expected to function at the same minimum LOS standard for the road link of that approach. Details of intersection standards will be outlined in the City's LDRs but shall generally include mast arm traffic control apparatus as well as pedestrian crossing controls as approved by the City. Project traffic should not further degrade the operation of an existing signalized intersection. Single, non-residential re-development uses within the corridor may be an exception to this criteria where other criteria are met including through significantly limiting passer-by traffic (e.g., limit drive-through bays) and providing cross or joint access and enhanced multi-modal access.

**Policy 4A.6:** In the Central City Area and TOC Overlay, the City will observe a targeted maximum volume to capacity ratio (V/C) of 1.5 (based upon generalized level of service tables) where new roadway improvements may be needed beyond this maximum.

**Policy 4A.7:** Development review and concurrency related facility improvement costs shall be the responsibility of the developer but could include contribution of funding toward improvements actually made by transit authorities, local governments, Florida DOT or other official entities. Eligible transit or non-motorized mitigation strategies may include but are not limited to one or more of the following, on and/or off-site improvements:

- a. Funding of bus shelters and/or bike racks, including all installation costs;
- b. Set aside of land and dedicated easement, as needed, for future bus shelter and/or bike rack facilities;
- c. Off-site sidewalk improvements within the CCTSA or TOC Overlay;
- d. Funding for enhanced transit services and/or transit capital facilities and equipment within and/or to the CCTSA, TOC Overlay or Urban Development Area;
- e. Depending on the level of congestion, additional strategies may be required to alleviate project impacts including use of staggered work hours for employees to promote off-peak travel; establishment of employee car or vanpools programs; establishment of incentive programs for employees to use transit; and/or development requirements for the installation of amenities such as showers and changing rooms to encourage bicycle commuting.

**Policy 4A.8:** Within the City's Transportation Concurrency Exception Area (TCEA), operational and safety related mitigation may be required of development projects to ensure continued safe mobility within the transportation network. Improvements needed for development or redevelopment may need to address any combination of the following: coordinated access (cross-access or service roads), signalization, turning lanes, bus pull-out lanes and/or geometric improvements to same. Multi-modal mitigation required under the auspices of a TCEA may include those options listed in 4.A.7 (a)-(e) above which shall be in addition to any operational and safety improvements to the road-based network. Multi-modal mitigation measures shall be incorporated into Developments of Regional Impact or their equivalent in the City as well as college campus development plans and agreements.

**Policy 4B:** Traffic analyses are required within all portions of the City's TCEA in order to quantify impacts to the regional and County road network as well as to document internal trip capture, identify any operational issues and help determine the appropriate multi-modal and traffic management strategies required for the project. For projects located outside of the TOCs, development orders, including permits, will not be issued where there is less than the minimum level of service, based on the generalized level of service assessment (Phase 1) for specific roadway links as provided in the City's Roadway Network Database and projected in TSD III-One (found in the *Technical Support Document*). These projects, when proposed on links which are determined to fall below the adopted level of service, have the option of providing a more detailed level of service analysis (Phase II) based on a Speed and Delay study following the procedures outlined by the Florida DOT, Traffic Engineering Office in its Manual for Uniform Traffic Studies, and a Highway Capacity Analysis as outlined in the most current edition of the Highway Capacity Manual, Special Report 209. If the more detailed analyses, after verification by Community Development Department staff, indicate an acceptable level of service, development orders may be issued. If the results of the analyses for level of service are below the adopted level of service in this Transportation Element, appropriate programming in the first three years of the City's Capital Improvements Program, and/or a CRA Trust Fund as also reflected in a local CIP of the City or County, and/or the Florida DOT Five-Year Work Program must occur prior to development order approval. If two or more public access approaches are failing when subjected to Highway Capacity Analysis, the intersection will be deemed not to meet the adopted level of service.

**Policy 4C:** The City of Lakeland will reduce roadway deficiencies by maximizing operational functions, access and demand management strategies, adding lanes, constructing new roadways, and providing facilities for alternative transportation modes, including transit, bicycle and pedestrian.

**Policy 4D:** The City of Lakeland's access management standards will be utilized in review of all new developments or redeveloped parcels in the City in order to maintain operating speed and preserve capacity on arterials and collectors by minimizing driveway and median cuts; where driveway access must be approved by an entity other than the City (County or FDOT), coordination shall occur to ensure maximum acceptable access controls.

**Policy 4E:** The City of Lakeland will coordinate efforts with the Florida DOT and with the Polk TPO to establish consistency in transportation related policies.

**Policy 4F:** The City of Lakeland will coordinate with Polk County TPO to conduct annual traffic counts on all roads on the concurrency network and will monitor the level of service on arterial and collector roadways within the City, as applicable within the TCEA, CCTSA and TOC Overlay.

**Objective 5:** By 2020, increase by 1% annually from 2010 baseline data, the linear feet of routes for non-motorized travel.

**Policy 5A:** The City of Lakeland will install new sidewalks, where physically and environmentally feasible, on at least one side of arterial and collector roads in accordance with the prioritization criteria outlined in Policy 6C.

**Policy 5B:** The City of Lakeland will continue to maintain existing sidewalks in a safe condition and make sidewalk maintenance an extension of the pavement maintenance system.

**Policy 5C:** The City of Lakeland will continue to incorporate consideration of bicycle and pedestrian facilities in all roadway improvements, consistent with the appropriate Roadway Typology and Citywide Pathways Plan and to help create complete streets that function safely for all users of the transportation system. The City will work with the Polk TPO, Florida DOT and Polk County in the identification of locations where sidewalks and bicycle lanes should be included on State and County highway improvements and resurfacing projects within the City. The City will also work with the TPO, FDOT and Polk County to incorporate bicycle and pedestrian features into intersection projects (e.g., pedestrian signals, intersection bulb-outs, enhanced crosswalks, raised concrete pedestrian refuges (“pork chops”)) and in resurfacing projects (e.g., addition of four-foot paved shoulders on open-drainage typical sections). The City shall include designated bicycle lanes or un-designated paved shoulders on each resurfacing project implemented on the City collector road system, unless such treatments are not feasible. In such instances, alternative measures such as “sharrow” markings and “bicycles sharing roadway” signage shall be evaluated for installation. Transit amenities such as transit shelter pads, wheelchair deployment pads and transit bench pads shall be included in all highway improvement and resurfacing projects implemented within the City, where feasible.

**Policy 5D:** Through the Citywide Pathways Plan, projects on prioritized Pathway Segments may be implemented through the following methods, where feasible:

- a. As elements of City capital improvements, including road widening and resurfacing projects;
- b. Through stand-alone projects funded by the City with local funds and/or discretionary grant funds from State and Federal sources;
- c. Through coordination with Polk County and FDOT on road projects programmed in the Lakeland Planning Area;
- d. As development requirements for projects within the City of Lakeland, including Developments of Regional Impact (DRI) or Planned Unit Developments (PUDs); and
- e. As suggested Polk County development requirements to include Pathways Segments in new or modified DRIs or PUDs within the Lakeland Planning Area and/or as a means to increase regional connectivity.



**Policy 5E:** Projects to be implemented through the Citywide Pathways Plan should include:

- a. 12-foot wide multi-use trails, constructed within 20-foot wide access easements or rights-of-way as stand-alone projects or constructed in conjunction with roadway improvement projects;
- b. Wider and enhanced sidewalks on designated Pathways Segments in neighborhoods or business districts to accommodate high pedestrian activity thereby increasing user comfort and minimizing operational conflicts;
- c. Designated bicycle lanes and/or other bicycle markings such as “sharrows”, network/bike sharing signage, controls or operational treatments as appropriate to better accommodate bicycles on local or collector streets with low-volumes; and
- d. Unpaved trails, constructed within 20-foot wide access easements through natural areas or between natural and developed areas to serve an added benefit as wildfire buffer.

**Policy 5F:** The City of Lakeland shall annually review high priority Pathways Segments to determine the feasibility of specific projects for inclusion in the Capital Improvement Plan (CIP). The following subjective measures shall be utilized in the selection of these specific pathways projects, including:

- a. **System connectivity and continuity.** This relates to the project’s ability to link on- and off-road facilities and support a more seamless non-motorized transportation network between trip origins and destinations. The intent is to avoid ranking of piecemeal projects that may not provide much benefit to system or corridor continuity.
- b. **Assessment of cost feasibility (or cost-benefit),** which includes potential right-of-way acquisition and community or business impacts relative to the potential value of the connection.
- c. **Safety Mitigation.** The ability of the project to mitigate perceived safety or potential safety problems regardless of crash data history. This information is derived from focus groups, discussions with agency staff, community input and/or professional judgment.
- d. **Mitigation of Obstacles or Barriers.** Because barriers are difficult to precisely define and compare equitably, this subjective measure considers the degree to which the project helps overcome barriers, such as a wide highway, fast traffic, an interstate, drainage canal or similar feature. Barriers defined in the Pathways Planning public input process as well as the support documentation for the Parks Connectivity component should be addressed under this criterion.

**Policy 5G:** Connectivity shall be established by Park type to implement the Parks Connectivity Plan, as discussed in the Transportation Element. Specific improvements shall be implemented where feasible and in accord with the needs and recommended projects

identified in the support documentation (Section One and Section Two) for the City's Parks Connectivity Plan.

**Policy.5H:** The City of Lakeland's adopted sidewalk ordinance will continue to apply to both residential and non-residential development projects as a means to assist infill and expansion of the pedestrian pathway system, especially where public schools, parks and/or transit services exist or are planned.

**Policy.5I:** The City of Lakeland will continue to develop the Greenway system discussed in the Recreation and Open Space Element in order to increase the number of bicycle and pedestrian trips.

**Policy.5J:** The City of Lakeland will continue to utilize and when needed to update its Engineering Standards Manual to include standard typical sections for all public and privately funded collector and arterial roadways to be constructed within the City. Future updates to the Engineering Standards Manual shall consider modifications based on the Roadway Typology cross-sections discussed in the Transportation Element. At a minimum, these typical sections shall include five-foot sidewalks on one or both sides of the street and include standard-width bicycle lanes, where appropriate, on-street parking where appropriate and provisions for transit. These typical sections shall also apply to privately funded streets that will serve as a component of a frontage, backage or other access road system for new multiple developments.

**Policy.5K:** The City of Lakeland will amend its Engineering Standards Manual to include standard typical sections for multi-use trails constructed with public funds or as part of private development projects where such facilities are required.

**Policy.5L:** The City of Lakeland will work with the Florida DOT to establish acceptable roadway cross-sections during the Project Development and Environment (PD&E) Study and design phases of widening projects, especially areas identified in the Transportation Element as "design exception areas".

**Policy.5M:** The City will cooperate with the Polk TPO in maintaining a comprehensive inventory of pedestrian and bicycle facilities in order to identify and eliminate regional and local network gaps.

**Policy.5N:** The City will design, build and maintain streets that support the Polk TPO Complete Streets Policy as adopted through TPO Resolution 2012-05 on October 11, 2012 and in accord with City Resolution 5004 adopted in August 2012, including use of guidelines that promote safe and convenient access and travel for all users of the transportation system. Transportation projects within the City should, where feasible, include amenities such as street and pathway lighting, transit amenities, street parking, medians, street trees and landscaping, and connection and integration of the street and

modal networks, all within consideration of local context of land uses and the City's adopted roadway typology.

**Policy 5Q:** As a bronze-level Bicycle Friendly Community (BFC) as designated by the League of American Bicyclists in 2012, the City will work with area stakeholders to evaluate and, where feasible, to implement recommendations from the BFC Feedback Report to enable the Lakeland community to, at minimum, maintain our BFC ranking and/or to achieve a higher level designation during future reviews of the City's BFC status.

**Objective 6:** Increase ridership of the transit system by 2% on an annual basis, should long-term funding for countywide and enhanced transit service operations be approved through referendum or legislative action.

**Policy 6A:** As part of any new or updated neighborhood, sector or CRA plan, the City of Lakeland will analyze the existing sidewalk network and identify remaining key gaps in pedestrian routes, including near schools and transit stops. Development within the Central City Transit Supportive Area (CCTSA) and Transit Oriented Corridors (TOC) having a significant impact (defined as consuming five percent of the roadway's peak-hour directional service volume on a roadway segment or intersection operating at a failing highway level-of-service) shall be required to fund off-site sidewalk and/or other multi-modal projects to address transportation network gaps in proportion to the project's impacts.

**Policy 6B:** Funding priorities for future sidewalk improvements shall support transit use and the City's multi-modal transportation level of service standards. The following funding prioritization shall apply within City limits and any of the following may include network improvements for the disabled (e.g., curb cuts for ramps):

- a. a critical public safety concern or emergency;
- b. improvements to the existing network along designated transit routes providing 30 minute or less headways at least in peak time, and secondarily, improvements to the network within ¼ mile of these routes and within ½ mile of any passenger rail station site (light/commuter or high speed rail services);
- c. specific pedestrian needs identified by elementary schools;
- d. improvements to enhance multi-modal corridors (including along designated greenways or trails such as the Lake-to-Lake Connector;
- e. pedestrian needs identified in City neighborhood, sector or CRA plans, including improved access to City parks;
- f. non-elementary school-related pedestrian needs;
- g. other identified system needs.

**Policy 6C:** Identified sidewalk gaps and deficiencies along and within ¼ mile of the transit routes, including general cost estimates for addressing needed improvements, shall generally be given high priority in capital improvements budgeting for sidewalk construction or reconstruction, as consistent with Policy 6B. Generally streets with no sidewalks in the Central City TSA and/or along TOCs, shall be given funding priority over

streets that already have sidewalks on one side; exceptions may include emergencies, safety concerns, or where the gap is within ¼ mile of an elementary school.

**Policy 6D:** The City of Lakeland will encourage private sector support of transit services through development incentives. Use of transit friendly site or subdivision plan designs shall be required throughout the Central City Transit Supportive Area and within ¼ mile of all Transit Oriented Corridors. Outside of the CCTSA and TOC Overlay, transit friendly design shall be encouraged in general and shall be required in all DRI-level projects and all new major commercial development located at a transit stop and along any portion of a transit route as per illustrations within this Element or the *Land Development Regulations*, whichever is more up-to-date. Major commercial development for purposes of this policy shall mean, at a minimum all new or redeveloped shopping centers/plazas, supercenter stores, or commercial infill at an existing transit stop.

**Policy 6E:** The City will continue to pursue an update to the Land Development Regulations incorporating elements of a form-based code that recognizes the street as a public place and emphasizes a well-connected, walkable urban form that is amenable to the pedestrian, bicyclist and transit user.

**Policy 6F:** The City of Lakeland will continue coordination with the Lakeland Area Mass Transit District (LAMTD) and Polk Transit Authority (PTA), the Polk TPO, and the Florida DOT to ensure maximum consideration be given to transit services in planning and programming of all agencies, including the need for park and ride lots and/or transfer centers. Development reviews of large employment, retail and/or mixed use centers shall consider the need to provide an on-site park and ride or transit transfer center as a means of project traffic mitigation. These park-and-ride and transfer center mitigation measures shall be required if LAMTD and/or PTA, Polk TPO and Florida DOT agree that the sites are consistent with locations identified in the Polk County Long-Range Transportation Plan or adopted Transit Development Plan.

**Policy 6G:** The City of Lakeland will implement future land use policies in support of increased transit, which includes encouraging mixed use developments and medium or higher residential densities within ¼ mile of any Transit Oriented Corridor or other transit route with at least a 30 minute headway.

**Objective 7:** Continue to pursue planning and programming of Intermodal Access Route improvements that will address identified transportation network access deficiencies to air and rail terminals.

**Policy 7A:** The City of Lakeland will coordinate efforts with the Polk TPO and the Florida DOT to prioritize projects that are identified in airport and rail facility master plans for funding in FDOT's Five-Year Work Program.

**Policy 7B:** The City of Lakeland will consider incentives to private development which use passenger rail or air to provide a significant portion of project related trips.

**Policy 7C:** The City of Lakeland will evaluate local and collector network connectivity deficiencies and future improvements which enhance access to airport, rail, and other multi-modal facilities.

**Policy 7D:** If the decision is made to build a segment of the high-speed rail line in Lakeland, the City will work in cooperation with the High Speed Rail Authority as well as State and private agencies involved in the development of the system to ensure that appropriate connecting transportation modes are available including bus/other transit, sidewalk and bicycle access. Appropriate densities and intensities to support the rail station will be encouraged within a ½ mile area next to the station; however, environmental, noise or other significant external impacts associated with the system should be fully assessed and reasonable attempts made to mitigate impacts. Rail station and related development should be consistent with the *Lakeland Comprehensive Plan*, local land development regulations and any applicable adopted redevelopment plans.

**Policy 7E:** The City of Lakeland will work with the Lakeland Area Mass Transit District (LAMTD) and Polk Transit Authority (PTA), the Florida DOT and the Polk TPO to plan and program appropriate types and levels of public transit or enhanced surface access to maximize intermodal connections (e.g., transit, automobile, non-motorized) should a station site that is intended to serve Florida's intrastate high-speed rail system be located within the City.

**Policy 7F:** The City shall promote and support programs designed to capture and enhance the secondary technological or other benefits of high speed rail projects including educational programs and centers, design and manufacturing firms, and research and development projects.

**Policy 7G:** The City of Lakeland will continue to coordinate with Polk County, Hillsborough County, the City of Plant City, and the Polk TPO to address concurrency and access management issues within the County Line Road corridor. Such strategies within the City include requirements for cross-connections and service roads, where environmentally feasible.

**Objective 8:** Continue to develop and implement policies which will discourage disruption of neighborhoods by increased traffic.

**Policy 8A:** Conduct periodic re-evaluation of truck routes through citywide, CRA, sector and or neighborhood planning efforts.

**Policy 8B:** The City of Lakeland will incorporate motorized and non-motorized traffic issues in all neighborhood, sector and CRA plans developed by the City.

**Policy.8G:** The City of Lakeland will continue to implement and evaluate the effectiveness of the traffic calming strategies detailed in its “Neighborhood Traffic Management Program”.

**Objective 9:** Provide a transportation system which will support the uses shown on the Future Land Use Map or map series and further mobility and access throughout the city via multi-modal system development.

**Policy.9A:** The City of Lakeland will prioritize highway system improvements based upon correction of existing deficiencies, available right-of-way, system continuity, development of central core, development of infill areas, and consistency with needs generated by future land uses.

**Policy.9B:** The City of Lakeland will continue to base development approvals upon adequate system capacities at acceptable levels of service, as established in this Element, to accommodate the mobility needs of the proposed development.

**Policy.9C:** The City of Lakeland will monitor the major transportation network annually, including tracking of vested trip data in order to provide input into the TPO’s regional roadway network data base. Thus, all development, even with an authorized TCEA, shall be responsible for reasonably quantifying its impacts on the transportation network.

**Policy.9D:** The City of Lakeland will coordinate efforts with the Polk TPO, the Florida DOT, Polk County, transit providers and other municipalities in data sharing, standards interpretation, concurrency management, access management and transit issues as relate to the management of the local and regional transportation system.

**Policy.9E:** The City of Lakeland will continue to participate in future updates of the adopted Long Range Transportation Plan through the Polk TPO planning process.

**Policy.9F:** The City of Lakeland will assess the annual status of City, County, and FDOT five year work programs for their effect on connectivity planning including but not limited to system connectivity, anticipated levels of service, system capacities and transit services.

**Policy.9G:** The City of Lakeland will continue to participate in the Polk TPO’s project prioritization process to address backlogged facility funding needs within the Lakeland Planning Area in support of City and County land use plans. Where necessary and if available, the City will provide local funding matches to expedite the implementation of State highway transportation improvement needs within Lakeland.

**Policy.9H:** The City of Lakeland will coordinate with the Polk TPO, Lakeland Area Mass Transit District (LAMTD) and Polk Transit Authority (PTA) and Florida DOT (including

its District One Commuter Services Program) to establish transportation demand management (TDM) strategies that reduce reliance on single occupancy automobile trips. Such strategies include programs for large employers to develop commuter assistance incentives for employees that carpool/vanpool, and/or utilize transit or non-motorized modes for commuting trips. The City will also coordinate with the District One Commuter Services Program and Bay Area Commuter Services to publicize such alternatives and to assist with data collection efforts that might be needed to address regional commuter patterns (e.g., Hillsborough and Pinellas County to Lakeland and vice versa). The City will amend its *Land Development Regulations* to include specific TDM options for large employers requiring development approvals within the City.

**Policy 9I:** The City of Lakeland will continue to work with the Polk TPO, Florida DOT and adjacent municipal, County and regional entities to implement regional premium mass transit connections (including bus rapid transit, express bus, intercity rail and commuter rail) contained in the *Polk County 2060 Transportation Vision Plan, Tampa Bay Area Regional Transportation Authority (TBARTA) Master Plan, and Heartland 2060 Vision Plan* and passenger rail options evaluated in FDOT's *Rail Traffic Evaluation Study*.

**Policy 9J:** The City of Lakeland will participate in the development of regional transportation plans required through the Florida Rail Enterprise Act.

**Objective 10:** All roadway, aviation and rail improvements will be evaluated to measure impacts to the natural, neighborhood and cultural resources affected by such improvements.

**Policy 10A:** Construction of all roadway, aviation, transit and rail improvements, including expansion and new facility sitings, should be coordinated with the City's Future Land Use and Conservation Elements to help minimize the disruption of neighborhoods, wetlands, wildlife habitats, and natural resources; projects must comply with the City's land development regulations, including the section on Natural Resources.

**Policy 10B:** Construction of new transportation projects will meet, or exceed, the minimum requirements for stormwater retention and treatment as set by Federal, State, regional or local regulations.

**Policy 10C:** Transportation projects should minimize disruption to designated historic districts as well as contributing individual historic buildings in the community.

**Objective 11:** Continue to develop a safe and convenient multi-modal transportation network that supports economic diversification and stability, including in the Central Business District.

**Policy 11A:** The City of Lakeland will work with the Polk TPO to ensure that the adopted Long Range Transportation Plan, and in particular Phase I of the LRTP, provides

an adequate network for ease of goods movement. The City will work with the Florida DOT and Polk County to ensure that truck movement and operational needs are addressed in the development of context-sensitive capital transportation projects in the Lakeland Planning Area including the intent to minimize adverse impacts to neighborhoods and bike/pedestrian/transit user safety.

**Policy.11B:** The City of Lakeland will work with the Polk TPO and Florida DOT to prioritize and fund freight rail analyses and long-term rail traffic mitigation identified in the FDOT's *Rail Traffic Evaluation Study* and *Florida Rail Enterprise Act*, including the construction of an alternative rail line route around communities in Central Florida. The City will also work with Florida DOT and CSX to implement short-term freight rail traffic mitigation improvements, including the establishment of a Quiet Zone through Downtown Lakeland.

**Policy.11C:** The City of Lakeland will give consideration to local goods movement in truck routing considerations for applicable neighborhood, sector and CRA plans.

**Policy.11D:** The City of Lakeland will continue to work with the Lakeland Area Economic Development Council to obtain discretionary funding from State and Federal sources for Intermodal Access Route and other transportation improvements intended to enhance economic development activity and improve efficiency of important freight and goods movement routes within the Lakeland area.

**Policy.11E:** The City of Lakeland will support and promote implementation of the Master Plan for Lakeland Linder Regional Airport, ensure that the plan is updated periodically, and maintains consistency with the *Lakeland Comprehensive Plan*.

**Policy.11F:** The City of Lakeland will continue to direct proposed non-residential developments, where appropriate, to seek sites in the industrial park adjacent to the airport or within the airport facility.

**Policy.11G:** The City will refer to and/or adopt similar regulations of the Joint Airport Zoning Board (JAZB) regarding height, noise, and land use compatibility consideration for proposed development near the Lakeland Linder Regional Airport.

**Policy.11H:** The City shall require avigation notices for new residential subdivisions or multi-family developments located near the City's airport property.

**Policy.11I:** The City shall address any safety issues for city parking facilities as a top priority within its regular physical maintenance activity for these facilities.

**Policy.11J:** Future or renewed City leased parking agreements shall consider area market rates and "at-cost" fee schedules to accommodate employee parking needs.



**Policy.11K:** The City shall consider formation of a Transportation Management Association (TMA) for any geographic areas of the City in which congestion and parking become a key challenge, such as but not limited to the Downtown area, Mid-Town area, HSR station site area, and/or Airport Road area. TMA membership could include City representatives, one or more members from any applicable CRA local partnerships and/or Boards and/or other appropriate stakeholders. Any TMA should coordinate with FDOT and the Polk TPO staff, as needed. The purpose of the TMA would be to explore alternatives for meeting transportation and parking demands including the use of intermodal facilities for transit, rail, walking, use of remote parking with shuttle service, and provision for bicycle lanes and racks. Maximizing available parking in the area should include examination of the use of flex schedules by employers, public-private partnerships for funding of parking improvements including any new garages or parking decks, remote parking lots, transit shelters, and additional on-street parking as part of any new roadway improvements which directly impact the subject area. The TMA may also wish to consider review of all such roadway projects for provisions of compatible street design including streetscapes/sidewalks, bike lanes and transit amenities.

**Objective 12:** Develop a program to protect existing and future traffic circulation, aviation and mass transit rights-of-way from encroachment by development.

**Policy.12A:** The City of Lakeland will evaluate program options that could potentially stabilize the cost of right-of-way acquisition for construction of transportation improvements, such as execution of “declaration of reservation agreements” for large developments with off-site transportation mitigation needs. Implementation efforts must consider the legal issues and constraints posed by taking concerns.

**Policy.12B:** The City of Lakeland will explore the feasibility of regulations which establish a right-of-way reservation program for all projects in the Short-Range Component (Phase I) of the adopted Long Range Transportation Plan.

**Policy.12C:** The City of Lakeland will coordinate efforts with Polk County and the Florida Department of Transportation to support future right-of-way protection on State and County roads.

**Policy.12D:** The City of Lakeland will consider the needs of the Lakeland Area Mass Transit District in its right-of-way reservation and acquisition programs.

**Objective 13:** Continue to coordinate mass transit plans with the plans and programs of the Polk TPO, Polk Transit Authority and the Florida Department of Transportation DOT to increase ridership.

**Policy.13A:** The City of Lakeland will review proposed Lakeland Area Mass Transit District plans to ensure consistency with appropriate local and State transportation plans as well as the *Lakeland Comprehensive Plan*.

**Policy 13B:** The City of Lakeland and Lakeland Area Mass Transit District will coordinate transit service and development reviews as per the multi-modal level of service standards and related policies found in this Element.

**Policy 13C:** The City of Lakeland will monitor the financial viability of the LAMTD system as per the TPO annual updates to the Transit Development Plans and the meetings of the LAMTD Board. The City will generally support actions that may enhance the long-term financial viability of LAMTD or its successor agency, including but not limited to cost efficiencies in services and administration, revenue increases through taxing district expansions, millage cap adjustment or countywide sales tax referenda, and other options proposed by LAMTD.

**Policy 13D:** The City will support LAMTD applications for federal or state grant programs and service developments which enhance transit ridership including amenities such as shelters and/or applications for funding of multi-modal connections, including facilities such as park and ride lots or remote parking areas with shuttle/express services for employees.

**Policy 13E:** The City of Lakeland will work with the Lakeland Area Mass Transit District and Polk Transit Authority to coordinate proposed mass transit service area expansions with identified major trip generators and attractors.

**Policy 13F:** Where the City extends wastewater service to an area outside but contiguous to the boundaries of the Lakeland Area Mass Transit District (LAMTD), and/or where a property has voluntarily annexed into the City and is outside of LAMTD, the owners shall petition for voluntary inclusion into the transit district prior to the adoption of City zoning. Nothing in this policy shall bind the District to accept such petition. This policy may become a moot issue should countywide transit service become established and have a dedicated funding source for those services.

**Objective 14:** Coordinate proposed road, airport and non-motorized improvements with the plans and programs of the Polk TPO, Polk County, the Florida DOT, other appropriate agencies and ensure consistency with the *Lakeland Comprehensive Plan*.

**Policy 14A:** The City of Lakeland will review expansion of existing transportation facilities or new facility proposals for consistency with all related policies in the *Lakeland Comprehensive Plan*.

**Policy 14B:** The City of Lakeland will protect airports and other transportation facilities from encroachment of incompatible land uses through implementation of the Future Land Use and Conservation Elements of the *Lakeland Comprehensive Plan*.

**Policy.14C:** The City of Lakeland will encourage coordinated intermodal management of surface and air transportation to maximize the efficiency of the overall transportation system.

**Objective 15:** Develop non-capital transportation improvement techniques to maximize the existing transportation system.

**Policy.15A:** The City of Lakeland will evaluate the traffic circulation network to examine such issues as one-way pairs, opening platted rights-of-way, and improving signage.

**Policy.15B:** The City of Lakeland will give consideration to low cost improvements to the transportation system, including intersection signalization adjustments, signage improvements, and other techniques in its capital budgeting process.

**Policy.15C:** Neighborhood, sector and CRA plans will consider the street as a public place, particularly streets with “Community Street” and “Main Street” typologies, where the existing street system is enhanced through various techniques such as streetscaping and traffic calming to encourage the use of non-motorized modes of travel and transit on at least those facilities that operate as collector or local roads.

**Objective 16:** Due to the amount of trips with no origin or destination within the Lakeland Planning Area, the City shall work with Polk County, Polk TPO and regional transportation agencies to maintain Year 2010 vehicle miles of travel (VMT) values through Year 2020, using focused application of appropriate land use and transportation strategies to promote a pattern of compact and complimentary mixed land uses that, when combined with urban design techniques and standards, produces a safe, walkable environment served by a well connected multi-modal transportation system providing connectivity to applicable regional bus, rail and high-speed rail systems.

**Policy.16A:** The City shall continue to support incentives for new and re-development within its traditional Community Redevelopment Areas of Downtown, Mid-Town and Dixieland as well as infill and transit oriented developments within the Central City Transit Supportive Area and increased residential densities within the TOC Overlay. The City Land Development Regulations shall include open space and landscaping standards for new development that provide relief from the built environment, provide street shade for the pedestrian and support energy efficiency for the built environment.

**Policy.16B:** The City will continue to employ access management and site circulation standards, maximum parking standards and multi-modal connectivity through its Land Development Regulations which address and support the linkage to bus, bike and pedestrian systems and amenities. Vehicle miles of travel and associated greenhouse gas emission reduction will be pursued through the implementation of the components of the City’s land use strategies and the connectivity plan outlined in the Transportation Element

including but not limited to enhancement of the transit services, prioritization of funding for pathways (bicycle and sidewalk) facilities, and transportation demand management strategies, where applicable.

**Policy.16C:** In order to develop a roadway grid system within the Central City Transit Supportive Area, Urban Development Area and Suburban Area, the City shall require development to accommodate public-privately funded connector roads contained in the Transportation Element, including those derived from the Southwest Lakeland Sector Plan, which provide relief to collector and arterial roadways that are projected to operate at a failing highway level-of-service through Year 2035. Construction and right-of-way costs shall be eligible for transportation impact fee credits in accordance with the most recent transportation impact fee ordinance.

**Policy.16D:** The City shall require the submittal of transportation demand management plans for new employment centers or large mixed-use development projects in accordance with the Land Development Regulations. The City shall continue its participation in and coordination with the Florida DOT District One Commuter Services Program.

**Policy.16E:** The City shall encourage bicycle travel by requiring bicycle parking as a condition of development approval for new development in accordance with the Land Development Regulations, and by participating in the development of a bicycle parking strategy for Downtown Lakeland and a published bike route map for the City. The City shall work with the Lakeland CRA, Florida DOT and Polk TPO to site and fund secure “bicycle stations” at strategic locations throughout Lakeland to provide parking, services and information to the area bicycling community.

**Policy.16F:** Should Polk County be designated as a Federal air quality non-attainment area, the City will work with the Polk TPO and Florida DOT to identify and fund programs and projects that encourage alternative means of transportation as part of the annual Transportation Improvement Program and Five-Year Work Program development processes.

# INFRASTRUCTURE ELEMENT

## INTRODUCTION

Infrastructure, as defined by Rule 9J-5, Florida Administrative Code, means "those man-made structures that serve the common needs of the population." This element of the *Lakeland Comprehensive Plan* addresses the provision of potable water, wastewater treatment, solid waste disposal, stormwater management, and protection of natural groundwater aquifer recharge areas.

Growth through new development places increased demands on all public services, but the infrastructure for water, sewer, drainage and roads are, by far, the most costly needs to address. This Plan requires that infrastructure needed to support new development be in place concurrent with the impacts of such development, where not superseded by State law. The Plan also discusses the identification of methods to ensure that new development pays its proportionate share of the cost to provide the infrastructure needed by the development. Only through enforcement of these measures can local governments ensure that future growth will be orderly and economical.

The Infrastructure Element is divided into several major sections which address legislative requirements for the issues of potable water, wastewater, solid waste, stormwater and natural groundwater aquifer recharge. Following this introduction, the second section discusses a summary of findings or existing conditions for each infrastructure-related issue. The third section examines issues and opportunities related to the infrastructure system, while the fourth section includes goal, objective and policy statements.

Supplemental data and documentation for the potable water update may be found in the *City's Technical Support Document*.



T.B. Williams Water Treatment Facility in NW Lakeland

## SUMMARY OF FINDINGS

An important first step in the preparation of this Infrastructure Element was an inventory and analysis of Lakeland's existing potable water, wastewater, solid waste, stormwater and natural groundwater aquifer recharge facilities and functions. The primary purpose of this inventory and analysis was to determine how well the existing infrastructure system is meeting present needs and how well it can be expected to meet future needs. For purposes of clarification, population projections used for estimating future needs were derived from the 1999 supplement to the Lakeland Population support document. These population projections represent the medium range projections utilized throughout this Comprehensive Plan. However, population for the water service area is projected by the Water Utilities staff; this service area has historically extended well beyond the City limits.

## POTABLE WATER

The Lakeland water system began in 1905 with a single well at the corner of Massachusetts Avenue and Cedar Street. By 1979, a system of some 33 dispersed wells had become inefficient and the Lakeland City Commission approved a water master plan to meet the City's current and long-range potable water needs. The older wells were either phased out or converted to monitoring wells to track the potentiometric surface (pressure) within the upper Floridan aquifer which serves as a primary source for drinking water wells. In the early 1980's, the City commenced a water improvement program and the Thomas B. Williams Water Treatment Plant and Northwest Wellfield were to be the City's new primary potable water source. In December 1989, the City installed several production wells at that Northeast Wellfield. Most recently, the C. Wayne Combee Water Treatment Plant located on Old Combee Rd began operation in October 2005.

The raw water supply source for the water service area is drawn from a network of multiple deep wells between the Northwest Wellfield and Northeast Wellfield. As of March 2008, the permitted average daily flow for Lakeland's entire potable water system is approximately 35.03 million gallons per day (MGD).

## EXISTING SERVICE SYSTEMS AND DEMANDS

The City of Lakeland water service area has historically extended well beyond the city limits of Lakeland. Illustration IV-1 shows the water service area as of 2007, including changes south of the Airport as per an interlocal agreement with Polk County. The existing water service planning area contains approximately 85,540 acres, or 134 square miles. However, the planning area is not, in all cases, the same as where service currently exists, but is a potential service area. Lakeland



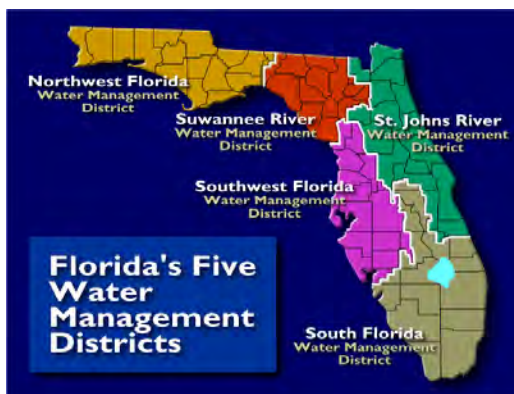
TB Williams Water Treatment Plant  
Administration Building

also had owned and operated a potable water system for Polk City but this system was sold to Polk City in January 2002. Since the wells and lines serving Polk City were located in Polk City, separate from the Lakeland system, the sale of the Polk City water system that served about 1,903 people did not have any impact on Lakeland's water operations.

Since 1982, the service area has historically been supplied water from the Northwest Wellfield and the Thomas B. Williams treatment plant; see current water facilities Illustration IV-2. Water treatment occurs at the T.B. Williams Water Treatment Plant located on the east side of Kathleen Road; treatment consists of lime softening, water stabilization, filtration, fluoridation, chlorination and disinfection. Periodic system upgrades to both the treatment plant and the water distribution system should extend the facility's life span through 2040 or later. Pump stations are expected to adequately perform through 2040. There are no current water quality problems; all finished water quality indicators meet or exceed state standards.

After water is treated, it is pumped to customers through a network of over 959 miles of pipeline, ranging in diameter from 2 to 54 inches, or the water is stored for peak use times. Primary storage for the system consists of two 5-million-gallon pre-stressed concrete tanks. Elevated storage tanks are no longer used. There is also a 3-million-gallon ground storage tank at the Lakeland Highlands Pump Station.

Until 1993, the withdrawal quantities permitted for the Northwest wellfield and treatment plant were 28.6 MGD annual average daily flow, 55 MGD maximum daily flow. A property in the northeast area of Lakeland consisting of approximately 770 acres was leased in 1989 and, then, eventually purchased in 1990 along with an additional 93.44 acres. The purchase was subject to the City being able to obtain a Water Use Permit from the Southwest Florida Water Management District for that site. This first required conducting a successful aquifer performance test (APT) on a well that was installed. The City installed several production wells on that site and the District issued a Water Use Permit for that Northeast Wellfield in December 1989 for up to 9 MGD annual average daily flow and 16 MGD maximum.



The SWFWMD issued a combined water use permit in 1993 for the Northwest and Northeast wellfields. This new 1993 permit would have allowed up to 9 MGD annual average flow and 11 MGD Peak Monthly Daily from the NE Wellfield to basically supplant that much withdrawal from the NW Wellfield, should it be needed. The total permitted withdrawals for our system was decreased to 28.1 MGD AADF and 33.7 MGD Peak Month Average Day. (The maximum day value was removed and replaced with a peak month average day.) In

January 2003, the SWFWMD again modified the WUP by rule with the creation and

adoption of the Southern Water Use Caution Area (SWUCA). The permitted amount was lessened again to 28.03 MGD AADF.

However, except for monitoring and testing purposes, the opening of the NE Wellfield was postponed until the growth in demand for water justified the development of the NE Wellfield and the initiation of construction of the C. Wayne Combee Water Treatment Plant. This happened to coincide with the Water Utilities' request for its Water Use Permit renewal in late 2003. The permit was renewed in March of 2008 at an increased allocation from 28.03 to 30.2 MGD and later revised to 35.03 in December of 2008. This new water treatment plant was necessary to provide redundancy for the City's potable water system and to treat and serve water pumped from the NE Wellfield; the C. Wayne Combee Water Treatment Plant located on Old Combee Rd began operation in October 2005.



Combee Treatment Plant Under Construction

The City now has a total design capacity of 59 MGD (51 MGD for Williams WTP and 8 MGD for Combee WTP.) The SWFWMD permitted withdrawals are for only 28.03 MGD from the Northwest Wellfield, 3 MGD from the Combee WTP and 4 MGD from the Northeast Wellfield. According to the City Water Utilities, approximately seventy percent (70%) of plant demand serves the incorporated area with the remainder, 30%, serving the unincorporated area.

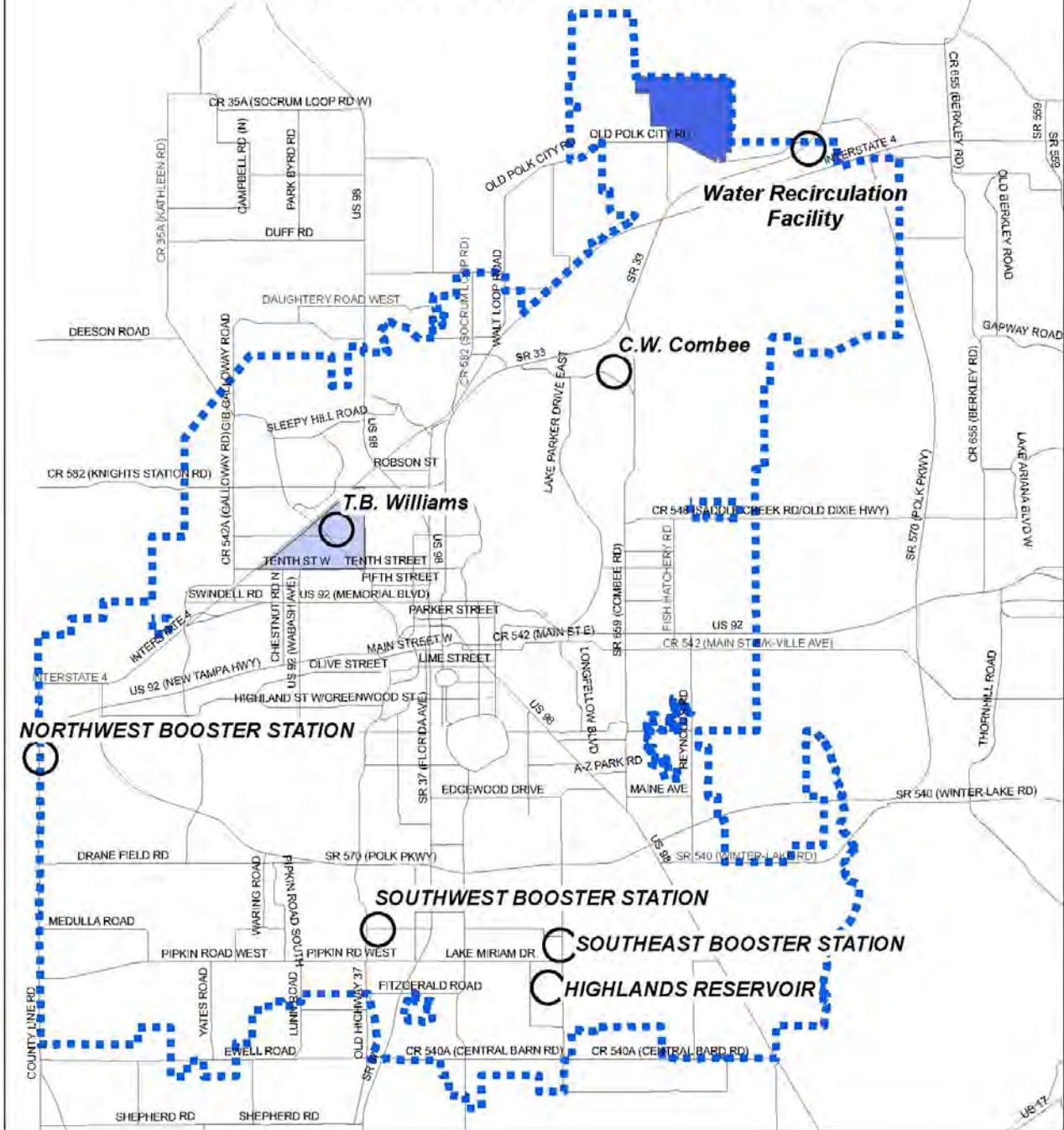
The existing demand on Lakeland's water system, with a 2006 water service area functional population estimate of 170,020 persons, was about 25.6 MGD Annual Average Demand and 31.83 MGD on a Peak Monthly basis; this equates to about 148 gpd/capita for both residential and nonresidential uses.

The City of Lakeland Water Division operates as a regional water supplier in that it provides service to unincorporated areas such as Highland City as well as selling water to private franchise systems, including Polk County Utilities, Skyview Utilities, and AquaSource (Aqua Water) Utilities. In addition to these systems based on public supplies, there are a number of large private water systems in the Lakeland water service planning area, as shown in Illustration IV-3. (The complete list of private facilities is in the *Technical Support Document*, TSD IV-Two.)





ILLUSTRATION IV-2  
**LAKELAND WATER SYSTEM EXISTING FACILITIES**



Source: Lakeland Water/WasterWater Department, 2010

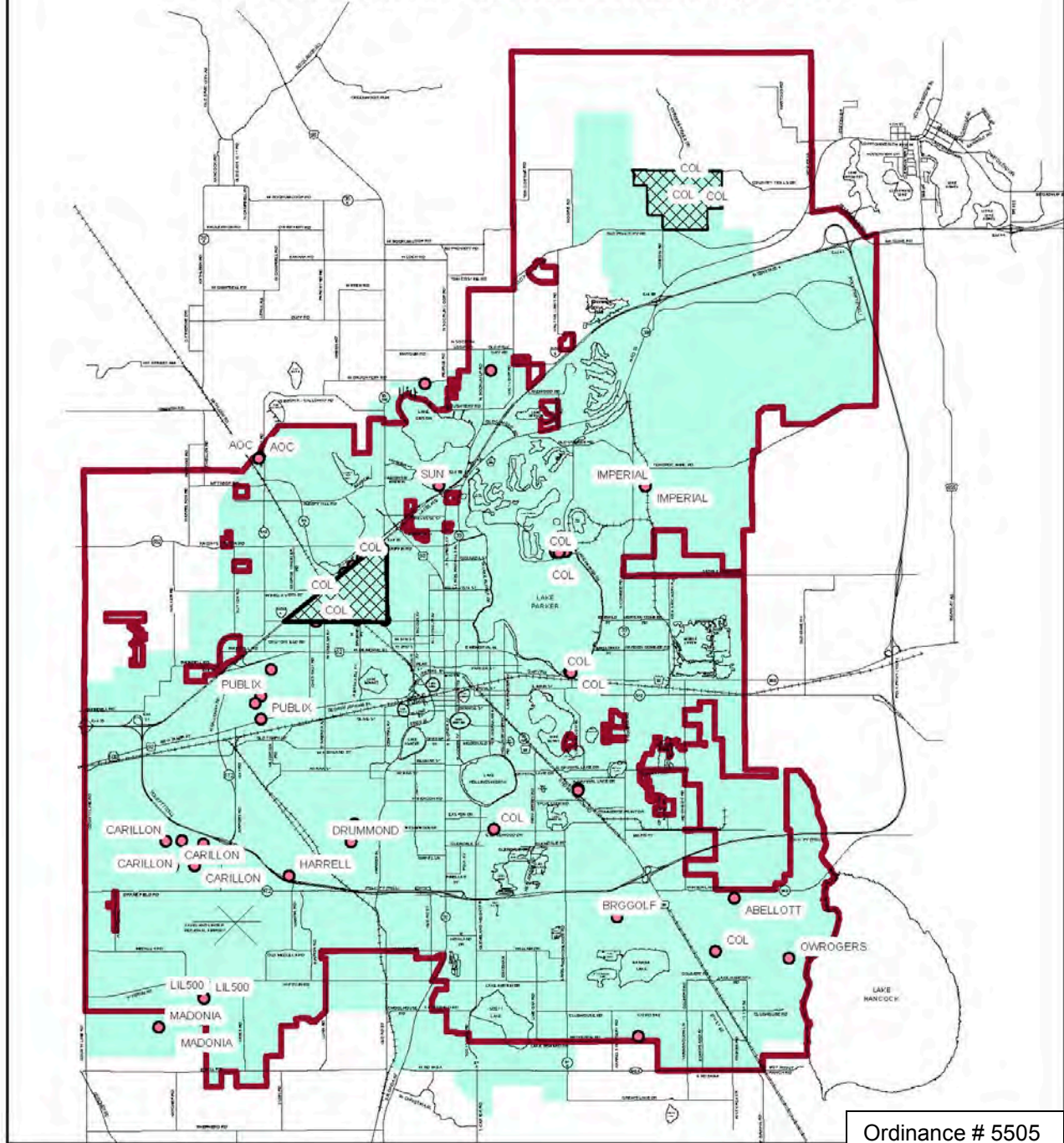


Northeast Wellfield  
 Northwest Wellfield



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ILLUSTRATION IV-3  
**WELL PERMITS GREATER THAN 100,000 GPD**



Source: South West Florida Water Management District, 2002

Ordinance # 5505  
 Adopted 05/18/15



- SWFWMD 100k Wells
- Lakeland 180 Reserve
- Lakeland Water Service Area



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## **FUTURE CONDITIONS**

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**Water Use and Conservation:** The top priority of the City of Lakeland is to provide customers within the corporate limits with an adequate and safe supply of potable water. Once the needs of City residents are met, surplus supplies are available for customers outside the corporate limits. The municipal water system currently provides potable water for residential, commercial and industrial uses. In order to ensure the availability of an adequate supply of quality potable water to meet demand, projections must be made of the future service area population.

In 1990, the Thomas B. Williams Treatment Plant serviced a population of 131,232 with a per capita consumption of approximately 183 gallons per day. In 1998, the service area population reached 156,471 and per capita consumption dropped to approximately 153 gallons per day. This reduction can be attributed, in part, to increased education and awareness of the need to practice water conservation. For the purpose of projecting future potable water needs, it is estimated that per capita consumption will continue to show a gradual decrease, as it has every year since 1981. The City has set a target or goal of per capita domestic (residential) water consumption of 150 gallons per capita per day and a long-term goal of additional reduction. The goal of reduced consumption will be achieved through the continued implementation of a City-wide water conservation plan, including the implementation of technological advances contributing to water conservation, and heightened public awareness of the significance of the decreasing supply of quality potable water and new/increased water reuse projects.

Key tools for water conservation have included implementation of an inverted-block rate structure for potable water consumption as of 1998. This encourages water conservation by increasing the cost of the service as consumption increases. For example, the City's modified rate structure implemented in October 2006 incorporated a four-block tier versus the former three-block tier. The inverted rate increases the costs for water for residences that use over 7,000 gallons per month, with a significant increase if consumption exceeds 19,000 gallons per month. Additional rate increases are likely to be proposed over time as one of many ways to support water conservation.

In March, 2000, the City Commission approved adjusting Water Utility rates or fees each year based upon the Public Service commission's Annual (Price) Index Adjustment for inflation. As a result, Lakeland is part of over 70% of the regulated utilities that utilize this price indexing option.

Other conservation efforts have included use of Florida-Friendly landscaping at City parks, City Hall, and other City properties, and increasing use of shallow aquifer wells to meet irrigation needs of new development wherever feasible. Lakeland also uses wastewater effluent to help meet cooling water needs at the City's McIntosh Power Plant. New generators scheduled to be constructed are expected to significantly increase the effluent used for cooling water. Estimates by Lakeland Electric indicate the effluent use will increase from about 4.6 MGD in 2005 up to 10 MGD by 2017. Additionally, of the average

of about 10+/- MGD of wastewater treated at the City's two wastewater treatment plants in FY 2007, as indicated below in Table IV-9, an average of about 5.39 MGD of treated effluent was used for cooling purposes at the City's power generation facility known as McIntosh. An additional average of about 4.5 MGD was utilized that year for purposes of blending with the water leaving McIntosh; due to high concentrates of brine upon emission from the power plant, this water must be diluted prior to discharge to the City's wetlands and later to the Alafia River. Thus virtually all of the City's treated wastewater was re-used. In addition to conservation measures, the City also implements a number of water conservation strategies such as promoting the use of low flow water devices, rain sensors, and public educational programs. Details of water conservation strategies can be found in the Conservation Element of the Comprehensive Plan and in the *Technical Support Document*, TSD VI-Two.



Lakeland Power Plants

Regulatory action has been taken to require the inclusion of reuse water systems in districts that may be established by the City as non-potable irrigation water service areas. In 2006 the City amended the City's *Land Development Regulations* to require the installation of reuse lines, at the developer's expense, for all new subdivision projects within the established non-potable water service areas. Engineering studies were conducted to establish the Southwest Lakeland area as a potential reclaimed water service area to be pursued as part of a cooperative effort with Polk

County to address their need to dispose of excess treated wastewater effluent. However, the implementation of reclaimed water service has been deferred due to the City's December 2008 agreement with Tampa Electric Power Company or TECO, to receive City treated wastewater effluent to meet TECO's cooling water needs for its planned power generation facility expansion. This agreement was approved and encouraged by the SWFWMD as a means of delaying additional groundwater withdrawals to meet TECO's future cooling water demands.

Reducing water consumption among residents takes time. The City did not achieve a reduction in use from 180 gpd/capita to about 148 gpd overnight; it took from 1990 to 2006, or sixteen years. In addition, like many things, reducing water consumption below a certain level is expected to become very difficult and perhaps expensive to achieve per City water officials. This reflects the principle of diminishing returns; that is, beyond a certain point, water demand reductions will be slow to occur and only very expensive options will render any additional change/reduction.

Given the City uses all of its wastewater effluent to meet the City and now TECO power plant cooling needs, the City by itself has no meaningful supply of public-access reuse/reclaimed water readily available to substitute for potable water for customers'

irrigation needs. As a result, the per capita rate in the Lakeland water service area may remain higher than communities/utilities that have that option. Thus, the use of higher water fees/rates, pursuit of water conservation initiatives, enforcement of watering restrictions and formulation of re-use (reclaimed) water cooperatives with Polk County, Mulberry, Auburndale or others who need to dispose of effluent are some of the most viable remaining options available to the City to reduce potable water consumption.

#### **FUTURE DEMAND & LEVEL OF SERVICE:**

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Table IV-1 outlines potable water needs for the City of Lakeland through 2020. The level of service standard is not to exceed 150 gpd per capita as adopted by the City in 2000 and reiterated in 2003 as a Special Condition in the existing Water Use Permit for an agency within the Southern Water Use Caution Area (SWUCA). This requirement of 150 gpd/capita is consistent with the Public Supply guideline for per capita water use as published in the Southwest Florida Water Management District's SWUCA II Rules adopted January 2007 in the "Basis of Review for Water Use Permit Applications", (Water Use Permit Information Manual), Section 3.6. and Section 8, page 114, of the SWFWMD Southern Water Use Caution Area (SWUCA) Recovery Strategy, March 2006 Final Report.

It is important to recognize that the minimum level of service standard is a standard used to indicate the minimum, not maximum, volume of water that the City agrees to provide to a user on a daily basis. The level of service is needed to plan capital facility capacity needs for Lakeland's potable water service system. Level of service, then, is needed to ensure an adequate water supply to new users needing to connect to the system as well as for current users. Potable water consumption is how much is actually used (drunk, flushed or otherwise consumed) by those receiving the water. Clearly, while water consumption and level of service are affected by each other, they are not the same. Therefore, water consumption targets can and should be separated from level of service standards.

It is also very important to recognize that Lakeland's level of service for potable water addresses both residential and non-residential consumption needs. Non-residential water use is about 23 percent of total water sales and residential comprises about 63 percent. The Lakeland Water Department indicates that, using SWUCA methodology to calculate current per capita water use as per the 2006 Southwest Florida Water Management District's "Public Supply Per Capita Water Use Survey" (Form A), after subtracting significant non-residential water users' volumes, the per capita consumption was about 138 gpd/capita for customers of the Lakeland Water Service Area (includes customers outside the City limits).

Table IV-1 projects only the needs of the incorporated area of the City. This does look at population driven water needs, but using a per capita demand figure that is higher than the actual demand per person; that is, the 150 GPD is intended to estimate non-residential potable water needs as well as residential needs.

**TABLE IV-1  
PROJECTED WATER NEEDS: 2005- 2020  
CITY OF LAKELAND CORPORATE LIMITS**

YEAR	POPULATION	PROJECTED DAILY DEMAND (GPD/CAPITA)	TOTAL DAILY DEMAND (MGD)
2005	89,562	150	13.4
2010	95,500	150	14.3
2015	101,400	150	15.2
2020	110,300	150	16.5

**Source:** City of Lakeland, Community Development Department, 2009.

Table IV-2 outlines residential potable water demand for the anticipated Lakeland Water Service Area through 2020. Since the water service area for the Water Department and the planning area for the Comprehensive Plan are not the same, the service area population projections from the City of Lakeland, Department of Water Utilities do not match planning area projections. The Water Department’s calculations for the Lakeland Water Service Area include the total water use (residential and non-residential) projections and look at water losses and export water.

The projections for the Lakeland Water Service Area were arrived at through a process of averaging several formal forecast methodologies including that used by the SWFWMD for its Regional Water Supply Plan or RWSP as adopted in November 2006. City water pumping data and per capita demand for year 2007 reflects actual data for that year. The City estimates also considered water losses and water exports. These figures correspond to the accepted water management district methodology for calculating water data.



Water Meter

For projection years of 2010, 2015 and 2020 estimates were made using BEBR-based population projection methodologies and arriving at more conservative (i.e., lower) population projections than those found in the adopted SWFWMD RWSP. For future year estimates, the City used the maximum value for per capita as allowed in the designated Southern Water Use Caution Area (SWUCA) to understand and be prepared for the worst case scenario. Per capita values can vary widely year to year depending on rainfall amounts. However, the City fully intends to continue its conservation and re-use strategies as discussed herein which should continue to lower our actual per capita value.

**TABLE IV-2  
AVERAGE AND PEAK WATER USE PROJECTIONS: 2007-2020  
LAKELAND WATER SERVICE AREA**

YEAR	POPULATION	ESTIMATED PER CAPITA DEMAND	INITIAL AVERAGE ANNUAL MGD	EXPORTED WATER & TREATMENT LOSSES	TOTAL PUMPING ANNUAL MGD	PEAK MONTH MGD
2007	180,081	133.14	23.98	0.743	24.72	29.39
2010	189,051	150	28.36	0.700	29.06	34.87
2015	205,690	150	30.85	0.700	31.55	37.86
2020	222,750	150	33.41	0.700	34.11	40.94

Source: City of Lakeland, Water Utilities Department, 2008.

Additional supporting data is found in Table IV-3 and outlines the potable water demand for all types of users, residential and non-residential, municipal, electric, resales and annual water losses. This data reveals a higher than average non-residential water demand and a lower than average water loss experience.

**TABLE IV-3  
ESTIMATED WATER USE BY ACCOUNT TYPE  
LAKELAND WATER SERVICE AREA**

ACCOUNT TYPE		AVERAGE # OF CUSTOMER ACCOUNTS	WATER SALES PER YEAR (1000 GALLONS)	% SALES
RESIDENTIAL	Inside	27,339	3,799,606	40.05%
	Outside	18,273	2,185,795	23.04%
	TOTAL	45,612	5,985,401	63.09%
NON-RESIDENTIAL	Inside	4,136	1,788,683	18.85%
	Outside	1,576	392,183	4.13%
	TOTAL	5,712	2,180,866	22.99%
SALES FOR RESALE	Polk County	5	110,139	1.16%
	Polk County Standby	3	945	0.01%
	Skyview Utilities	6	55,145	0.06%
	Aqua Source Utilities	2	47,556	0.50%
	Auburndale Standby	1	2,658	0.03%
	Plant City Standby	2	36,146	0.38%
	TOTAL	19	252,589	2.66%
MUNICIPAL	TOTAL	527	285,453	3.01%
UTILITY USES & LOSSES (Not billed)			711,063	7.49%
ELECTRIC DEPT.	Larsen Plant	4	30,324	0.32%
	McIntosh Plant	4	26,503	0.28%
	All Other	39	14,421	0.15%
	TOTAL	47	71,248	0.75%
TOTAL CUSTOMERS		51,917	9,486,620	

Source: City of Lakeland Water Utilities Statistics Fiscal Year 2005-2006.



The residential use, 63%, and non-residential use, 23%, total 86% of all water sales within the water service area. Other uses besides Sales for Resale (3%) are relatively minor. Water losses consist of water used for things like fighting fires, flushing new utility lines for subdivisions or businesses under construction, unauthorized use, system leaks, and other losses. Water losses average about 7.5% with anything under 10% considered “good” performance for a utility (the industry norm is approximately 15%.)

Probably one of the most important things to happen to water planning has been the need to account for not only normal or incremental water customer growth based on historical trends and Bureau of Economic and Business Research (BEBR) projection type forecasts, but also the need to account for growth-management based development commitments. As local governments make commitments to land development projects at the time of concurrency, which is typically at time of site plan or plat, prior to building permit approval, they have had to reserve and track trips on roadway segments. They now also have to reserve estimated allocations for potable water, per Senate Bill 360, passed in 2005 by the Florida Legislature. This means local governments must track potable water amounts that are committed to both residential and non-residential projects that are typically at the engineering plan approval stage. Where the new commitment is for an unexpectedly large development such as a Development of Regional Impact or DRI, the water demand will likely exceed anything projected in annual growth estimates based solely on historical trends which BEBR’s estimates tend to produce. As the estimated potable water demands for concurrency level projects are totaled, that total represents the “committed” water flow, not yet being pumped at the City’s water treatment plants. Typically these committed flows do not represent or include irrigation needs; due to the constrained nature of water resources, the City asks each developer to make every effort to utilize an alternate water source for irrigation needs and to phase development wherever possible.

The City Water Utility receives new water requests weekly within its water service territory, i.e., the geographic service area within the City and a portion of the unincorporated area. Thus, point in time committed flows do not represent all growth demands. In fact, the City had a growing waiting list for water requests above and beyond the list of committed water requests due to its delayed 2004 water use permit renewal issues, reinforcing the point that incremental growth is continuous.

Normal population growth, added to normal non-residential/business growth, accounts for the incremental growth that is the subject of the typical projection methodology recognized by the Water Management District and University of Florida’s Bureau of Economic and Business Research (BEBR). Therefore, our Water Utility staff made projections for normal growth using this accepted methodology. However, committed capacity for large, new projects may need to be added to this normal incremental growth projection since it may exceed historical trend projections. This is similar to the methodology used for many years in transportation planning where modelers trying to project future roadway demands consider existing road capacity minus reserved trips and projected annual (incremental) estimated growth to determine available capacity.

Similarly, water projections must consider at least three factors to ascertain future demand for the planning period:

1. existing demand (average flows);
2. reserved or committed demand; and
3. projected annual demand (from incremental growth)

**City Water Permit:** For the 1990-2000 period, the City of Lakeland had a consumptive use permit for the Northwest and Northeast Wellfield allowing withdrawal of an average daily flow of 28.03 MGD; historically some portion of this total was technically allowed to be withdrawn from the Northeast Wellfield. The maximum design capacity of the Thomas B. Williams Treatment Plant is 51 MGD. The maximum design capacity of the C. Wayne Combee Treatment Plant is 8 MGD.

In March 2008, the SWFWMD Governing Board approved a new Water Use Permit for the City of Lakeland that reflected findings from a January 2008 judicial proceeding (Division of Administrative Hearings Case No. 07-564.) The new water use permit issued by the SWFWMD authorized the City to pump 4 MGD from the Northeast Wellfield and 28 MGD from the Northwest Wellfield, i.e. for a total of up to 32.02 MGD withdrawals. However, in December 2008, the permit was revised to permit up to 35.03 MGD through 2028 contingent upon the an agreement to send treated wastewater effluents to the Southwest Polk TECO power generation facility to offset ground water withdrawals related to TECO's generator cooling process. Monthly pumping distribution from the City's facilities is limited to 28.03 MGD from the Northwest Wellfield, 3 MGD from the Combee Treatment Plant and 4 MGD from the Northeast Wellfield.

The City of Lakeland will continue to work with the SWFWMD to pursue adequate water supply resources to meet the Water Service Area's long term needs. As required by Florida Statute, this Potable Water Supply Sub-Element must also address water facility capital needs for a 10 year period; see Tables IV-4 through IV-8.

## **10-YEAR WATER SUPPLY PLAN**

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The City of Lakeland's 10-Year Water Supply Plan is a capital plan for developing water supplies for long-term demand. It identifies future capital projects and programs that are feasible which include the City's conservation strategy. Currently, the plan's primary focus is reuse and conservation.

Prior to adopting the Water Supply Plan the City has invested significant resources over the past 20 years to ensure sufficient water supply for residents and customers within the City water service area. The Northeast Wellfield and the C. W. Combee Water Treatment Plant have been developed at a total cost of \$25.91 million and have been operational since 2005. The C.W. Combee Water Plant has a total design capacity of 8 million gallons per day. Table IV-4 outlines the City's investment in potable water supply from 1989 to 2005.

**TABLE IV-4  
POTABLE WATER SUPPLY PROJECTS 1989-2005**

PROJECT	DATE COMPLETED	COST
Acquisition of NE Well Field Property	1989	\$2.24 Million
Drilling of NE Well Field and setting casings	1989	\$0.6 Million
Acquisition of C. W. Combee Water Treatment Plant Property	2000	\$0.574 Million
Pipe installation from NE Well Field to C.W. Combee Water Treatment Plant	2005	\$3.3 Million
Development/Construction of NE Well Field and C. W. Combee Water Treatment Plant	2005	\$19.2 Million
Total Cost		\$25.91 Million

Source: COL Water Department, 2007.

The Water Supply Plan currently has scheduled potable water projects to expand and upgrade the existing system. To provide new capacity for future demand additional upgrades to the C. W. Combee Water Treatment Plant are planned. The water management district is shifting its focus to alternative water sources and encouraging local governments that have the option to do the same pursuant to the 2006 Regional Water Supply Plan. At this time the City of Lakeland is studying the feasibility of alternative water sources. Table IV-5 outlines the 10-Year Water Supply Plan's potable water capital improvement schedule by fiscal year.

The following is a summary of the 10-Year Water Supply Plan's potable water capital projects:

- Northeast Plant Expansion (CW Combee WTP):** Major construction project to expand the total capacity of the 9.0 MGD WTP to 18.0 MGD. The existing "footprint" of the WTP allows for an additional High Service Pump, an additional Transfer Pump, an additional Softening Unit, a Higher Filter Rating, and perhaps an additional 5.0 MG Ground Storage Tank. This project is to be linked with new production wells mentioned above.

**TABLE IV-5  
POTABLE WATER SUPPLY PROJECTS**

PROJECT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Northeast Plant Upgrade (C.W. Combee WTP)					100,000					
TOTAL	0	0	0	0	100,000	0	0	0	0	0

Source: COL Water Utilities Department, 2010.

## ALTERNATIVE WATER SUPPLY

Similar to potable water supply projects, the efficient utilization of wastewater will play an important role in our overall water supply. As with increased demand for potable water there will be an increase in wastewater quantities that will be available for water re-use once such a system is implemented. Table IV-6 outlines wastewater projects included in the City's Water Supply Plan 10-Year Schedule of Projects by fiscal year.

The following is a summary of each of the 10-Year Water Supply Plan's wastewater capital projects related to potential water reuse, i.e., potential reclaimed water projects:

- TECO Wastewater Reuse Agreement:** In 2008, shortly after the adoption of the City's Water Supply Plan, the City negotiated an agreement with TECO to divert treated wastewater, which now flows into the Alafia River, a tributary of the Peace River, to the new Polk Power Station south of Mulberry. Using the treated wastewater averts the need for TECO to pump groundwater in order to cool the plant and meets the conditions of the Central Florida Coordination Area rules, and reduces City flows to the Alafia River. TECO and SWFWMD will fund the construction of pipes and pumps that will carry the water to the power plant. The waste water transmission system, estimated to cost \$60 million, is scheduled for completion in 2012.
- English Oaks:** The southwest portion of the wastewater service territory is deficient in collection or pipeline capacity. The City is actively constructing major force mains and pump lift stations. Due to the transmission line availability delay, growth in this area was also delayed.

**TABLE IV-6  
WASTEWATER RE-USE RELATED PROJECTS**

PROJECT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
TECO Wastewater Reuse		\$60,000,000*								
English Oaks Force Mains			\$1,500,000	\$1,500,000	\$2,000,000	\$8,000,000				

\*Note: Per the agreement with TECO this project is funded by TECO and SWFWMD.

Source: COL Water Department, 2010.

To meet State and Water Management District requirements to identify and plan for water supply alternatives to future ground water withdrawal, the City of Lakeland is continuously considering the feasibility and practicality of other potential alternative water supply projects and conservation programs, including but not limited to, the following projects:

- Auburndale Reuse Cooperative:** The City of Auburndale plans to expand its wastewater treatment capacity by 1 – 3 MGD, but is interested in a beneficial use instead of land application via a spray field located north of the city. The Williams

Holding Company is developing a large mixed-use development of regional impact and has donated land for the new FPU/I-4 campus which will develop independently but adjacent to the DRI. The Williams Company has proposed accommodating Auburndale's reuse for its irrigation demands. Since Auburndale's service territory is immediately adjacent to Lakeland's City Limits in which the William's property and FPU is positioned, Auburndale may provide bulk reuse water directly to FPU. However, implementation will depend on economic feasibility and approval from FDEP and SWFWMD.

Table IV-7 outlines the proposed scheduling and estimated cost of each of the alternative water supply projects.

**TABLE IV-7  
POTENTIAL ALTERNATIVE WATER SUPPLY PROJECTS**

PROJECT	ESTIMATED IMPLEMENTATION DATE	ESTIMATED COST	STATUS
Auburndale Reuse Tie-in	2013-2020	\$200,000	Allowed per Williams DRI & FPU agreements with COL

**Source:** COL Water Utilities Department, 2010.

This project is described in more detail in TSD IV-Four (Response letter to SWFWMD RWSP), found in the *Technical Support Document*. However, the Auburndale Re-use project would, if it occurred, be a direct purchase relationship with Williams/the user, not requiring City participation.

The final component to the 10-Year Water Supply Plan is capital investment in conservation projects. The following are capital projects planned to implement conservation programs:

- **Low Flow Shower Head/Aerator Replacement Program:** The City's Water Department provides low flow shower head/aerators to residents that voluntarily bring their conventional shower heads and aerators to the Lakeland Electric and Utility building in exchange. This program is estimated to cost approximately \$5,000 and is paid for through operations and maintenance funds.
- **Park Central Irrigation System:** The City's Parks and Recreation continues to convert all park facility irrigation systems to time-controlled irrigation to minimize water consumption.
- **SmartGrid Project:** The City's electric utility, Lakeland Electric, is implementing the installation of SmartGrid technology to replace its manual electric meter reading process. The system is being designed to accommodate the inclusion of water meter readings also. Although the City Commission only adopted the project funding for Lakeland Electric which included a federal grant, Water Utilities will deploy SmartGrid system-compatible water meters over time as funds are budgeted. Instead of only one water meter reading per month, hourly readings will be acquired

through the new system. This will allow the Water Utility to provide conservation-related services to both the Utility and its customers, including features such as:

- quicker detection of private plumbing leaks
- identifying improperly set irrigation timers
- inactive account water consumption are byproducts of the SmartGrid system

Table IV-8 outlines the programmed and estimated funding of each of the City’s water conservation programs.

**TABLE IV-8  
CONSERVATION PROGRAMS FUNDING**

CONSERVATION PROGRAMS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Low Flow Shower Head/Aerator Replacement Program	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Park Central Irrigation System Control						50,000				
SmartGrid Project	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
<b>TOTAL</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>55,000</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>

\*Note: TBD – To Be Determined

**Source:** COL Water Utilities Dept.; Parks Dept., 2010

Overall, limited options for alternative water supply exist within the Central Florida inland region and particularly within the Polk County area and Lakeland. As a non-coastal area, desalination of ocean or salt water is not an option. Aquifer storage recovery, ASR, as a water supply technique involves storage of potable or treated effluent water types underground. This technique is still somewhat experimental and often cost-prohibitive and may be subject to some environmental concern.

Treated wastewater, or effluent, is limited as an alternative for Lakeland due to substantial commitment of that effluent flow to the Lakeland Electric power plant system (see Table IV-9.) The primary option to re-use water for power plant cooling is groundwater; therefore, employing treated or reclaimed water as a substitute is, in the City’s opinion, a very valid water conservation strategy. The Hines Energy complex in south Polk County has historically sought reuse water from several municipalities in the area for this same reason.

Lakeland Electric is the primary source for electrical power supply for all of the City and Metro Lakeland which includes portions of unincorporated Polk County, and provides some power to a larger, regional municipal grid system so the local reuse water that cools the power plant is utilized to help meet local and regional energy demands. Illustration IV-4 and Table IV-10 (below) demonstrate the Lakeland Electric service area and the projected

population for the same. Other effluent flows are sent to the City's artificial wetlands located off of S.R. 60, south of Lakeland, which discharges into the Alafia River system if not diverted to the TECO power plant. That discharge augments the flows/volumes of the Alafia, which is used by Tampa Bay Water Authority as one of its potable water sources. Therefore, the City's reuse water serves a larger regional water need already.

**TABLE IV-9  
LAKELAND EFFLUENT USES**

MONTH	REUSE WATER TO MCINTOSH POWER PLANT				TREATED WW SENT TO WETLANDS						WETLANDS EFFLUENT DISPOSAL TO ALAFIA RIVER		
	Glendale	Northside	TOTAL		Glendale WWTP		Polk County Discharge Intertie		TOTAL		TOTAL		
	WWTP	WWTP	Monthly	DAY	Monthly	AVG DAY	Monthly	DAY	Monthly	DAY	Monthly	#	AVG DAY
	(MG)	(MG)	(MG)	(MGD)	(MG)	(MGD)	(MG)	(MGD)	(MG)	(MGD)	(MG)	Days	(MGD)
Oct-06	72.85	98.45	171.30	5.53	204.82	6.607	3.57	0.12	208.39	6.72	0.00	31	0.00
Nov-06	36.14	94.97	131.11	4.37	211.38	7.046	21.62	0.72	233.00	7.77	0.00	30	0.00
Dec-06	39.87	96.84	136.71	4.41	232.93	7.514	24.78	0.80	257.71	8.31	0.00	31	0.00
Jan-07	39.45	108.26	147.71	4.76	236.00	7.613	21.58	0.70	257.58	8.31	0.00	31	0.00
Feb-07	55.62	94.27	149.89	5.35	212.97	7.606	19.30	0.69	232.27	8.30	320.54	28	11.45
Mar-07	82.61	90.06	172.67	5.57	197.22	6.362	9.48	0.31	206.70	6.67	420.73	31	13.57
Apr-07	56.51	54.50	111.01	3.70	233.94	7.798	0.00	0.00	233.94	7.80	0.00	30	0.00
May-07	37.50	74.80	112.30	3.62	228.50	7.371	0.12	0.00	228.62	7.37	0.00	31	0.00
Jun-07	90.45	98.56	189.01	6.30	178.23	5.941	6.63	0.22	184.86	6.16	0.00	30	0.00
Jul-07	107.34	100.88	208.22	6.72	166.66	5.376	22.97	0.74	189.63	6.12	0.00	31	0.00
Aug-07	123.35	100.71	224.06	7.23	174.69	5.635	10.16	0.33	184.85	5.96	141.52	31	4.57
Sep-07	112.24	100.61	212.85	7.10	188.70	6.290	23.09	0.77	211.79	7.06	78.36	30	2.61
FY Totals	853.93	1,112.91	1,966.84	5.39	2,466.04	6.756	163.30	0.45	2,629.34	7.20	961.15	365	2.63

Source: COL Water Utilities Department, 2007.





**TABLE IV-10  
LAKELAND ELECTRIC SERVICE AREA  
2020 PROJECTED POPULATION**

YEAR	POPULATION
2007	258,681
2008	262,085
2009	266,163
2010	270,292
2011	273,989
2012	277,585
2013	281,112
2014	284,750
2015	288,313
2016	291,563
2017	294,718
2018	297,875
2019	301,087
2020	304,326

**Source:** Lakeland Electric, 2006

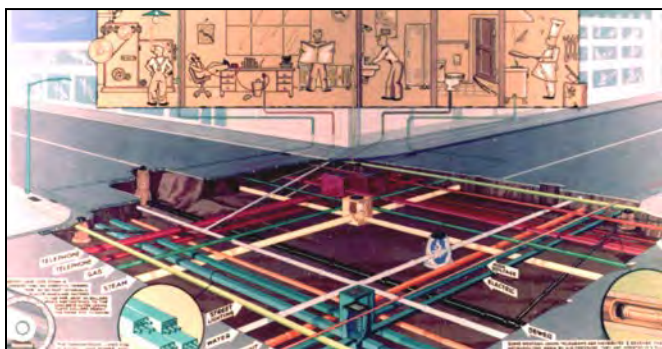
The chief alternative or option for the City of Lakeland in regard to water supply is that of additional water conservation measures, rules and programs. Please see the discussion of the City’s Water Conservation Plan as found in the Conservation Element of the City’s Comprehensive Plan and in its *Technical Support Document*, TSD VI-Two.

The City and/or Water Utility participates in “intergovernmental coordination” dealing with water supply and resource issues. It is part of the Heartland Alliance, a non-authority made up of entities within Polk, Highlands, Hardee, and Desoto Counties. A study was performed on behalf of this alliance to identify future water demands and possible resources to meet those demands. The Utility has a presence at the Polk County Water Policy Advisory Committee meetings as well as the Public Supply Advisory Committee of the Southwest Florida Water Management District. A water official regularly attends the Basin Board meetings of the Water Management District.

The Governor has requested the three water management districts which control the Central Florida region begin to collectively organize their regulations to address the growth and future water demands of the Central Florida area. The Central Florida Coordination Area (CFCA) has been identified by these Water Management Districts. They began the process of developing proposed rules which would restrict access to groundwater for demands past the year 2013. To date, water users within Polk County and a small portion of Lake County are the only ones within the SWFWMD proposed to come under CFCA jurisdiction. However, as part of drafting the proposed rules, it has been determined that existing areas in Polk County within the Southern Water Use Caution Area (SWUCA) would not be subject to the CFCA rules.

## WELLFIELD PROTECTION

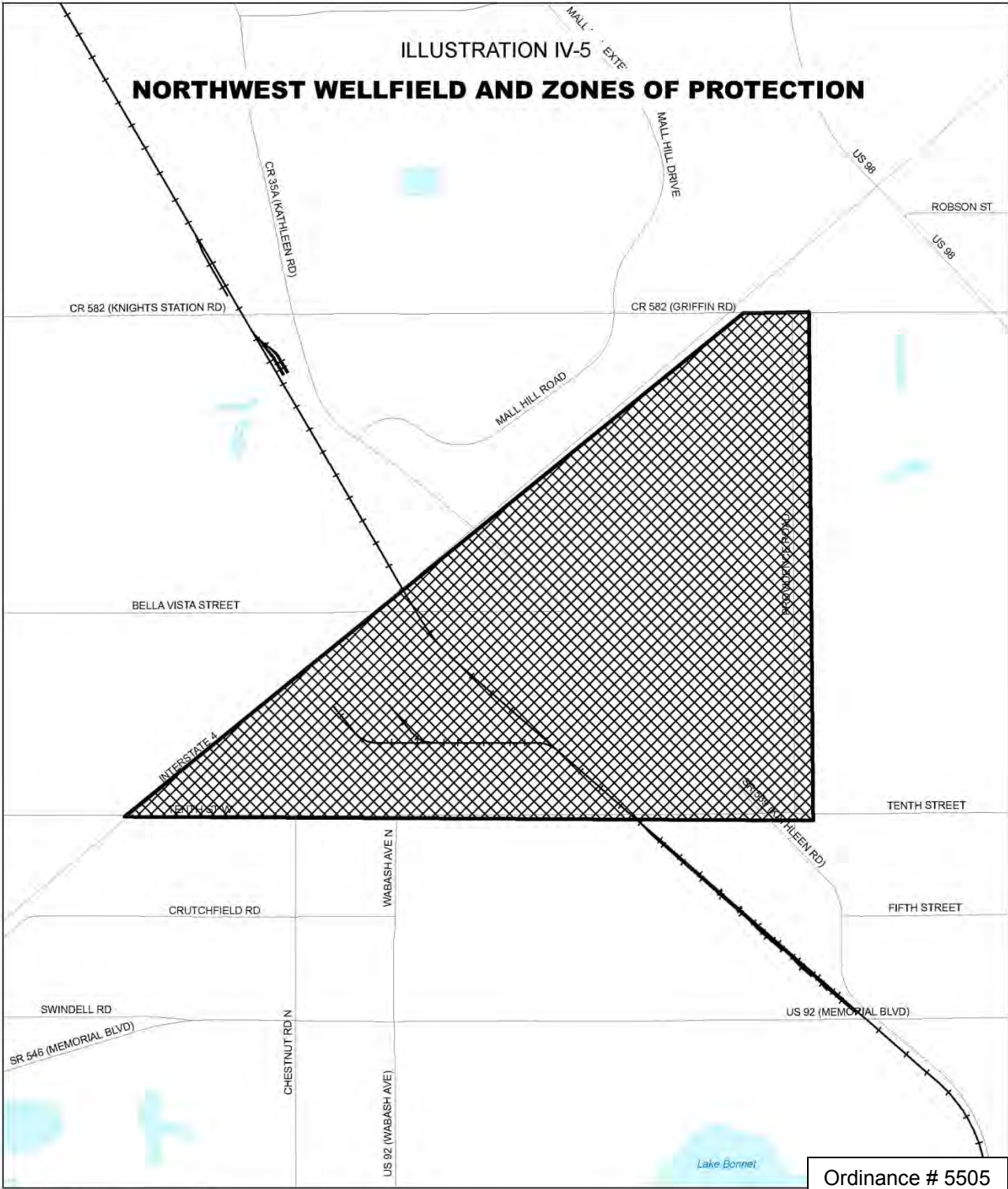
The area around the Northwest Wellfield is highly urbanized. Due to this high level of urbanization and proximity to Interstate 4, establishing sufficient zones of protection to prevent future contamination has become increasingly difficult. While the City owns the land containing each of the wells, the surrounding site is part of a platted business park. The individual platted lots are approximately 350 feet in depth. The City has established in its land development regulations a 500-foot setback and a requirement for a monitoring plan for all businesses with restricted-use operating permits to operate within the protection zone. This has become the City's primary tool for protection of the wellfield. The zones of protection for the Northwest Wellfield are shown in Illustration IV-5.



In early 1989, following completion of hydrological studies and SWFWMD approval of a water use permit, the City of Lakeland purchased an 883-acre tract located approximately one mile north of the intersection of Interstate 4 and State Road 33. The Northeast Wellfield site, depicted in Illustration IV-6, consists mostly of pasture and wetland areas.


There are five wells at this site. Use of the Northeast Wellfield has required funding for transmission lines, pumps, and an off-site water treatment plant. This funding had been budgeted in the City's capital improvements plan (CIP) of the Capital Improvements Element. This water treatment plant and wellfield is now constructed and operational. These new facilities cost a total of \$31,000,000. The need for the Northeast Wellfield had been tempered over the last decade by water conservation/reduced pumpage as encouraged by regulations for the Southern Water Use Caution Area (SWUCA). Use of the Northeast Wellfield together with the Northwest Wellfield basically requires a cooperative effort to not exceed the requirements of the City's combined water use permit for the two wellfields.

The addition of the Northeast Wellfield to the City's water supply system helps ensure that the water demands of the service area can be met for many years, and add a large measure of ensured reliability by acting as a back-up wellfield should the City need to reduce pumpage at the Northwest Wellfield or deal with any contamination issues. The NE Well Field is very rural compared to the NW Well Field which is located near a large urban population and businesses. In an era of threats of acts of bioterrorism, it is in the interest of the City's approximate 52,000 customer accounts and more than 170,000 water service population to have more than one single area of aggregated water wells and more than one treatment facility. In addition, the rural nature of the site will help ensure that the wellfield is guarded against potential contaminants. A safe, reliable water supply is essential for service to the growing population in the water service area.



Source: City of Lakeland Water Department, 2014



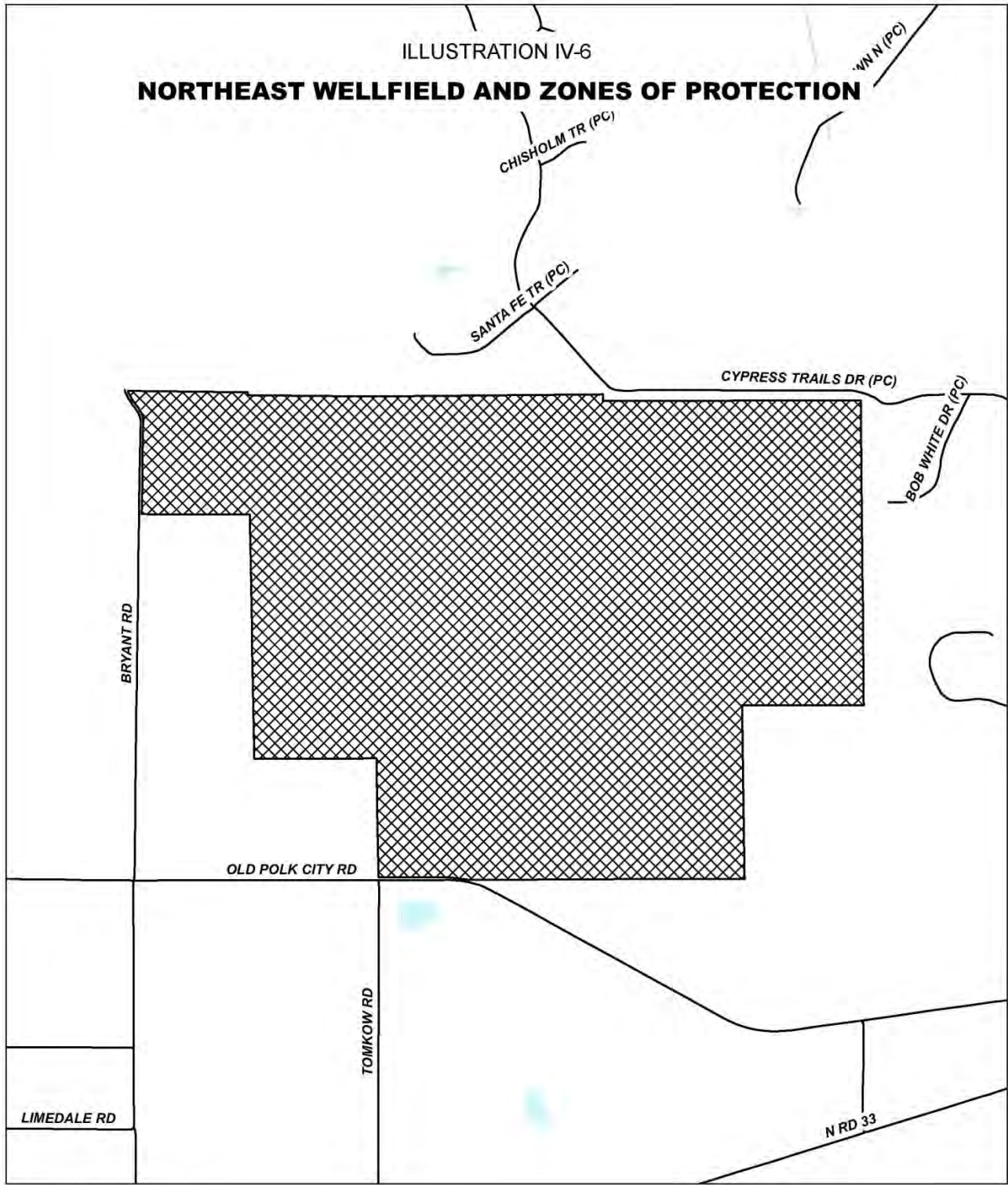
 NW Wellfield (general location)  
ZOP=500 radial feet



k:\cd\maps\esri\comp\_plan\infrastructure\IV\_5 NW Wellfield.mxd


ILLUSTRATION IV-6

**NORTHEAST WELLFIELD AND ZONES OF PROTECTION**



Source: City of Lakeland Water Department, 2014



 NE Wellfield (general location)  
ZOP=500 radial feet



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## SUMMARY OF FINDINGS

An important first step in the preparation of this Infrastructure Element was an inventory and analysis of Lakeland's existing potable water, wastewater, solid waste, stormwater and natural groundwater aquifer recharge facilities and functions. The primary purpose of this inventory and analysis was to determine how well the existing infrastructure system is meeting present needs and how well it can be expected to meet future needs

## POTABLE WATER

The City of Lakeland's raw water supply source for the water service area is drawn from a network of multiple deep wells between the Northwest Wellfield and Northeast Wellfield. As of March 2008, the permitted average daily flow for Lakeland's entire potable water system is approximately 35.03 million gallons per day (MGD).

### EXISTING SERVICE SYSTEMS AND DEMANDS

The City of Lakeland water service area has historically extended well beyond the city limits of Lakeland. Illustration IV-1 shows the water service area as of 2016, including the area formerly served by Skyview Utilities in East Lakeland. The existing water service planning area contains approximately 84,186 acres, or 131.5 square miles. However, the planning area is not, in all cases, the same as where service currently exists, but is a potential service area.



TB Williams Water Treatment Plant  
Administration Building

Since 1982, the service area has been supplied water from the Northwest Wellfield and the Thomas B. Williams treatment plant; see current water facilities Illustration IV-2. Water treatment occurs at the T.B. Williams Water Treatment Plant located on the east side of Kathleen Road. The C. Wayne Combee Water Treatment Plant located on Old Combee Road began operation in October 2005. This newest water treatment plant was necessary to provide redundancy for the City's potable water system and to treat and serve water pumped from the NE Wellfield. Potable water treatment consists of lime softening, water stabilization, filtration, fluoridation, chlorination and disinfection. Periodic system upgrades to both the treatment plant and the water distribution system should extend the facility's life span through 2040 or later. Pump stations are expected to adequately perform through 2040. There are no current water quality problems; all finished water quality indicators meet or exceed state standards.

After water is treated, it is pumped to customers through a network of over 996 miles of pipeline, ranging in diameter from 2 to 54 inches, or the water is stored for peak use times. Primary storage for the system consists of three 5-million-gallon pre-stressed concrete tanks.

Elevated storage tanks are no longer used. There is also a 3-million-gallon ground storage tank at the Lakeland Highlands Pump Station.

The City's current Water Use Permit was approved by SWFWMD in March 2008 for 30.2 MGD and was revised in December 2008 for 35.03 MGD.



Combee Treatment Plant Under Construction

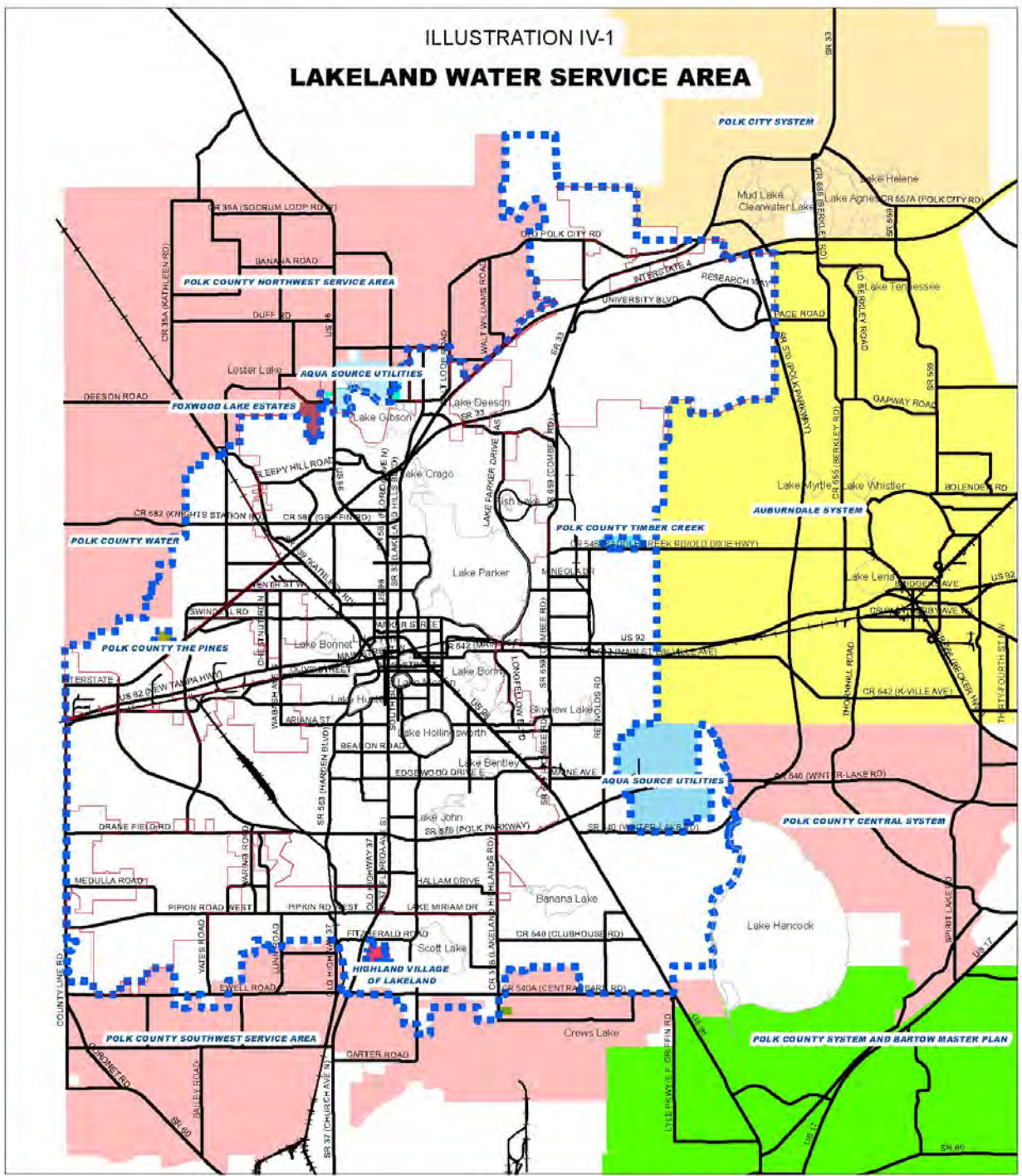
The City now has a total design capacity of 59 MGD (51 MGD for Williams WTP and 8 MGD for Combee WTP.) The SWFWMD permitted withdrawals are for only 28.03 MGD from the Northwest Wellfield, 3 MGD from the Combee WTP and 4 MGD from the Northeast Wellfield. According to the City Water Utilities, approximately seventy-one percent (71%) of plant demand serves the incorporated area with the remainder, 29%, serving the unincorporated area.

The existing demand on Lakeland's water system, with a 2016 water service area functional population estimate of 173,441 persons, was about 20.949 MGD Annual Average Demand and 26.73 MGD on a Peak Monthly basis. These estimates include the population served by the former Skyview private water utility, just east of incorporated area, that was taken over by the City after years of operational and maintenance challenges became a burden to the operator and the community it served. The estimated population served by the former Skyview utility was 2,127 in 2015.

The City of Lakeland Water Division operates as a regional water supplier in that it provides service to unincorporated areas such as Highland City as well as selling water to private franchise systems, including Polk County Utilities and Florida Government Utility Authority (formerly AquaSource Utilities). In addition to these systems based on public supplies, there are a number of large private water systems in the Lakeland water service planning area, as shown in Illustration IV-3.

In early 2016, Lakeland joined 15 other public water utilities within the County to form the Polk Regional Water Cooperative (PRWC). The primary purpose of the PRWC is to develop water supplies to meet the projected maximum demand of 46 MGD by 2035 in Polk County. Lakeland's portion of the future demand could be up to approximately one-third of the total demand. The City's Water Utility Department has taken a leadership role in this countywide effort to qualify for state and water management district funding and to jointly issue bonds to finance the estimated water supply development needed over the next decade. According to the SWFWMD 2015 Regional Water Supply Plan, the countywide supply development could cost up to \$600 million. The PRWC will be shifting attention from traditional water sources to alternative water supplies and conservation as a result of efforts by the state regulatory agencies, such as SWFWMD and DEP, to restrict additional unsustainable groundwater withdrawals that may negatively impact the environment. Potential PRWC projects that will mutually benefit Lakeland's water supply are found in Table IV-8 under the Alternative Water Supply section.

# ILLUSTRATION IV-1 LAKELAND WATER SERVICE AREA



City Limits  
 Lakeland Water Service Area



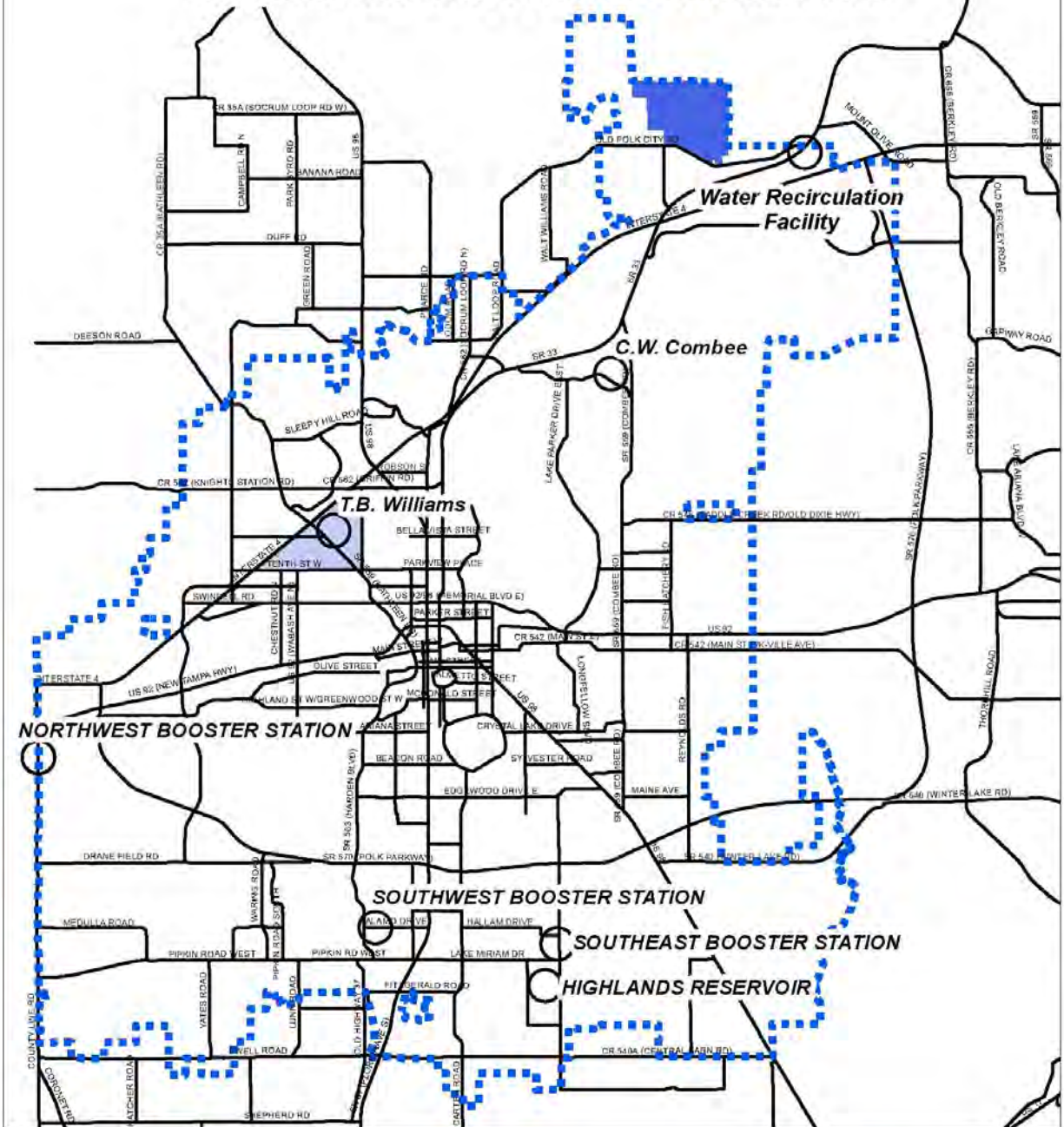
**ORD #5643**  
**Adopted 7/5/17**

Source: Lakeland Water/Water/Water Department, 2016 Document Path: Z:\Comp\_Plan\Infrastructure\IV-1 Water Service Areas.mxd



ILLUSTRATION IV-2

**LAKELAND WATER SYSTEM EXISTING FACILITIES**



- Northeast Wellfield
- Northwest Wellfield

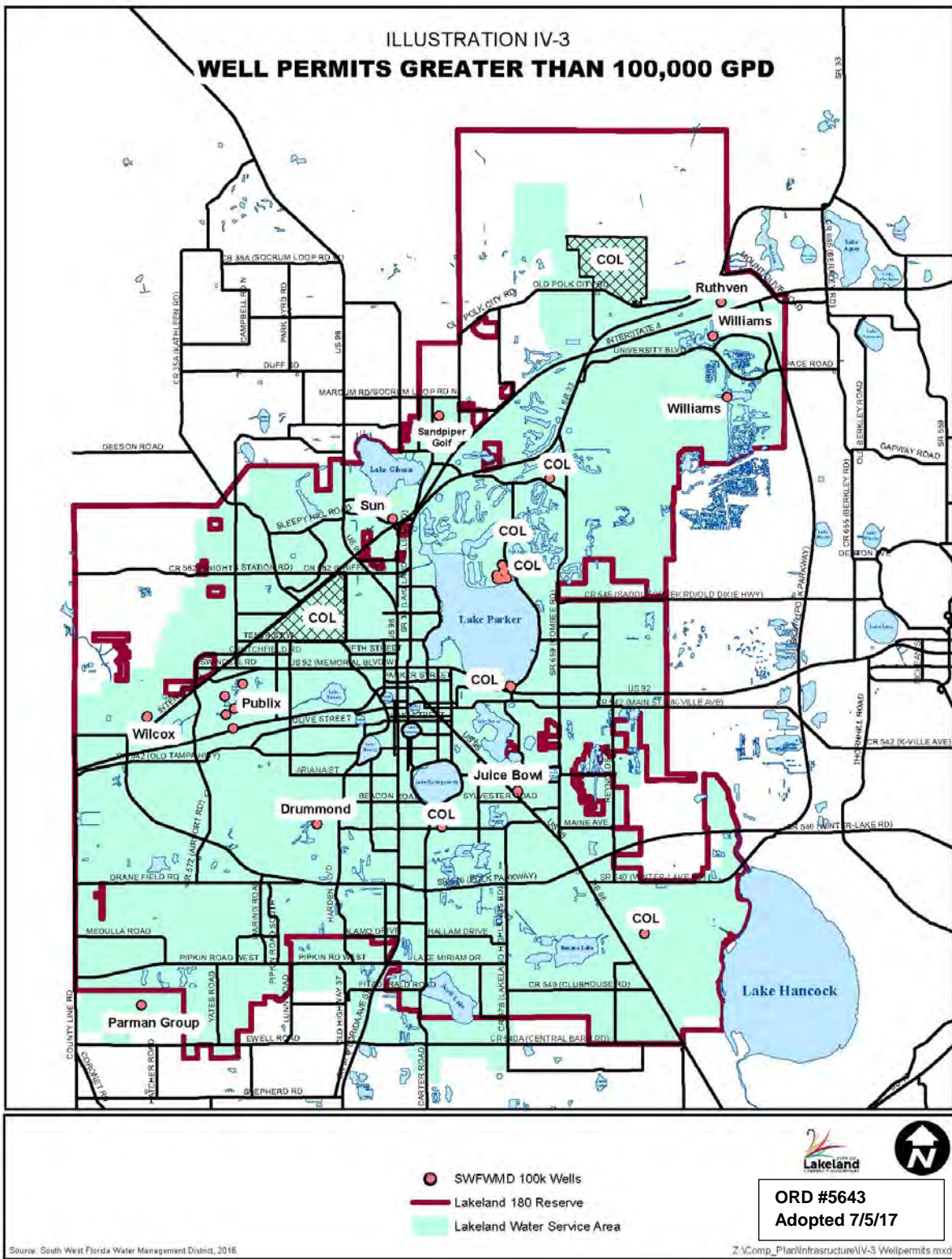


**ORD # 5643**  
**Adopted 7/5/17**

Source: Lakeland Water/Waster/Water Department, 2016

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ILLUSTRATION IV-3  
**WELL PERMITS GREATER THAN 100,000 GPD**



## FUTURE CONDITIONS

**Water Use and Conservation:** The top priority of the City of Lakeland is to provide customers within the corporate limits with an adequate and safe supply of potable water. Once the needs of City residents are met, surplus supplies are available for customers outside the corporate limits. The municipal water system currently provides potable water for residential, commercial and industrial uses. In order to ensure the availability of an adequate supply of quality potable water to meet demand, projections must be made of the future service area population.

**Table IV-1**

Fiscal Year	Functional Population	GPCPD
1995	143,455	147
2000	152,170	163
2005	166,345	141
2010	163,213	123
2015	171,951	117

Source: City of Lakeland, Water Utilities, 2016

As shown in Table IV-1, the functional service population has increased over the previous two decades, while average gallons per capita per day consumption has trended down from 147 gallons in 1995 to 117 gallons in 2015. This reduction can be attributed, in part, to increased education and awareness of the need to practice water conservation. For the purpose of projecting future potable water needs, it is estimated that per capita consumption will continue to show a gradual decrease. The City currently has achieved the targets of per capita domestic (residential) water consumption reduction set forth in this element and continues to pursue opportunities to meet future goals. The goal of reduced consumption will be achieved through the continued implementation of a City-wide water conservation plan, including the implementation of technological advances contributing to water conservation, and heightened public awareness of the significance of the decreasing supply of quality potable water and increased water reuse projects.

Key tools for water conservation have included implementation of an inverted-block rate structure for potable water consumption implemented in 1998 and modified in 2006. This encourages water conservation by increasing the cost of the service as consumption increases. For example, the inverted rate increases the costs for water for residences that use over 7,000 gallons per month, with a significant increase if consumption exceeds 19,000 gallons per month. Additional rate increases are likely to be proposed over time as one of many ways to support water conservation.

An increasing quantity of wastewater effluents are being utilized to offset the use of water supplies for cooling electrical generation facilities. Lakeland has reused treated wastewater to cool the Lakeland Electric Macintosh Power Plant since 1982 and began sending additional effluents to the Tampa Electric Power Company (TECO) South Polk County Power Station in 2014. A very small quantity of wastewater effluents is sent to the Matheson Tri Gas medical

chemical production facility. In Fiscal Year 2015-16, the Macintosh Power Plant received approximately 1,809 million gallons of effluents and TECO received 1,709 million gallons as shown in Table IV-9. TECO has indicated that it has the potential to receive larger quantities at their Polk County facilities as they expand in the future.

Other conservation efforts have included use of Florida-Friendly landscaping at City parks, City Hall, and other City properties, and increasing use of shallow aquifer wells to meet irrigation needs of new development wherever feasible. Regulatory action has been taken to require the inclusion of reuse water systems in districts that may be established by the City as non-potable irrigation water service areas. In addition to conservation measures, the City also implements a number of water conservation strategies such as promoting the use of low flow water devices, rain sensors, and public educational programs. Details of water conservation strategies can be found in the Conservation Element of the Comprehensive Plan and in the *Technical Support Document*, TSD VI-Two.



Lakeland Power Plants

Reducing water consumption among residents takes time. The City did not achieve a reduction in use from 147 gpd/capita to about 117 gpd overnight; it took from 1995 to 2015, or twenty years. In addition, like many things, reducing water consumption below a certain level is expected to become very difficult and perhaps expensive to achieve per City water officials. This reflects the principle of diminishing returns; that is, beyond a certain point, water demand reductions will be slow to occur and only very expensive options will render any additional change/reduction.

Given the City uses all of its wastewater effluent to meet the City and now TECO power plant cooling needs, the City by itself has no meaningful supply of public-access reuse/reclaimed water readily available to substitute for potable water for customers' irrigation needs. As a result, the per capita rate in the Lakeland water service area may remain higher than communities/utilities that have that option. Thus, the use of higher water fees/rates, pursuit of water conservation initiatives, enforcement of watering restrictions and formulation of reuse (reclaimed) water cooperatives with Polk County, Mulberry, Auburndale or others who need to dispose of effluent are some of the most viable remaining options available to the City to reduce potable water consumption.

#### **FUTURE DEMAND & LEVEL OF SERVICE:**

Table IV-2 outlines potable water needs for the City of Lakeland through 2030. The minimum level of service standard is not to exceed 150 gpd per capita as adopted by the City in 2000 and reiterated in 2003 as a Special Condition in the existing Water Use Permit for an agency within the Southern Water Use Caution Area (SWUCA). This requirement of 150 gpd/capita is consistent with the Public Supply guideline for per capita water use as published in the

Southwest Florida Water Management District’s SWUCA II Rules adopted January 2007 in the “Basis of Review for Water Use Permit Applications”, (Water Use Permit Information Manual), Section 3.6. and Section 8, page 114, of the SWFWMD Southern Water Use Caution Area (SWUCA) Recovery Strategy, March 2006 Final Report.

It is important to recognize that the minimum level of service standard is a standard used to indicate the minimum, not maximum, volume of water that the City agrees to provide to a user on a daily basis. The level of service is needed to plan capital facility capacity needs for Lakeland’s potable water service system. Level of service, then, is needed to ensure an adequate water supply to new users needing to connect to the system as well as for current users. Potable water consumption is how much is actually used (drunk, flushed or otherwise consumed) by those receiving the water. Clearly, while water consumption and level of service are affected by each other, they are not the same. Therefore, water consumption targets can and should be separated from level of service standards.

It is also very important to recognize that Lakeland’s level of service for potable water addresses both residential and non-residential consumption needs. Non-residential water use is about 23 percent of total water sales and residential comprises about 63 percent. The Lakeland Water Department indicates that, using SWUCA methodology to calculate current per capita water use as per the 2006 Southwest Florida Water Management District’s “Public Supply Per Capita Water Use Survey” (Form A), the per capita consumption was about 110 gpd/capita for customers of the Lakeland Water Service Area (includes customers outside the City limits).

Table IV-2 projects only the needs of the incorporated area of the City. This does look at population driven water needs, but using a per capita demand figure that is higher than the actual demand per person; that is, the 150 GPD is intended to estimate non-residential potable water needs as well as residential needs.

**TABLE IV-2  
PROJECTED WATER NEEDS: 2015-2030  
CITY OF LAKELAND CORPORATE LIMITS**

YEAR	POPULATION	PROJECTED DAILY DEMAND (GPD/CAPITA)	TOTAL DAILY DEMAND (MGD)
2015	101,517	150	15.2
2020	108,300	150	16.2
2025	112,800	150	16.9
2030	117,200	150	17.6

**Source:** BEBR 2016 projection; Lakeland Community Development Dept. 2016

Table IV-3 outlines residential potable water demand for the anticipated Lakeland Water Service Area through 2020. Since the water service area for the Water Department and the planning area for the Comprehensive Plan are not the same, the service area population

projections from the City of Lakeland, Department of Water Utilities do not match planning area projections. The Water Department’s calculations for the Lakeland Water Service Area include the total water use (residential and non-residential) projections and look at water losses and export water.

The projections for the Lakeland Water Service Area were arrived at through a process of averaging several formal forecast methodologies including that used by the SWFWMD for its Regional Water Supply Plan or RWSP as adopted in November 2015. City water pumping data and per capita demand for year 2007 reflects actual data for that year. The City estimates also considered water losses and water exports. These figures correspond to the accepted water management district methodology for calculating water data.



Water Meter

For projection years of 2020, 2025, and 2030 estimates were made using BEBR-based population projection methodologies and arriving at more conservative (i.e., lower) population projections than those found in the adopted SWFWMD RWSP. For future year estimates, the City used the maximum value for per capita as allowed in the designated Southern Water Use Caution Area (SWUCA) to understand and be prepared for the worst case scenario. Per capita values can vary widely year to year depending on rainfall amounts. However, the City fully intends to continue its conservation and re-use strategies as discussed herein which should continue to lower our actual per capita value.

**TABLE IV-3  
AVERAGE AND PEAK WATER USE PROJECTIONS: 2015-2030  
LAKELAND WATER SERVICE AREA**

YEAR	POPULATION	ESTIMATED PER CAPITA DEMAND	INITIAL AVERAGE ANNUAL MGD	EXPORTED WATER & TREATMENT LOSSES	TOTAL PUMPING ANNUAL MGD	PEAK MONTH MGD
2015	171,951	117	20.15	0.5	20.65	25.240
2020	185,480	150	27.82	0.7	28.52	34.224
2025	194,435	150	29.17	0.7	29.87	35.844
2030	205,039	150	30.76	0.7	31.46	37.752

Source: City of Lakeland, Water Utilities Department, 2016.

Additional supporting data is found in Table IV-4 and outlines the potable water demand for all types of users, residential and non-residential, municipal, electric, resales, municipal, irrigation, and annual water losses. This data reveals a higher than average non-residential water demand and a lower than average water loss experience.

**TABLE IV-4  
ESTIMATED WATER USE BY ACCOUNT TYPE  
LAKELAND WATER SERVICE AREA**

ACCOUNT TYPE		Average # of Customer Accounts	Water Sales Per Year (1000 Gallons)	% Sales
RESIDENTIAL	Inside	29,806	3,012,449	39.39%
	Outside	20,567	1,640,231	21.45%
	TOTAL	50,373	4,652,680	60.84%
NON-RESIDENTIAL	Inside	3,607	1,307,233	17.09%
	Outside	1,416	217,564	2.84%
	TOTAL	5,023	1,524,797	19.94%
SALES FOR RESALE	Polk County	5	74,966	0.98%
	Polk County Standby	1	0	0.00%
	Skyview Utilities	6	13,451	0.18%
	Florida Governmental	2	30,104	0.39%
	Auburndale Standby	1	1	0.00%
	Plant City Standby	1	946	0.00%
	TOTAL	16	119,468	1.56%
MUNICIPAL	TOTAL	269	108,457	1.41%
UTILITY USES			69,964	0.88%
UACCOUNTED FOR LOSSES			697,554	9.12%
ELECTRIC DEPT.	Larsen Plant	3	20,582	0.27%
	McIntosh Plant	4	28,184	0.37%
	All Other	24	2,302	0.00%
	TOTAL	31	51,068	0.66%
IRRIGATION	Residential Inside	8	1,154	0.00%
	Residential Related			
	Inside	90	16,133	0.21%
	Outside	54	7,488	0.09%
	Non-Residential			
	Inside	639	228,172	3.00%
	Outside	100	34,183	0.45%
	Municipal	345	147,525	1.92%
	Lakeland Electric			
	Larsen Plant	1	181	0.00%
	All Other	11	2,659	0.00%
	TOTAL	1,248	437,495	5.72%
	TOTAL CUSTOMERS		56,960	7,646,727

Source: City of Lakeland Water Utilities Statistics Fiscal Year 2015-2016.

The residential use, 61%, and non-residential use 20%, total 81% of all water sales within the water service area. Other uses besides Irrigation (5.7%) and Sales for Resale (1.6%) are relatively minor. Water losses average about 9% with anything under 10% considered “good” performance for a utility (the industry norm is approximately 15%.) Water loss is attributed to

many factors including aging infrastructure, faulty meter registration, pipelines damaged during excavation or construction, and unmetered water uses. Aging infrastructure leads to pipeline failure (Large scale water loss), leaky hydrants and valves (small scale loss per fixture). A free statewide locating system is in place but with increased development and construction buried facilities are more likely to be accidentally damaged by excavating equipment which generally leads to rapid water loss over a short period. In addition, as water meters age beyond the useful life cycle, accuracy begins to degrade.

The City is working to reduce unaccounted-for water usage by testing large meters, maintaining a small meter changeout program, maintaining a valve and hydrant maintenance program, operating an in-house leak detection program and looping the water system to reduce flushing whenever possible. These programs, along with on-going pipeline replacement, and greater accountability for unmetered water usage (i.e. pipeline repair flushing and fire prevention) will help to reduce the percentage of unaccounted-for water. Additionally, the City of Lakeland is in the process of installing “Smart” water meters and will investigate the possibility of implementing the use of “smart” devices which aid in detecting water main leaks.

Water planning requires accounting for not only normal or incremental water customer growth based on historical trends and Bureau of Economic and Business Research (BEBR) projection type forecasts, but also the need to account for growth-management based development commitments. As local governments make commitments to land development projects at the time of concurrency, which is typically at time of site plan or plat, prior to building permit approval, they have had to reserve and track estimated allocations for potable water, per Senate Bill 360, passed in 2005 by the Florida Legislature. This means tracking potable water amounts that are committed to both residential and non-residential projects that are typically at the engineering plan approval stage. Where the new commitment is for an unexpectedly large development, such as a Development of Regional Impact or DRI, the water demand will likely exceed anything projected in annual growth estimates based solely on historical trends which BEBR’s estimates tend to produce. As the estimated potable water demands for concurrency level projects are totaled, that total represents the “committed” water flow, not yet being pumped at the City’s water treatment plants. Typically, these committed flows do not represent or include irrigation needs; due to the constrained nature of water resources, the City asks each developer to make every effort to utilize an alternate water source for irrigation needs and to phase development wherever possible.

The City Water Utility receives new water requests weekly within its water service territory, i.e., the geographic service area within the City and a portion of the unincorporated area. Thus, point in time committed flows do not represent all growth demands. In fact, the City had a growing waiting list for water requests above and beyond the list of committed water requests due to its delayed 2004 water use permit renewal issues, reinforcing the point that incremental growth is continuous.



Normal population growth, added to normal non-residential/business growth, accounts for the incremental growth that is the subject of the typical projection methodology recognized by the Water Management District and University of Florida's Bureau of Economic and Business Research (BEBR). Therefore, Water Utility staff made projections for normal growth using this accepted methodology. However, committed capacity for large, new projects may need to be added to this normal incremental growth projection since it may exceed historical trend projections. This is similar to the methodology used for many years in transportation planning where modelers trying to project future roadway demands consider existing road capacity minus reserved trips and projected annual (incremental) estimated growth to determine available capacity. Similarly, water projections must consider at least three factors to ascertain future demand for the planning period:

1. existing demand (average flows);
2. reserved or committed demand; and
3. projected annual demand (from incremental growth)

**City Water Permit:** In December 2008, the City's SWFWMD Water Use Permit to permit pumping up to 35.03 MGD was extended through 2028 contingent upon an agreement to send treated wastewater effluents to the Southwest Polk TECO power generation facility to offset ground water withdrawals related to TECO's generator cooling process. Monthly pumping distribution from the City's facilities is limited to 28.03 MGD from the Northwest Wellfield, 3 MGD from the Combee Treatment Plant and 4 MGD from the Northeast Wellfield.

The City of Lakeland will continue to work with the SWFWMD to pursue adequate water supply resources to meet the Water Service Area's long term needs. As required by Florida Statute, this Potable Water Supply Sub-Element must also address water facility capital needs for a 10-year period; see Tables IV-4 through IV-8.

### **10-YEAR WATER SUPPLY PLAN (2018- 2027)**

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The City of Lakeland's 10-Year Water Supply Plan is a capital plan for developing water supplies for long-term demand. It identifies future capital projects and programs that are feasible which include the City's conservation strategy. Currently, the plan's primary focus is reuse and conservation.

Prior to adopting the 2008 Water Supply Plan the City had invested significant resources to ensure sufficient water supply for residents and customers within the City water service area. The Northeast Wellfield and the C. W. Combee Water Treatment Plant have been developed at a total cost of \$25.91 million and have been operational since 2005. The C.W. Combee Water Plant has a total design capacity of 8 million gallons per day. Table IV-4 outlines the City's investment in potable water supply from 1989 to 2005.

**TABLE IV-5  
POTABLE WATER SUPPLY PROJECTS 1989-2005**

PROJECT	DATE COMPLETED	COST
Acquisition of NE Well Field Property	1989	\$2.24 Million
Drilling of NE Well Field and setting casings	1989	\$0.6 Million
Acquisition of C. W. Combee Water Treatment Plant Property	2000	\$0.574 Million
Pipe installation from NE Well Field to C.W. Combee Water Treatment Plant	2005	\$3.3 Million
Development/Construction of NE Well Field and C. W. Combee Water Treatment Plant	2005	\$19.2 Million
Total Cost		\$25.91 Million

**Source:** COL Water Department, 2007.

The Water Supply Plan currently has scheduled potable water projects to expand and upgrade the existing system. Improvements are planned at the C. W. Combee Water Treatment Plant to expand storage capacity to assist with peak hour demand and reliability during short-term repairs. The water management district continues to focus on alternative water sources and encouraging local governments to do the same pursuant to the Regional Water Supply Plan. At this time the City of Lakeland is studying the feasibility of alternative water sources. Table IV-6 outlines the 10-Year Water Supply Plan's potable water capital improvement schedule by fiscal year.

The City of Lakeland has been proactive regarding aging infrastructure. For decades, the City of Lakeland has maintained a waterline replacement program. Waterlines with continued maintenance or failure are targeted for replacement projects. The replacement program will continue and is in the capital improvement budget for the next ten years. The City also maintains a valve and hydrant maintenance program which reduces the possibility of failure. Additionally, the City has an ongoing leak detection program that audits the City's water system annually.

The following is a summary of the 10-Year Water Supply Plan's potable water capital projects:

- **Northeast Plant Expansion (CW Combee WTP):** Construction of an additional 5.0 MG Ground Storage Tank is planned for FY2019. This project will not increase the capacity of the Northeast Plant however the additional storage will assist in meeting peak demands and increase reliability.

**TABLE IV-6  
POTABLE WATER SUPPLY PROJECTS**

PROJECT	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Northeast Plant Add Ground Storage Tank (C.W. Combee WTP)	750,000	750,000								
TOTAL	750,000	750,000	0	0	0	\$0	0	0	0	0

Source: COL Water Utilities Department, 2016.

### ALTERNATIVE WATER SUPPLY

The City is planning future implementation of alternative water supply projects on its own as well as in collaboration with the newly established Polk Regional Water Cooperative. Similar to potable water supply projects, the efficient utilization of wastewater will play an important role in our overall water supply. As with increased demand for potable water there will be an increase in wastewater quantities that will be available for water re-use. Table IV-7 outlines wastewater projects included in the City's Water Supply Plan 10-Year Schedule of Projects.

The following is a summary of each of the 10-Year Water Supply Plan's wastewater capital projects related to potential water reuse, i.e., potential reclaimed water projects:

- Auburndale Reuse Cooperative:** The City of Auburndale plans to expand its wastewater treatment capacity by 1 – 3 MGD, but is interested in a beneficial use instead of land application via a spray field located north of the city. The Williams Holding Company is developing a large mixed-use development of regional impact and has donated land for the FPU/I-4 campus which will develop independently but adjacent to the DRI. The Williams Company has proposed accommodating Auburndale's reuse for its irrigation demands. Since Auburndale's service territory is immediately adjacent to Lakeland's City Limits in which the William's property and FPU is positioned, Auburndale may provide bulk reuse water directly to FPU. However, implementation will depend on economic feasibility and approval from FDEP and SWFWMD.
- English Oaks:** The southwest portion of the wastewater service territory is deficient in collection or pipeline capacity. The City is actively constructing major force mains and pump lift stations. If funding through the State Revolving Loan Program is approved this project will resume in FY2017. Completion of construction is anticipated by FY2027.

**TABLE IV-7  
WASTEWATER RE-USE RELATED PROJECTS**

PROJECT	ESTIMATED IMPLEMENTATION DATE	ESTIMATED COST	STATUS
Auburndale Reuse Tie-in	2017-2019	\$1,000,000	Allowed per Williams DRI & FPU agreements with COL
English Oaks Force Mains	2017-2027	\$16,100,000	Budgeted in FY2017 for Engineering. Construction contingent upon State Revolving Loan Program funds.

**Source:** COL Water Department, 2016

To meet State and Water Management District requirements to identify and plan for water supply alternatives to future ground water withdrawal, the City of Lakeland is continuously considering the feasibility and practicality of other potential alternative water supply projects and conservation programs, including but not limited to, the following projects:

- **County/Bartow Reliability Interconnection:** The interconnect will increase reliability between the Lakeland, County and Bartow systems by providing an alternate source water supplies for “wheeling” or reselling surplus water between Lakeland, Bartow, and Polk County.
- **West Lakeland Lower Floridan Aquifer Brackish Water Treatment Product Phase I:** The project includes the construction of a new water treatment plant (WTP), wellfield and raw water transmission main to the new WTP, concentrate disposal well(s), finished water transmission mains to the project partners. Phase 1 is anticipated to produce a minimum of 10 MGD of treated water (12.5 MGD of raw water withdrawn). Phase 1 construction includes the installation of five production wells, one standby well, a raw water transmission main from the production wells to a regional treatment facility, treatment facilities, and finished water transmission mains to deliver the treated water. Also included in this phase will be the construction of one deep injection well and one standby injection well.
- **West Lakeland Lower Floridan Aquifer Brackish Water Treatment Product Phase II:** Phase 2 construction includes the installation of an additional five wells, additional raw water transmission main from the wells to the existing raw water transmission main constructed in Phase 1, a second deep injection well and treatment facilities to provide a total treated water capacity of 20 MGD (25 MGD of raw water withdrawn).

Table IV-8 outlines the proposed scheduling and estimated cost of each of the alternative water supply projects.

**TABLE IV-8  
POTENTIAL ALTERNATIVE WATER PROJECTS**

PROJECT	ESTIMATED IMPLEMENTATION DATE	ESTIMATED COST	STATUS
County/Bartow Reliability Interconnection	2018	\$1,000,000	PRWC Project - Planned
West Lakeland Lower Floridan Aquifer Brackish Water Treatment Product Phase I	2023	\$125,000,000	PRWC Project – Early Planning Stage
West Lakeland Lower Floridan Aquifer Brackish Water Treatment Product Phase II	2030	\$75,000,000	PRWC Project – Early Planning Stage

**Source:** COL Water Department, 2016

These projects are described in more detail in TSD IV-Four (Response letter to SWFWMD RWSP), found in the *Technical Support Document*. However, the Auburndale Re-use project would, if it occurred, be a direct purchase relationship with Williams/the user, not requiring City participation.

The final component to the 10-Year Water Supply Plan is capital investment in conservation projects. The following are capital projects planned to implement conservation programs:

- **Conservation Kit Distribution Program:** The City’s Water Department distributes low flow showerheads, faucet aerators, dye tabs kitchen aerators, bath aerators, rain gauges, water conservation wheels to the Lakeland Utility customers.
- **Florida Friendly Landscape Program:** The Water Department funds a portion of the County-wide program through a University of Florida partnership to educate customers with converting their landscaping to Florida Friendly species.
- **Landscape & Irrigation Evaluations:** An Irrigation Professional is contracted to conduct evaluations of the customer’s irrigation system and landscape and provide a report to the property owner on how to improve efficiency. A free wireless rain sensor is provided if needed.
- **Lunch & Learn Lecture Series:** Funding is used to provide an educational series to make the public aware of outdoor water saving landscape elements.
- **Wireless Rain Sensor:** The program provides free wireless rain sensors to homeowners that do not currently have a rain sensor on their irrigation system.
- **Toilet Rebate Program:** A \$100 rebate is issued to any customer (commercial, residential, multi-family) for replacing High-flow toilets with High Efficiency toilets (1.28 gpf) or less.

- **Park Irrigation System Conversion:** The City’s Parks and Recreation continues to convert all park facility irrigation systems to time-controlled irrigation to minimize water consumption.
- **Florida Friendly Landscape Conversion:** Homeowners or businesses convert up to 40% of existing landscape incorporating Florida Friendly Principles. The cost is shared at 50% between the property owner and the Water Management District. Water Utility employees facilitate the program and provide reporting to the Water Management District. Up to \$4,000 per property is covered.
- **Conservation Specialist:** This position was created by the Water Utility to further public education and assist in implementation of conservation programs.
- **SmartGrid Project:** The City’s water utility is implementing the installation of SmartGrid technology to replace the manual meter reading process. Instead of only one water meter reading per month, hourly readings will be acquired through the new system. This will allow the Water Utility to provide conservation-related services to both the Utility and its customers, including features such as:
  - quicker detection of private plumbing leaks
  - identifying improperly set irrigation timers
  - inactive account water consumption are byproducts of the SmartGrid system

Table IV-8 outlines the programmed and estimated funding of each of the City’s water conservation programs.

**TABLE IV-9  
CONSERVATION PROGRAMS FUNDING**

CONSERVATION PROGRAMS	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Conservation Kit Distribution Program	500	500	500	500	500	500	500	500	500	500
Florida Friendly Landscape Program	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Landscape & Irrigation Evaluations	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Lunch & Learn Lecture Series	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Wireless Rain Sensor	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Toilet Rebate Program	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Parks Irrigation System Conservation	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Florida Friendly Landscape Conversion*	50,000	50,000								
Conservation Specialist	68,200	68,200	68,200	68,200	68,200	68,200	68,200	68,200	68,200	68,200
SmartGrid Project		3,312,000	3,312,000	1,650,000	3,000,000	2,000,000				
<b>TOTAL</b>	<b>159,200</b>	<b>3,471,200</b>	<b>3,421,200</b>	<b>1,759,200</b>	<b>3,109,200</b>	<b>2,109,200</b>	<b>109,200</b>	<b>109,200</b>	<b>109,200</b>	<b>109,200</b>

Source: COL Water Utilities Dept. 2016

Overall, limited options for alternative water supply exist within the Central Florida inland region and particularly within the Polk County area and Lakeland. As a non-coastal area, desalination of ocean or salt water is not an option. Aquifer storage recovery, ASR, as a water supply technique involves storage of potable or treated effluent water types underground. This technique is still somewhat experimental and often cost-prohibitive and may be subject to some environmental concern.

Treated wastewater, or effluent, is limited as an alternative for Lakeland due to substantial commitment of that effluent flow to the Lakeland Electric power plant system (see Table IV-9.) The primary option to re-use water for power plant cooling is groundwater; therefore, employing treated or reclaimed water as a substitute is, in the City's opinion, a very valid water conservation strategy. The Hines Energy complex in south Polk County has historically sought reuse water from several municipalities in the area for this same reason.

Lakeland Electric is the primary source for electrical power supply for all of the City and Metro Lakeland which includes portions of unincorporated Polk County, and provides some power to a larger, regional municipal grid system so the local reuse water that cools the power plant is utilized to help meet local and regional energy demands. Illustration IV-4 and Table IV-10 (below) demonstrate the Lakeland Electric service area and the projected population for the same. Other effluent flows are sent to the City's artificial wetlands located off of S.R. 60, south of Lakeland, which discharges into the Alafia River system if not diverted to the TECO power plant. That discharge augments the flows/volumes of the Alafia, which is used by Tampa Bay Water Authority as one of its potable water sources. Therefore, the City's reuse water serves a larger regional water need already.

**TABLE IV-10  
LAKELAND EFFLUENT USES**

MONTH	Reuse Water to McIntosh Power Plant				Reuse to TECO		Reuse to Matheson		Treated WW Sent to Wetlands						Wetlands Effluent Disposal to Alafia River		
	Glendale	Northside	TOTAL						Glendale WWTP		Polk County Discharge Intertie		TOTAL		TOTAL		
	WWTP	WWTP	Monthly	DAY	Monthly	DAY	Monthly	DAY	Monthly	AVG DAY	Monthly	DAY	Monthly	DAY	Monthly	#	AVG DAY
	(MG)	(MG)	(MG)	(MGD)	(MG)	(MGD)	(MG)	(MGD)	(MG)	(MGD)	(MG)	(MGD)	(MG)	(MGD)	(MG)	Days	(MGD)
15-Oct	24.25	122.01	146.26	4.72	133.5	4.31	4.32	0.14	285.02	9.19	24.42	0.79	309.45	9.98	222.01	31	7.16
15-Nov	19.42	117.49	136.91	4.56	93.7	3.12	5.09	0.16	284.16	9.47	14.33	0.48	298.49	9.95	192.08	30	6.4
15-Dec	32.68	115.5	148.18	4.78	82.8	2.67	3.76	0.12	248.45	8.01	27.56	0.89	276.01	8.9	0	31	0
16-Jan	10.99	125.35	136.34	4.4	85.18	2.75	0	0	327.77	10.57	35.78	1.15	363.55	11.73	0	31	0
16-Feb	2.22	114.56	116.78	4.03	92.2	3.18	0	0	335.32	11.56	34.1	1.18	369.42	12.74	91.25	28	3.15
16-Mar	2.63	121.35	123.98	4	106.1	3.42	0	0	336.65	10.86	25.2	0.81	361.85	11.67	0	31	0
16-Apr	19.07	112.79	131.86	4.4	197.9	6.6	0	0	289.83	9.66	15.31	0.51	305.14	10.17	277.12	30	9.24
16-May	82.41	110.53	192.94	6.22	219.4	7.08	0	0	216.24	6.98	17.49	0.56	233.73	7.54	74.49	31	2.4
16-Jun	38.83	126.68	165.51	5.52	171.8	5.73	0	0	255.42	8.51	28.86	0.96	284.28	9.48	0	30	0
16-Jul	56.19	120.18	176.37	5.69	177.3	5.72	0.01	0	202.65	6.54	15.28	0.49	217.93	7.03	0	31	0
16-Aug	44.79	127.46	172.24	5.56	177.9	5.74	0.01	0	263.34	8.49	31.75	1.02	295.09	9.52	0	31	0
16-Sep	24	137.62	161.62	5.39	171.6	5.72	0	0	381.31	12.71	46.79	1.56	428.1	14.27	0	30	0
FY Totals	357.48	1,451.52	1,808.99	4.96	1709.38	4.68	13.18	0.04	3,426.16	9.39	316.88	0.87	3,743.04	10.25	856.95	365	2.35

Source: COL Water Utilities Department, 2016.





**TABLE IV-11  
LAKELAND ELECTRIC SERVICE AREA  
2030 PROJECTED POPULATION**

<b>YEAR</b>	<b>POPULATION</b>
2010	253,009
2015	275,911
2020	298,957
2025	320,744
2030	341,849

**Source:** Lakeland Electric, 2016

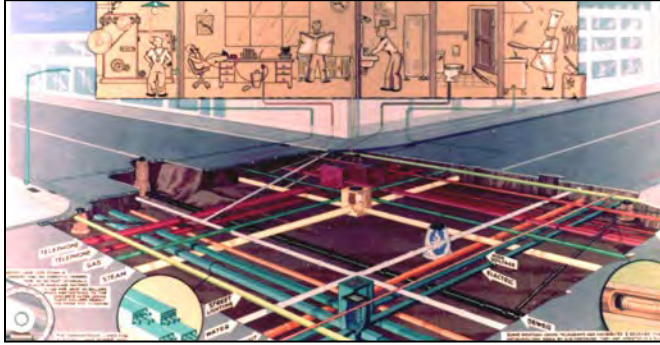
The chief alternative or option for the City of Lakeland in regard to water supply is that of additional water conservation measures, rules and programs. Please see the discussion of the City’s Water Conservation Plan as found in the Conservation Element of the City’s Comprehensive Plan and in its *Technical Support Document*, TSD VI-Two.

The City and/or Water Utility participates in “intergovernmental coordination” dealing with water supply and resource issues. It is part of the Heartland Alliance, a non-authority made up of entities within Polk, Highlands, Hardee, and Desoto Counties. A study was performed on behalf of this alliance to identify future water demands and possible resources to meet those demands. The Utility has a presence at the Polk County Water Policy Advisory Committee meetings as well as the Public Supply Advisory Committee of the Southwest Florida Water Management District.

The Governor has requested the three water management districts which control the Central Florida region begin to collectively organize their regulations to address the growth and future water demands of the Central Florida area. The Central Florida Water Initiative (CFWI) has been identified by these Water Management Districts. In 2015, the CFWI adopted a regional water supply plan encompassing Orange, Osceola, Polk, Seminole and southern Lake counties; and have begun the process of developing proposed rules that will restrict access to groundwater for demands past the year 2019.

### **WELLFIELD PROTECTION**

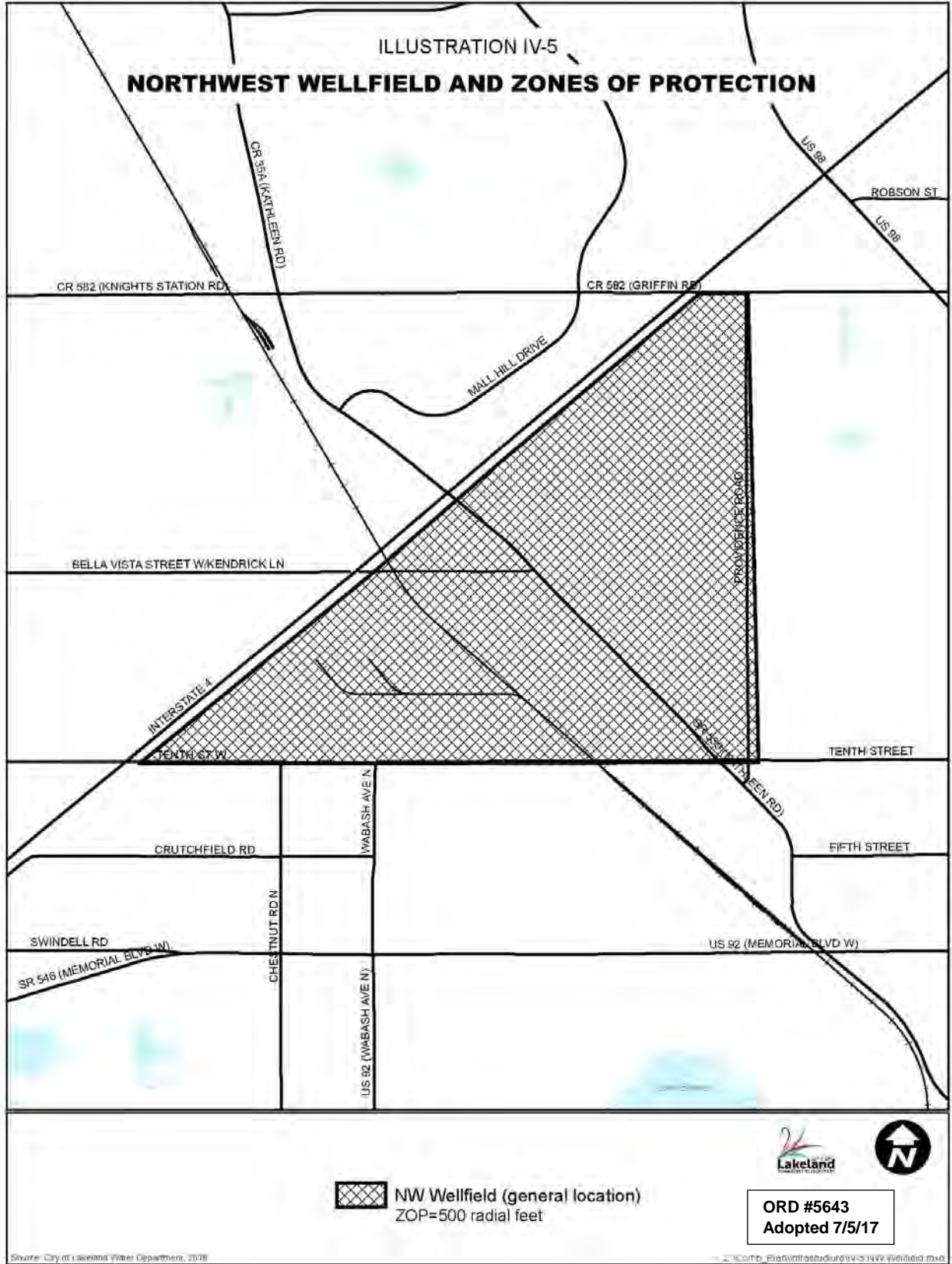
The area around the Northwest Wellfield is highly urbanized. Due to this high level of urbanization and proximity to Interstate 4, establishing sufficient zones of protection to prevent future contamination has become increasingly difficult. While the City owns the land containing each of the wells, the surrounding site is part of a platted business park. The individual platted lots are approximately 350 feet in depth. The City has established in its land development regulations a 500-foot setback and a requirement for a monitoring plan for all businesses with restricted-use operating permits to operate within the protection zone. This has become the City’s primary tool for protection of the wellfield. The zones of protection for the Northwest Wellfield are shown in Illustration IV-5.

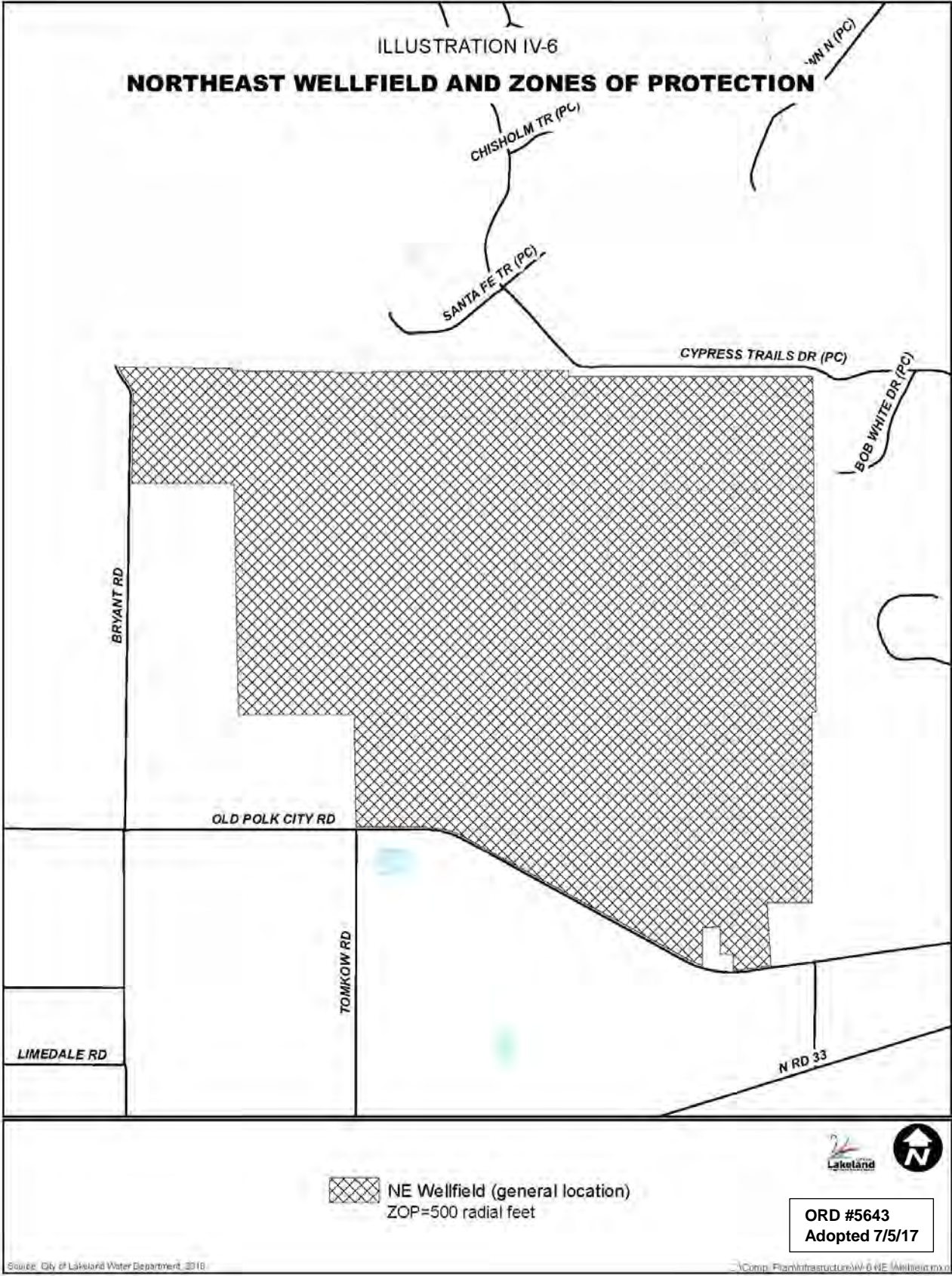


In early 1989, following completion of hydrological studies and SWFWMD approval of a water use permit, the City of Lakeland purchased an 883-acre tract located approximately one mile north of the intersection of Interstate 4 and State Road 33. The Northeast Wellfield site, depicted in Illustration IV-6, consists mostly of pasture and wetland areas. There are five wells at this site. Use of the

Northeast Wellfield has required funding for transmission lines, pumps, and an off-site water treatment plant. This funding had been budgeted in the City's capital improvements plan (CIP) of the Capital Improvements Element. This water treatment plant and wellfield is now constructed and operational. These new facilities cost a total of \$31,000,000. The need for the Northeast Wellfield had been tempered over the last decade by water conservation/reduced pumpage as encouraged by regulations for the Southern Water Use Caution Area (SWUCA). Use of the Northeast Wellfield together with the Northwest Wellfield basically requires a cooperative effort to not exceed the requirements of the City's combined water use permit for the two wellfields.

The addition of the Northeast Wellfield to the City's water supply system helps ensure that the water demands of the service area can be met for many years, and add a large measure of ensured reliability by acting as a back-up wellfield should the City need to reduce pumpage at the Northwest Wellfield or deal with any contamination issues. The NE Well Field is very rural compared to the NW Well Field which is located near a large urban population and businesses. In an era of threats of acts of bioterrorism, it is in the interest of the City's approximate 52,000 customer accounts and more than 170,000 water service population to have more than one single area of aggregated water wells and more than one treatment facility. In addition, the rural nature of the site will help ensure that the wellfield is guarded against potential contaminants. A safe, reliable water supply is essential for service to the growing population in the water service area.





## WASTEWATER

Wastewater is defined as the waste carried by water from domestic, commercial or industrial sources. Although some wastewater may be drained directly onto the ground (washing cars, pressure cleaning buildings, etc.), generally, wastewater must be treated before its release into the environment. Wastewater is treated in the Lakeland Planning Area by one of the sub-regional treatment plants, mid-size package treatment plants, or by individual on-site septic tanks.

### EXISTING FACILITIES AND PROPORTIONAL SHARE

Per 2009 Wastewater Division records, about 2% of wastewater demand was attributable to residential and commercial users outside the City limits, while the remaining 98% of demand originated from within the City of Lakeland. While there is a significant population outside of the City, residential uses are not required to connect to the wastewater collection system. Service to the unincorporated area is not expected to significantly increase due to Polk County's planned northwest regional wastewater plant and due to continued annexation by the City. Voluntary annexation agreements are required for all potential customers of the City wastewater system as part of the overall wastewater service agreement. Once the City limits become contiguous to the customer's property, the City has the option of requiring the customer to annex into the City.

**Public Facilities:** The City of Lakeland is served by three sub-regional treatment plants for wastewater service: the Glendale Water Reclamation Facility, the Northside Wastewater Treatment Plant (WWTP) and the West Lakeland Pretreatment Plant. The Glendale Facility is located on Glendale St. and the Northside WWTP is located near the McIntosh Power Plant on the northeast side of Lake Parker. In addition, some septic systems continue to function in areas of Lakeland, including areas developed prior to the availability of centralized wastewater service. Illustration IV-7 depicts the 2009 existing wastewater facilities and service area locations.

**Private Facilities:** Private package treatment plants in the Lakeland Area have decreased over the last two decades. In 1991, there were 50 package treatment plants identified outside the City limits in the surrounding metro area. Today, there are approximately 26 still in operation. Some of the package wastewater treatment facilities still in operation serve shopping centers, subdivisions, and other mid-size developments. One reason package systems desire to connect to the City system is to avoid fines by the FDEP if the system is experiencing some type of failure. For residential subdivisions on package plant systems, the City has had a standard policy to not accept new customers from such systems unless, at a minimum: a) impact fees for those customers are paid, and b) sewer extensions from the plant to the City system and a pumping station are constructed at no cost to the City.

**Service Area:** As can be seen from Illustration IV-7, an expansion of the wastewater service area occurred prior to 2000 primarily to the west and north of the Lakeland Linder

Regional Airport and to the north and northeast of Lake Gibson. Although some of the wastewater service area is serving the unincorporated County in these areas, the expansion of the City limits has occurred in these same general directions due to industrial growth in the west Lakeland area and mixed types of growth in the north/northeast Lakeland area. The collection system was expanded to the southeast along the US Highway 98 South corridor approximately 10 years ago. The northeastern expansion to the FPU campus and Williams DRI was completed in 2008. Most recently, an expansion to the southwest of Lakeland Linder Airport to serve the English Oaks and other developments in the area is underway and expected to be complete by the end of 2013.

The wastewater service planning area in Illustration IV-7 appears to be well outside the actual service areas on the east and the northwest. However, the planning area boundary actually comprises the utility planning area boundary for both water and wastewater services. It is a negotiated boundary contained in an interlocal agreement executed in April 1993 with Polk County (refer to Illustration VIII-4 in the Intergovernmental Coordination Element).

While a few of the major trunk lines for the Glendale Facility are shown on the service area map, most distribution lines are not shown to reduce clutter. Wastewater Division staff report as of the end of 2009 that approximately 315 miles of gravity sewer (between 6 and 48 inches) and 146 miles of force main (between 4 and 24 inches) comprise the Lakeland collection system. Located throughout the wastewater service area there are 150 wastewater pump stations operated and maintained by the City's Wastewater Division. The Glendale WWTP is linked by pipeline to an artificial wetlands site which treats effluent from the wastewater plant. This wetlands site is located on the north side of S.R. 60, east of Mulberry.

**Plant Capacity:** The City's wastewater treatment plants have the following capacities: the Glendale facility has a permitted capacity of 13.7 million gallons per day (MGD) annual average daily flow (AADF). The Northside Treatment Plant is permitted for up to 8.0 MGD, AADF. As of July 2007, the annual average daily flows for the Glendale and Northside treatment plants were 7.13 MGD and 3.28 MGD respectively. The recent construction of the West Lakeland pre-treatment facility, completed in November 2009, resulted in reduced loading of the Glendale facility in turn freeing up capacity for future demand. The pre-treatment facility has a design capacity of 1.5 MGD. The City's waste water facility capacity is expected to handle the anticipated growth in service demands through at least 2020.

Trunk capacities will depend on the actual rate and location of new development and redevelopment. The capacity at the Glendale facility is capable of handling higher flows resulting from infiltration during unusually wet years, such as the 3rd quarter of 1994 through the 3rd quarter of 1996 when an average of 2 MGD or more of infiltration was added to base sewer flow. In addition, the City's sewer rehabilitation program has been accelerated to better control infiltration (of stormwater) into lines and manholes.

There has been some redirection of efforts away from remediation of infiltration (leakage through defects below the water table) towards reducing inflow (direct openings to flood water on the surface). The intent is to reduce the sudden spikes in flow which occur during and immediately after heavy rain storms. These spikes overwhelmed the system during the hurricane events of 2004.



COL WW Effluent Wetlands

**Artificial Wetlands Capacity:** The City's Artificial Wetlands facility located east of Mulberry, south of Lakeland, and north of SR 60, began receiving treated effluent in 1987. The Wetlands are currently rated 20 MGD, AADF, and are permitted on a common NSPES permit with the Glendale Plant. Annual average flow to the Wetlands is about 8 MGD and ranges between 6 and 11 MGD. The operating permit (together with the Glendale Plant) was renewed by the State in November 2004; the Wetlands are projected to have sufficient capacity through at least 2018.

## FACILITY PERFORMANCE

The 2007 Chastain-Skillman's Capacity Analysis report on the City's wastewater facilities listed the estimated 2010 population residency within the wastewater planning service area as 158,771 persons, of which 118,623 are connected to the utility. The estimated 14.46 MGD total collection system flow indicates approximately a 131 gpd/capita use. The physical plants themselves are in excellent condition, both having undergone expansions that will take the expected life of the facilities out another 40 or more years (20 years for certain high speed equipment).

The data in Table IV-11, indicates that the overall performance of the Glendale Water Reclamation Facility and the Wetlands Effluent Treatment facility is very good. Performance indicators for the Northside Wastewater Treatment Plant, given in Table IV-12, also show positive performance in terms of staying within current design capacities as well as with the expanded capacity, once permitted.



**TABLE IV-11  
GLENDALE AND WETLANDS EFFLUENT TREATMENT FACILITIES**

INFLUENT FLOW		CONCENTRATION (MG/L)				POUNDS (LBS/DAY)			
	MGD	CBOD <sub>5</sub>	TSS	TN	TP	CBOD <sub>5</sub>	TSS	TN	TP
Annual Avg. 9/06-8/07	7.16					33,304	17,200	2,927	919
9/06-8/07									
Max Month	7.56								
Max Day	9.65								
Max H	14.00								
<b>PLANT EFFLUENT</b>						<b>196</b>	<b>184</b>	<b>311</b>	<b>118</b>
Removal						33,108	17,016	2,616	801
% Removal						99.4%	98.9%	89.4%	87.2%
<b>WETLAND EFFLUENT</b>		<b>2.03</b>	<b>4.23</b>	<b>1.14</b>	<b>2.40</b>	<b>73.3</b>	<b>153.8</b>	<b>41.2</b>	<b>86.7</b>
Overall Removal						33,231	17,047	2,886	832
% Overall Removal						89.2%	99.1%	98.6%	90.5%
Permit Limitations		5.00	5.00	3.00	N/A				
<b>PLANT DESIGN CAPACITY</b>									
Annual Avg.	13.7					40,930	28,740	3,313	
Max. Month	18.5					44,478	31,420	3,611	
<b>% of Design Capacity</b>									
Annual Avg.	52.3%					80.9%	59.8%	88.3%	
Max. Month	62.9%								

Source: City of Lakeland Wastewater Division, 2007

**TABLE IV-12  
NORTHSIDE TREATMENT FACILITY**

INFLUENT FLOW		CONCENTRATION (MG/L)				POUNDS (LBS/DAY)			
	MGD	CBOD <sub>5</sub>	TSS	TN	TP	CBOD <sub>5</sub>	TSS	TN	TP
Annual Avg. 9/06-8/07	3.28					7,521	6,203	1,148	265
9/06-8/07									
Max Month	3.56								
Max Day	3.57								
Max H	NA								
<b>PLANT EFFLUENT</b>						<b>34</b>	<b>55</b>	<b>62</b>	<b>34</b>
Removal						7,487	6,148	1,086	231
% Removal						99.5%	99.1%	94.6%	87.2%
<b>PLANT DESIGN CAPACITY (1)</b>									
Annual Avg (solids)						15,638	13,018	2,085	
	6.25								
Annual Avg (liquids)						20,016	16,680	2,669	
	8.00								
Max Month	NA					24,770	16,663	3,742	
Peak Hr	24.0					32,109	21,600	4,203	
<b>% of Design Capacity</b>									
Annual Avg.	41.0%					37.6%	37.2%	43.0%	

Source: City of Lakeland Wastewater Division, 2007.

The indicators given in Tables IV-11 and IV-12 above are defined as follows:

- CBOD = Carbonaceous Biological Oxygen Demand
- TSS = Total Suspended Solids
- TN = Total Nitrogen
- TP = Total Phosphorus

## LINE CAPACITY LIMITATIONS

Table IV-13 lists segments of the wastewater system which could reach full capacity by year 2020. Peak volume flow, the parameter which determines the capacity of sewers, has decreased rather than increased over the past 10 years, a consequence of significant sewer rehabilitation and conservation efforts. Five segments, about 4% of the Western Trunk, will continue to be closely monitored for actual peak demand and to re-estimate Western Trunk system capacity. These segments could require capacity augmentation prior to 2020.

The Eastern Trunk is projected to have adequate capacity through the year 2020. The Northside sewers (Socrum Loop, Griffin Road 24" gravity trunk, and the 18"/21" Lakeland Hills gravity trunk) continue to have reserve capacity. The West Lake Parker Drive gravity sewer, smaller than a trunk, is affected by infiltration. While some infiltration has been eliminated, more must be eliminated, or upsizing could become necessary before 2020. With the upgrade of the Lake Gibson station, the US 98 system appears to have sufficient reserve capacity absent unforeseen annexation in the area.

**TABLE IV-13  
WASTEWATER FACILITIES  
WITH POTENTIAL CAPACITY LIMITATIONS**

PUMP STATIONS	FORCE MAINS	GRAVITY SEWERS
	US 98 N	Western Trunk (portions)
	Eastside Village	West Lake Parker Drive
	Drane Field Road	
	Hwy 98 South	
	SR 33	

**Source:** City of Lakeland Wastewater Division, 2007

The Tradewinds pump was rebuilt as a triplex station, with initially only two pumps. It currently has substantial reserve capacity. In the event City wastewater service is ultimately extended to the neighboring Skyview Utility, it may become necessary to install the third pump into the station.

During the prior planning period, larger replacement force mains have been provided for Lakeland Harbor, County Line Industrial, Griffin Road and Lakeland Highlands Road. A second phase of the Lakeland Highlands force main expansion is currently in progress. A major force main replacement is in progress along Drane Field Road and the Polk Parkway. This multi-year project was approximately half completed by 2010, with a likely completion of 2011 or 2012. This project will greatly increase system capacity for the southwest portion of the City. The Eastside Village force main has reserve capacity, but is located in fringe areas which could experience unpredictable growth and so will be monitored. With anticipation of continued growth along the Hwy 98 South corridor and east of SR 33, the City initiated a study (in 2010) to determine the future needs for expanded transmission facilities in these areas. Existing City policy requires new development to fund expansions

and extensions of the wastewater collection system directly necessitated by their currently planned development.

Three identified high-growth areas are actively being provided with long-range wastewater transmission facilities. The local developments will be required to provide collection and local transmission pipelines. The facilities serving the Williams DRI & Florida Polytechnic have been completed north along SR 33 and then south into the Williams DRI. A series of projects known as English Oaks I, II & III are scheduled for completion by the end of 2013 to serve the areas south and west of the Lakeland Linder Airport. Upsizing and relocation of the US 98 South force main was under construction as of early 2010.

## EFFLUENT REUSE

As of 2007 the Lakeland Electric McIntosh Power Plant utilizes an average of 8.4 MGD of City wastewater effluent for cooling water. The remaining effluents are directed to the City's artificial wetlands site located on S.R. 60. Effluent reuse for cooling water is expected to reach up to 10 MGD by 2020. Table IV-14 accounts for the City's effluent uses in 2007. In March 2009, the City entered into a 30-year agreement with the Tampa Electric Company (TECO) to utilize the City's treated wastewater from the artificial wetlands to TECO's power generation facilities in southwest Polk County to meet increased demand for water related to the cooling process. TECO will lay pipelines and connect Lakeland's wastewater transmission system to TECO's facilities at an estimated cost of \$60 million. The project is expected to be complete by 2013. This agreement mutually benefits both parties by allowing TECO to meet its water needs and freeing up otherwise allocated groundwater supplies to meet the area's future demands.

**TABLE IV-14  
LAKELAND EFFLUENT USES**

MONTH	Reuse Water to McIntosh Power Plant				Treated WW Sent to Wetlands						Wetlands Effluent Disposal to Alafia River		
	Glendale		Northside		Glendale WWTP		Polk County Discharge Intertie		TOTAL		TOTAL		
	WWTP (MG)	WWTP (MG)	Monthly (MG)	AVG DAY (MGD)	Monthly (MG)	AVG DAY (MGD)	Monthly (MG)	AVG DAY (MGD)	Monthly (MG)	AVG DAY (MGD)	Monthly (MG)	# Days	AVG DAY (MGD)
Oct-05	66.18	76.06	142.24	4.59	255.778	8.251	25.04	0.81	280.82	9.06	259.279	31	8.364
Nov-05	50.89	92.40	143.29	4.78	244.138	8.138	16.52	0.55	260.66	8.69	222.539	30	7.418
Dec-05	57.82	97.41	155.23	5.01	223.038	7.195	14.33	0.46	237.37	7.66	0.000	31	0.000
Jan-06	50.22	99.36	149.58	4.83	218.784	7.058	19.78	0.64	238.56	7.70	0.000	31	0.000
Feb-06	28.96	82.39	111.35	3.98	250.458	8.945	11.80	0.42	262.26	9.37	182.619	28	6.522
Mar-06	40.92	95.21	136.13	4.39	227.416	7.336	5.23	0.17	232.65	7.50	394.969	31	12.741
Apr-06	58.11	89.77	147.88	4.93	203.368	6.779	0.00	0.00	203.37	6.78	0.000	30	0.000
May-06	16.42	50.58	67.00	2.16	267.096	8.616	0.00	0.00	267.10	8.62	0.000	31	0.000
Jun-06	80.25	94.65	174.90	5.83	182.758	6.092	4.45	0.15	187.21	6.24	0.000	30	0.000
Jul-06	109.62	105.10	214.72	6.93	164.144	5.295	8.08	0.26	172.22	5.56	0.000	31	0.000
Aug-06	115.50	111.29	226.79	7.32	171.336	5.527	26.48	0.85	197.82	6.38	227.939	31	7.353
Sep-06	95.90	101.48	197.38	6.58	200.190	6.673	27.37	0.91	227.56	7.59	670.440	30	22.348
FY TOTALS	770.79	1,095.70	1,866.49	5.11	2,608.500	7.147	159.08	0.44	2,767.58	7.58	1,957.785	365	5.364

Source: City of Lakeland Water Department, 2007

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## **ANALYSIS OF SOILS FOR USE OF SEPTIC SYSTEMS**

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Soils are part of a natural system which are not expected to have significantly changed from the time of the adopted Comprehensive Plan (see Illustration IV-8). Where development has occurred in the City, centralized wastewater service is usually a requirement; the City does not issue permits for septic systems or package plants. The Health Department does allow use of septic systems where wastewater service is “unavailable”/too far away and soil conditions are suitable for the septic system. Some septic systems have been added through annexation of areas developed in the County but, according to Wastewater Division staff, these are widely scattered. Septic systems which have been annexed to date have generally operated well due to their location in areas which include well- to moderately well-drained soils. While a few of these septic systems have been removed on an individual system basis and connected to centralized sewer service, such connections are neither easy nor inexpensive. General location map Illustration IV-9 depicts the location of septic systems in the City. A detailed analysis of the suitability of the soil groups for septic systems was included in the original 1991 Comprehensive Plan and is now found in TSD IV-Three: Septic Systems in the *Technical Support Document*.

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## **ADOPTED LEVEL OF SERVICE**

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The City of Lakeland will provide wastewater service at levels of service which comply with all standards of the U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP). In addition, system-wide wastewater collection and treatment will be sufficient to provide a minimum of 128 gallons per capita per day.

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## **FUTURE CONDITIONS**

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A top priority of the City of Lakeland is to provide customers within the corporate limits with adequate capacity to meet wastewater collection and treatment demand. Once the needs of City residents are met, surplus capacity is made available to unincorporated areas within the sewer service area. In order to ensure the availability of adequate collection and treatment capacity to meet demand, projections must be made of the future service area population.

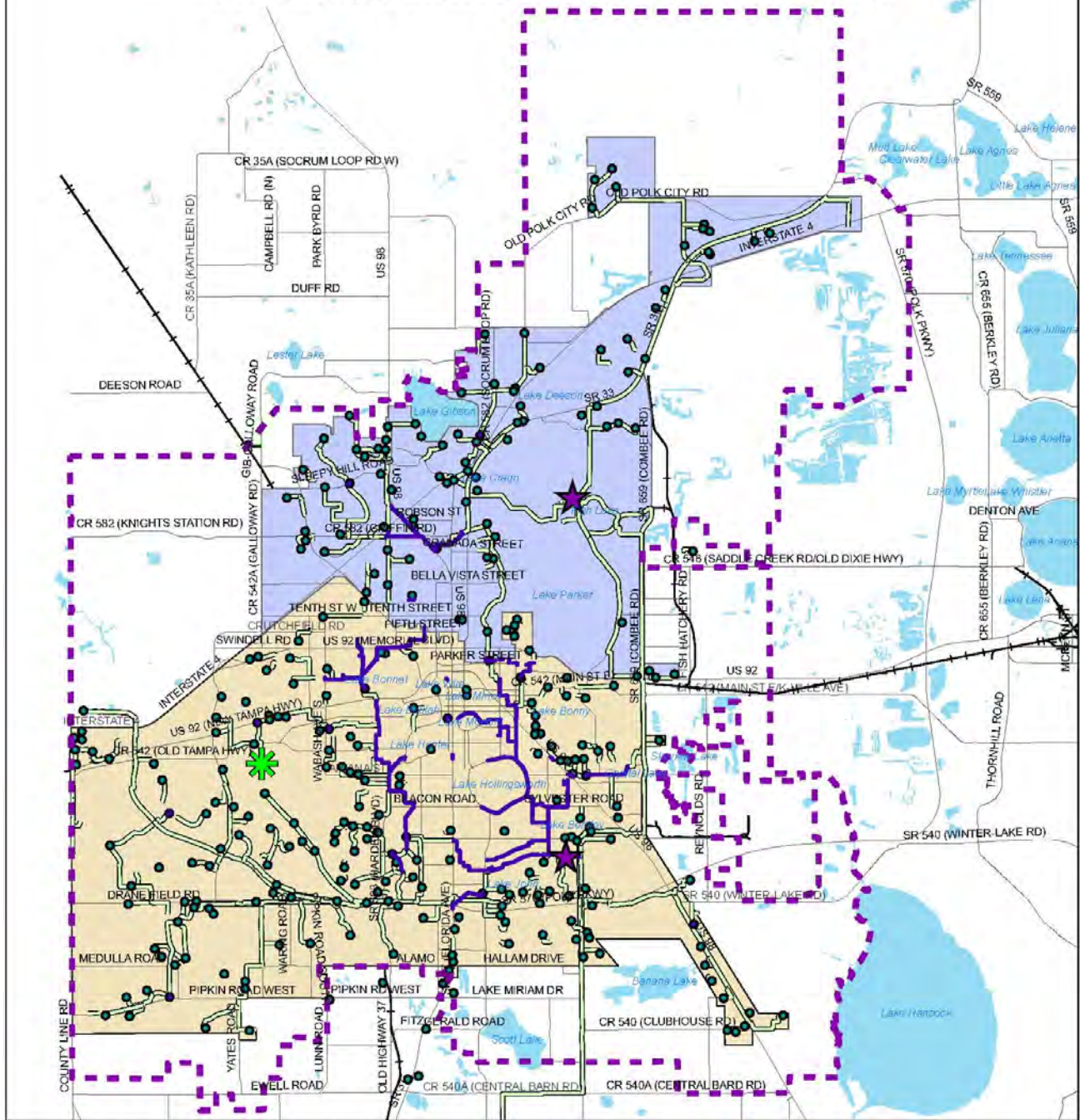
In 2020, the City’s wastewater utility service area is anticipated to exceed an estimated total population of 204,874, however, only 153,110 persons are projected to be receiving waste water service. Per capita collection and treatment demand is estimated at approximately 131 gpd for residential uses. For purposes of projecting future demand, the minimum level of service standard, which relates to the historical demand data, is multiplied by the projections for total population served. Table IV-15 outlines anticipated wastewater collection and treatment demand through 2020, excluding infiltration. The City provides priority service within its corporate limits and extends beyond those limits typically only as part of an annexation agreement. The per capita demand figure used in Table IV-15 allows for commercial development in conjunction with population growth from residential development.

**TABLE IV-15  
WASTEWATER COLLECTION AND TREATMENT NEEDS: 2010 – 2020**

<b>YEAR</b>	<b>POPULATION SERVED</b>	<b>PER CAPITA DAILY DEMAND</b>	<b>TOTAL DAILY DEMAND</b>
2010	118,623	128 gallons	15,183,744
2015	143,853	128 gallons	18,413,184
2020	153,110	128 gallons	19,598,080

**Source:** City of Lakeland, Community Development Department & Wastewater Utility Division. 2007.

# ILLUSTRATION IV-7 WASTEWATER FACILITIES AND SERVICE AREAS



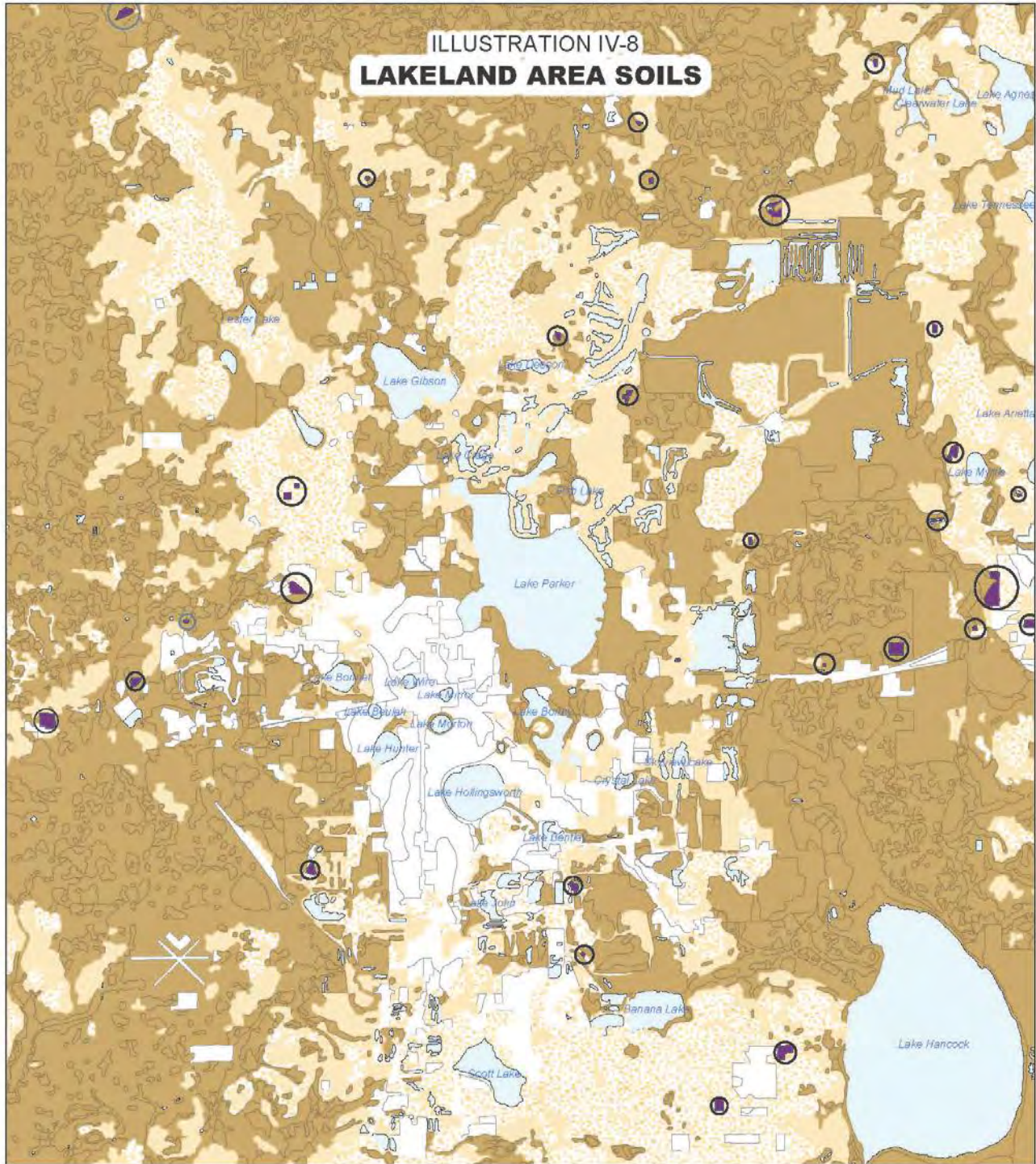
Source: Lakeland Water/Wastewater Development, 2010

- |  |  |                               |
|--|--|-------------------------------|
|  | Wastewater Service Area                    | 15" + Wastewater Gravity Line |
|  | Wastewater Treatment Plant                 | Force Main                    |
|  | West Lakeland Wasteload Reduction Facility | Service Area                  |
|  | Wastewater Pump Station                    | Glendale                      |



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**ILLUSTRATION IV-8  
LAKELAND AREA SOILS**



Source: U.S. Soil Conservation Service Polk County 1990 Soil Survey

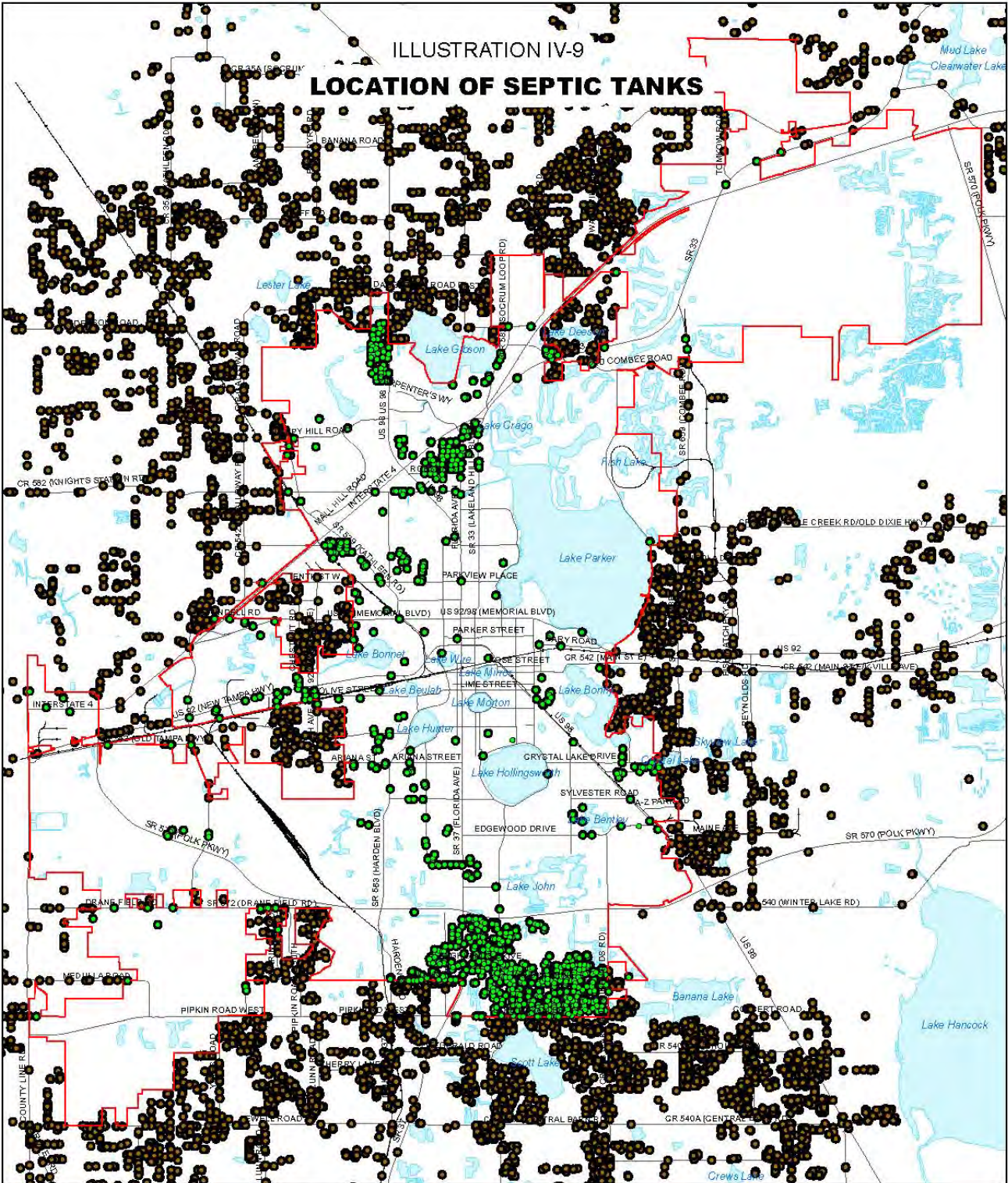


Shade	Rating
[White box]	None
[Light brown box]	Well Drained
[Medium brown box]	Moderately Drained
[Dark brown box]	Poor to Poorly Drained
[Circle with crosshair]	Excavation Sites

General Soil Types
Ridges - Urban Land Complexes
Upland Soils - Apoka Candler, Ft Meade & 4 Others
Flatwood Uplands - Adamsville, Archbold, Arents, Sparr & 9 others
Flood Plain/Depressional/
Mucks/Clayey - Basinger, Chobee, Fied Samsula & 32 others



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Source: Florida Department of Health, Division of Environmental Health, 2007



- Active Septic Tanks within City Limits
- Active Septic Tanks



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## SOLID WASTE

### BACKGROUND

Solid waste includes garbage, refuse, yard trash, clean debris, white goods, ashes, sludge or other discarded material which may be solid, liquid, semisolid or contained gaseous material. Hazardous waste is solid waste which, because of its quantity, concentration of physical, chemical or infectious characteristics may present a hazard to human health or the environment when improperly managed.

### DISPOSAL METHODS

Disposal of wastes generated in the Lakeland Planning Area occurs in various ways. The City's primary method is to haul wastes that are not recycled to the North Central Landfill, which is owned and operated by the Polk County Environmental Services Division. Burnable refuse, such as wood and tires, are sent to the Wheelabrator facility located adjacent to the County's North Central landfill for waste-to-energy conversion. Polk County provides solid waste disposal for the entire county, including the municipalities. The County has determined that sufficient landfill space is available in the North Central Landfill to meet projected demand through 2020, with a Phase II already built and having capacity through 2050. The County's Class III landfill (for construction debris and yard waste) has been closed and this division is now taking these wastes to their Class I landfill (although privately run construction and debris landfills also operate within the county.)

There have been no problems in terms of leachate contamination associated with the County landfills. As is true with all landfills, scavenging birds and odors are common; however, there is no residential development in the immediate proximity of any Polk County landfill. As a result, these are minimal problems. The siting of a new landfill is not necessary at this time as the existing facilities are adequate to accommodate projected demand through 2050.

In 2008, the City of Lakeland entered into an Interlocal agreement for a ten year period of which rates are not to increase over 10% in years three and five of this agreement; the 2010 rate is \$29.33/ton and not to exceed approximately \$35.50/ton.

### EXISTING FACILITIES AND PROPORTIONAL CAPACITY

**Public facilities:** In 2009, the City of Lakeland Solid Waste Division used 15 rear packer trucks for 29 collection routes, handling residential collection three times per week (2 times/week for regular garbage and once/week for vegetative wastes which are composted). For commercial collection, the City had 10 front loader trucks for 8 collection routes. In 2009, the City had an annual average of 34,000 residential and approximately 3,000 commercial accounts for solid waste collection.

Most solid waste collected by the City is taken to the Polk County North Central Landfill located on C.R. 540. There is not an assigned capacity for each jurisdiction using the

County landfill. However, the existing County landfill is estimated to have adequate capacity to receive and handle solid wastes through at least the year 2020, with Phase II capacity through 2050.

**Private facilities:** The City Solid Waste Division provides all solid waste collection and disposal service for all areas inside the corporate limits, except in regards to roll-off service. Within the City limits, the City Solid Waste Division competes with approximately six other haulers permitted by the City Public Works. Currently, there are two major private haulers and a number of smaller haulers providing solid waste (haul) service in the Polk County area.

There is a landfill for construction and demolition debris, as well as wood debris, located near Bartow called the Cedar Trail Landfill, which could be utilized as a disposal site. Yard waste is also taken to Southern Softwoods, located east of Lakeland on Lasso Lane and recycled for wood waste (2010 charge was \$33.00/load). Tires and most wood waste are taken to the Wheelabrator facility located north of the County landfill on C.R. 540, and used as a renewable fuel for power production (2010 charge was \$70/ton).

## **OTHER WASTES**

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The City does not handle hazardous and/or special waste collection or disposal but does cooperate in advertising and helping to find a collection site for what is referred to as “Amnesty Day a.k.a. Hazardous Waste Day” collections where a local collection site is provided for a day for residents to bring residential household special wastes and/or hazardous wastes such as paint thinners and used oils. There is a central location for hazardous waste drop-off located at Polk County’s North Central Landfill complex; this collection/drop-off area is open year-round. The County does not, however, treat or dispose of hazardous wastes; these wastes are transported to official disposal sites located off site. Bio-hazardous (including infectious) wastes generated at the Lakeland Regional Medical Center (LRMC) are incinerated on site; the LRMC Facilities Engineering Department estimate that they burn approximately 1,317 tons per year of waste based on a 3-year average. At times of periodic maintenance or other interruptions in incineration the LRMC sends their bio-hazardous wastes to Stericycle. Stericycle is a privately operated autoclave site for bio-hazardous wastes located in the Eaton Park area outside of Lakeland.

In 2009 the City produced approximately 397 tons of sludge from its Northside Plant and 1,715 tons of sludge from the Glendale Plant. Wastewater treatment plant sludge from the City’s wastewater treatment plants is applied as permitted onto agricultural lands. As it relates to the digestion process of sludge, the City began a pilot project in April 2009 to utilize methane by-product emitted for energy production. This new process to utilize sludge by-product as fuel, referred to as the Calnetix Pilot Project, will take more time to evaluate its effectiveness, however, it promises to be an innovative and energy efficient re-use of waste residuals.

## EXISTING CAPACITIES AND CURRENT DEMAND

In 2009, 92,002 tons of solid waste and recyclables were collected within Lakeland, which is an all-inclusive weight for residential and commercial municipal solid waste, yard waste and recycling. Total tonnage per day, including non-residential waste collected, was 252 tons. According to the Solid Waste Division's records, even with the matrix of population increasing, overall tonnage (solid waste, recycling, and yard waste) collection levels are tracking a downward trend since the 2005, probably due to our national, state and local push for recycling and general support of green initiatives (see Table IV-16 below.)

**TABLE IV-16  
AVERAGE TONS OF SOLID WASTE**

YEAR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Tons	80,020	82,150	88,540	92,983	100,183	106,471	101,053	99,689	96,708	92,002
Avg Tons Per Day	219	225	243	255	274	292	277	273	265	252
Population	78,452	82,706	85,512	88,741	89,731	90,851	91,623	93,428	93,508	94,163
Lbs/Per Capita	5.59	5.44	5.67	5.74	6.12	6.42	6.04	5.85	5.67	5.35

Source: Solid Waste Division, 2010.

As stated earlier, the existing Polk County North Central landfill has adequate capacity for service through the year 2050. In 2009, County data indicates that the North Central Landfill received 631,285 tons of waste or 2,070 tons/day for that year (305 operational days).

## PERFORMANCE AND WASTE REDUCTION

Currently, the City's collection of solid waste is handled by trucks which depreciate annually with replacement required and budgeted for every 7 years.

The City is looking to venture into residential automated collection. Automated garbage collection utilizes a mechanical arm on the collection vehicle, instead of workers lifting and emptying household waste containers. The City will supply one container at no cost to each residential household within the incorporated City limits. Residents can choose from three specially designed wheeled containers for garbage of either 96-, 64-, or 35-gallons. Prior to full implementation, the City will develop new routes that will allow garbage collection from every residential and commercial customer one day per week rather than two. Affected solid waste customers will be informed via several public education strategies about this change in collection frequency and will be assigned one day of the week on which they are to set their container for collection in the automated system. Due to the design of the containers, residents will find that they have less litter, odor and pest problems because lids always remain on the container. There is a potential cost savings to the City of Lakeland's operations because automated collection is more efficient. Containers are convenient, maneuverable, easy to roll, and extremely durable. Solid waste personnel indicate that their research shows that where automation collection is already a reality, there are clean

neighborhoods, satisfied customers, and a more efficient collection system with decreased personnel and fuel costs, which enhances the environment and saves everyone money.

The City is not bound by the State mandate to recycle a minimum of 30% of solid wastes collected; that mandate applies to Polk County. However, the City has historically recycled approximately 25% to 30% of the solid waste it collects. This is a good recycling performance relative to many other solid waste collection operations in Florida. Most of the City's recyclable tonnage is comprised of yard wastes, which are renewable as a fuel. In addition, the City recycles or sells tires, scrap metal and cardboard.

Lakeland residents may use a maximum of thirty-two (32) gallons container(s) for any yard waste collection such as bagged or loose grass, leaves, or small branches, since this will continue to be picked up manually once a week. Anything larger is too heavy and causes increased injuries for the sanitation workers. The City Solid Waste Department will continue to schedule bulk junk and yard waste collection.

City residents are encouraged to take advantage of the current recycling options available to them to reduce the amount of garbage they need to place at the curb. The more each household recycles, the less garbage is produced. An additional garbage container can be made available for large families, but the City encourages recycling before adding containers. All containers remain the property of the City and are assigned to each residence by serial number. Residents must call the City Solid Waste Division to arrange for a second container for regular garbage if necessary. National surveys indicate the 96-gallon container is adequate for the average home of four (4) people. Each container will hold the equivalent of three (3) normal trash cans. The City's objective is to utilize the above strategic efforts in order to encourage residents to reduce, reuse, and recycle. By utilizing the City recycling program, recycling decreases household waste, prolongs the life of landfills and helps the environment.

## STORMWATER

Stormwater is the water which runs off buildings, streets, and all other impervious and pervious surfaces during a rainfall event. Untreated stormwater runoff can transport pollutants to city lakes and streams. Stormwater runoff is now considered to be the most significant source of pollutant loading to surface waters.

Stormwater management refers to techniques for dealing with runoff in a manner that ensures adequate removal of pollutants and flood protection in an economical manner. These management techniques must generally ensure that the volume, rate, timing and pollutant load which exists after development or redevelopment of a site are similar to or better than the drainage characteristics which existed prior to development.

There are distinct land topographies in the Lakeland Planning Area which require different approaches to stormwater management. There is a high, sandy ridge running north and south through the center of the City dotted with several natural lakes. West of this ridge lies a flat terrain with a maze of streams and expansive floodplains. East of the ridge is a wide swath of formerly mined lands, much of which is unreclaimed, except for establishment over time of dense natural vegetation. Water filled mine pits are also characteristic of these mined-out areas. Illustration IV-10 depicts the four watersheds within the Lakeland Planning Area which give rise to rivers flowing eventually into the Gulf of Mexico.

**Local Rainfall** Per the Water Management District, the region and County averages, respectively, approximately 51 and 49 inches of rainfall in a year (1990-2009). According to rain gauge readings taken near the Lakeland Linder Airport, local yearly rainfall has averaged about 49 inches from 2005 to 2009. In planning for the capacity of stormwater facilities to handle rainfall, the standard of a 25-year storm is generally chosen for open basin systems and is used by the water management district. This storm can be described as the largest amount of rainfall that can be expected during any 25-year period. In Lakeland such a storm would result in about 7.5 inches of rain during a 24-hour period. Stormwater facilities should be designed to accommodate a storm of that level.

## DRAINAGE SYSTEM

The two key aspects of the local drainage system are the natural drainage features and the man-made drainage system. Illustration IV-10 depicts the Lakeland Planning Area's natural drainage features. The lakes, rivers, and other surface waters in the city are an integral part of the larger regional drainage basins also depicted in Illustration IV-10. Man-made drainage improvements within Lakeland are largely a function of street and site improvements which connect to the existing system of channels, lakes and streams. The City drainage system, shown in Illustration IV-11, is maintained and operated by the Lakeland Public Works Department. The illustration incorporates the location of the storm sewer pipelines as located via the Division's extensive survey map of stormwater facilities.

This survey will assist the City with the effort to maintain its National Pollution Discharge Elimination System (NPDES) permit.

## **DRAINAGE REGULATION**

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Stormwater control focuses on the temporary storage of water on-site. On-site detention areas are effective in controlling short, intense, local storm runoff and catch the initial pollutant wash. Detention strategies also help reduce downstream flooding and soil erosion, and help to recharge the groundwater aquifer. The City of Lakeland has had regulations requiring on-site stormwater detention and treatment since at least 1977. Following the adoption of the 1991 Comprehensive Plan, the City compiled and enhanced most existing development regulations into one ordinance, referred to as the *Land Development Regulations*.

Provisions in Article 34 of Lakeland's land development regulations address aquifer recharge protection, surface water quality/stormwater management requirements, natural habitat protection, floodplain management, soil erosion control and standards for the review of development site plans in regard to the protection of natural resources. Most construction activity that results in an increase in impervious surface area requires prior submittal and approval of a stormwater management plan for the site. A pre-post match of peak rate, volume, and pollutant loads is required for new development and redevelopment. The City's standards were historically more stringent than the current water management district requirements in that the district did not require a pre-post match for volume vs. rate. In an urban area where redevelopment is key to a healthy economy, the City's drainage policies are crucial to prevent further degradation of our lakes or any new flooding problems. Developments in a floodplain area must first attempt to locate on the non-floodplain portion of the site. When a development must infringe on part of a 100 year floodplain, the flood water storage function and capacity must be compensated, usually somewhere else on site, according to City and Southwest Florida Water Management District and/or FDEP standards which address this issue; also, structures within a floodplain must be elevated per City regulations. If a site is totally within a 100 year floodplain, development should be prohibited except where it would result in a "taking" of private property unless it's been permitted by the appropriate regulatory agencies (SWFWMD &/or FDEP.) New surface water and stormwater quality standards are being proposed by the federal government that could require significant increases in water treatment capabilities with associated new costs. As these new regulations become vetted, the City will need to monitor the impact on its lakes management and stormwater treatment projects, as well as examine its development regulations for any required changes.

## **FLOOD AND SURFACE WATER QUALITY PROBLEMS**

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The results of a 1988 study and generalized stormwater master plan completed by the firm of Dames and Moore in 1992 were somewhat problematic in regard to predicting flood problem areas. The City's Public Works Department uses a work order system that tracks

current flood problem areas. Some of the worst areas as of 2010 included streets, intersections and/or segments of the streets as follows (the list will tend to vary each year):

**STREETS/ STREET SEGMENTS**

1. Robson Road, west of N. Florida Ave
2. Buckingham Avenue, north of Easton Drive
3. Gilmore Avenue, south of Memorial Blvd.
4. Elm Road

The City Public Works Department is largely responsible for correction of drainage problems. Corrective actions must be appropriately funded in the City's 5-year Capital Budget Program.

Surface water quality problems are present in all City lakes. All of the lakes in Lakeland are over-enriched with nutrients, primarily nitrogen and phosphorus. This condition, termed eutrophy, results in reduced water clarity, persistent algal blooms, accelerated sedimentation/aging and imbalances in fish and wildlife populations. In Lakeland, eutrophy is due in part to the rich deposits of phosphorus naturally occurring in area soils. The problem is compounded by the discharge of untreated stormwater runoff to surface waters since this stormwater carries fertilizers, pesticides and other pollutants from yards and streets into the lakes.

Another source of nutrient loading to lakes is internal recycling from the lake sediments. Sediment dredging or chemical inactivation may be required in lakes with extensive deposits of organic sediments. Lake specific diagnostic studies, as scheduled in the City of Lakeland Comprehensive Lakes Management Plan, are needed to identify the sources of pollution and other management needs.

In 2009 federal courts ruled that the US Environmental Protection Agency (EPA) must establish limits to pollution of Florida's lakes, rivers and bays as a result of the State's failure to meet the 2004 deadline mandated by the Clean Water Act. The EPA is expected to develop methodologies for restricting the discharge of the violating pollutants such as phosphorous and nitrogen, originating from various sources including sewage, fertilizer and manure, between 2010 and 2011. Since the City's lakes do not meet the goals and objectives of the Federal Clean Water Act, they are subject to future regulation by Federal and State government.

**STORMWATER PROJECTS**

The natural surface water system that runs through Polk County includes Lakeland. It is not restricted by any political boundaries but is an integrated natural system influenced by the built environment including man-made stormwater systems. Thus, the City and the County can benefit from joint stormwater projects and should remain aware of each others stormwater/flood control projects. Heavy rains in the mid-1990's led the Polk County Commission to begin an intensified effort to correct flooding in over 60 flood problem areas throughout the County. The effort includes continued maintenance of stormwater ditches to

retain their proper functioning. The County has implemented a series of regional flood control projects in chronically wet areas along Itchepackesassa, Blackwater, Peace and Gator Creeks; these projects and/or the studies for them were jointly funded by the County and the Southwest Florida Water Management District.

In addition, Polk County has initiated studies and efforts in the Lakeland Urban Area. This includes stormwater studies and projects for the following:

1. **Lake Parker Drainage Area Study.** A study for Polk County was conducted by Keith & Schnars, consultant firm, to examine the outfall from Lake Bonny to Lake Parker and perform the drainage system analysis of the Lake Parker-Saddle Creek drainage system in the late 1990's. Additionally, the Florida Department of Environmental Protection also contracted a study (with USF and BCI Engineers) to model drainage from the Tenoroc Recreation area (which is primarily unreclaimed mined lands) through the Saddle Creek Basin. The study evaluated the feasibility of reconnecting isolated unreclaimed mined lands to the Peace River System and includes modeling of the inflows from the Lake Parker sub-basin. According to the Lakes Management and Stormwater Division, phases I and II of Lake Tenoroc Area Lake Parker-Saddle Creek Drainage Project were completed in 2008 and subsequent phases were being permitted as of 2010.
2. The County conducted a study to revise federal Flood Insurance Rate Maps (FIRMs) for an area near Scott Lake. This was a jointly funded project with some funding by Alafia River Basin Board. All work was completed by April 2003.

Specific City projects for stormwater management include the following:

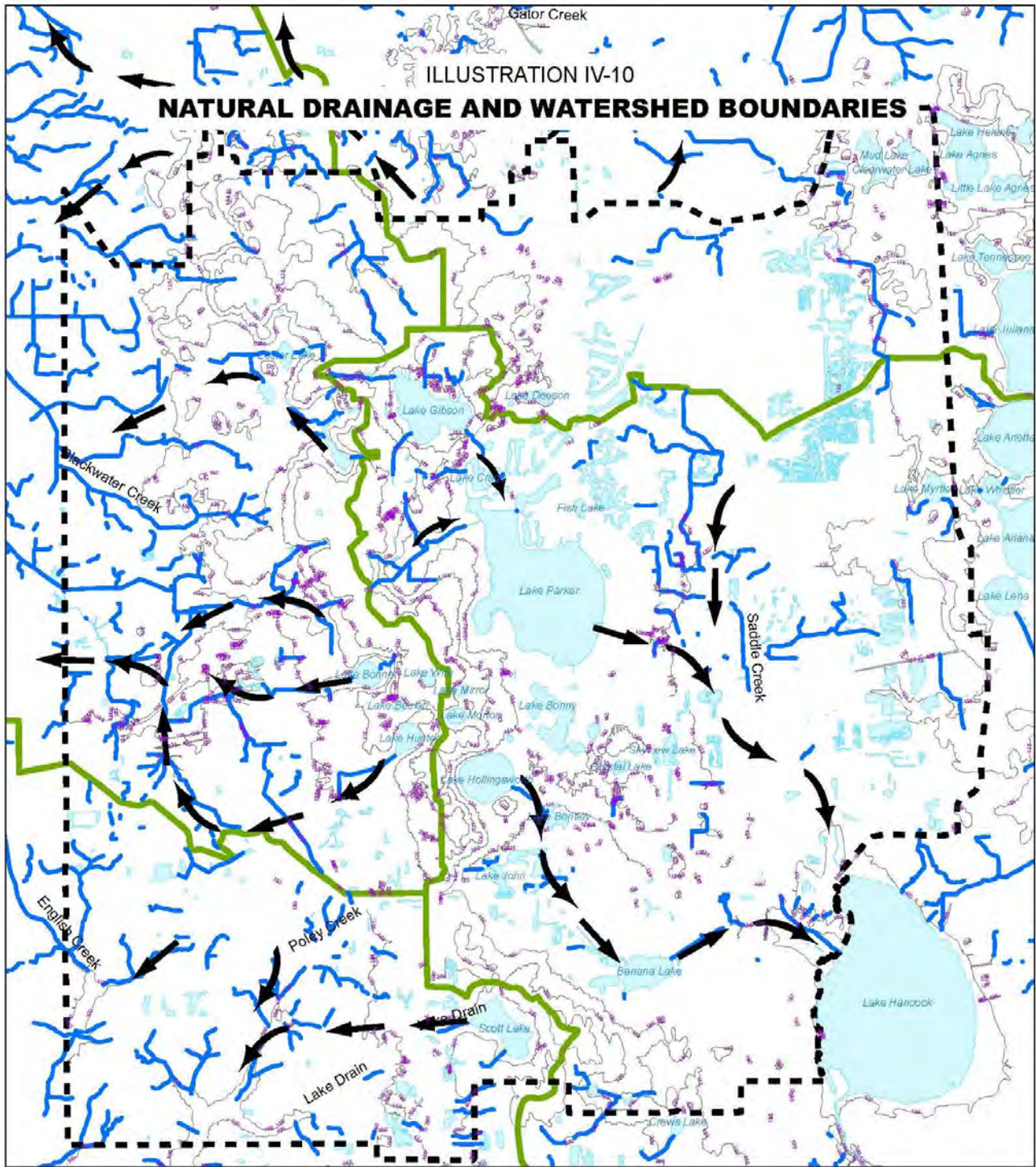
1. **Lake Hollingsworth Restoration:** The removal of 3.6 million cubic yards of organic deposits to restore lake bathymetry and improve water quality was completed 2001.
2. **Lake Hollingsworth Watershed Management Plan:** A plan to treat a significant portion of stormwater runoff entering Lake Hollingsworth. The following projects have been completed: Southern Landing stormwater treatment pond, wetland forest rehydration project adjacent to Buckingham Avenue, native vegetation replanting along the shoreline, and ongoing control of exotic plant species. The Westside Stormwater Treatment Project was completed in 2009.
3. **Comprehensive Lakes Management Plan:** Initially adopted in 1996, the 20-year plan identifies projects and costs for improving and protecting our lake resources to specifically address Federal Stormwater National Pollutant Discharge Elimination System (NPDES) and the State Total Maximum Daily Load (TMDL) programs. The plan served as the impetus for the City to approve the creation of a Stormwater Utility in 1999. An update to the plan, conducted in 2006, made the following findings and recommendations:
  - From 2000 to 2006 there has been an average of 16 water quality and 12 drainage capital improvement projects under way simultaneously;



- Replacement cost for the City's aging stormwater infrastructure is estimated to be \$248 million;
  - The cost of complying with the TMDL program in Lakeland will exceed \$100 million;
  - Annual expenditures on stormwater management in the City will cost \$18.5 million/year;
  - Based on the Impaired Waters Rule, most surface water in the City of Lakeland are impaired for one or more pollutants;
  - Incorporation of the areas identified in the City's Annexation Plan would double the City's cost for the TMDL program to over \$200 million.
  - Increase the stormwater fee from \$2.00 to \$4.00 in 2007 (completed);
  - Add 2 additional street sweepers (completed);
  - Allocate the remaining additional revenue for watershed management, water quality enhancement, and flood control projects (ongoing process);
  - Conduct a street sweeping study to evaluate the existing program and identify ways to increase efficiency (in progress as of 2010);
  - Perform an extensive evaluation of city codes and regulations that impact lake and natural resource protection. Incorporate incentive based, low impact development principles and standards into land development regulations and the comprehensive planning process wherever possible (subject to further study);
  - Update and revise this plan every five years. This will correspond with the TMDL's 5-year rotating basin plan. This will guide the City in regards to prioritizing CIP projects.
4. **Pollution Control Device Program:** A program to install pollutant removal devices in the existing city stormwater system beginning in 1999. Approximately 50 control devices were in operation and being actively maintained as of 2010; however the City is not pursuing expansion of this program.
  5. **Lake Parker Southwest Outfall Retrofit:** Retrofitting a major stormwater outfall to Lake Parker by constructing a series of stormwater detention ponds within the southwest watershed of the Southwest Basin. Phase I construction was completed in 2008 and phase II scheduled to go under construction in mid-to-late 2010.
  6. **Street Sweeping:** The City of Lakeland has four street sweepers. They remove 2,265 tons per year of sediments, trash, and leaves from the streets each year. Furthermore, this program reduces street stormwater runoff levels for heavy metals, nutrients, pesticides, and hydrocarbons. Without the street sweeping program, these materials and associated contaminants would be discharged into our lakes.
  7. **Public Education:** The City is involved in public education projects to advise citizens on how they can help protect our lakes. This includes financial and technical support to the grassroots organization – Lakes Education/Action Drive (LE/AD). The public education effort has resulted in numerous activities such as lake displays,





stormwater inlet plaques, Lakes Appreciation Month events, neighborhood/lake cleanups, public service announcements, educational brochures and presentations to adult and school groups.

8. **Lake Parker Tributary Swamp:** Restoring the hydrology of a large forested swamp located northeast of Lake Parker. The restoration will revitalize the swamp while providing treatment to stormwater flowing into Lake Parker (this project was on hold as of early 2010.)



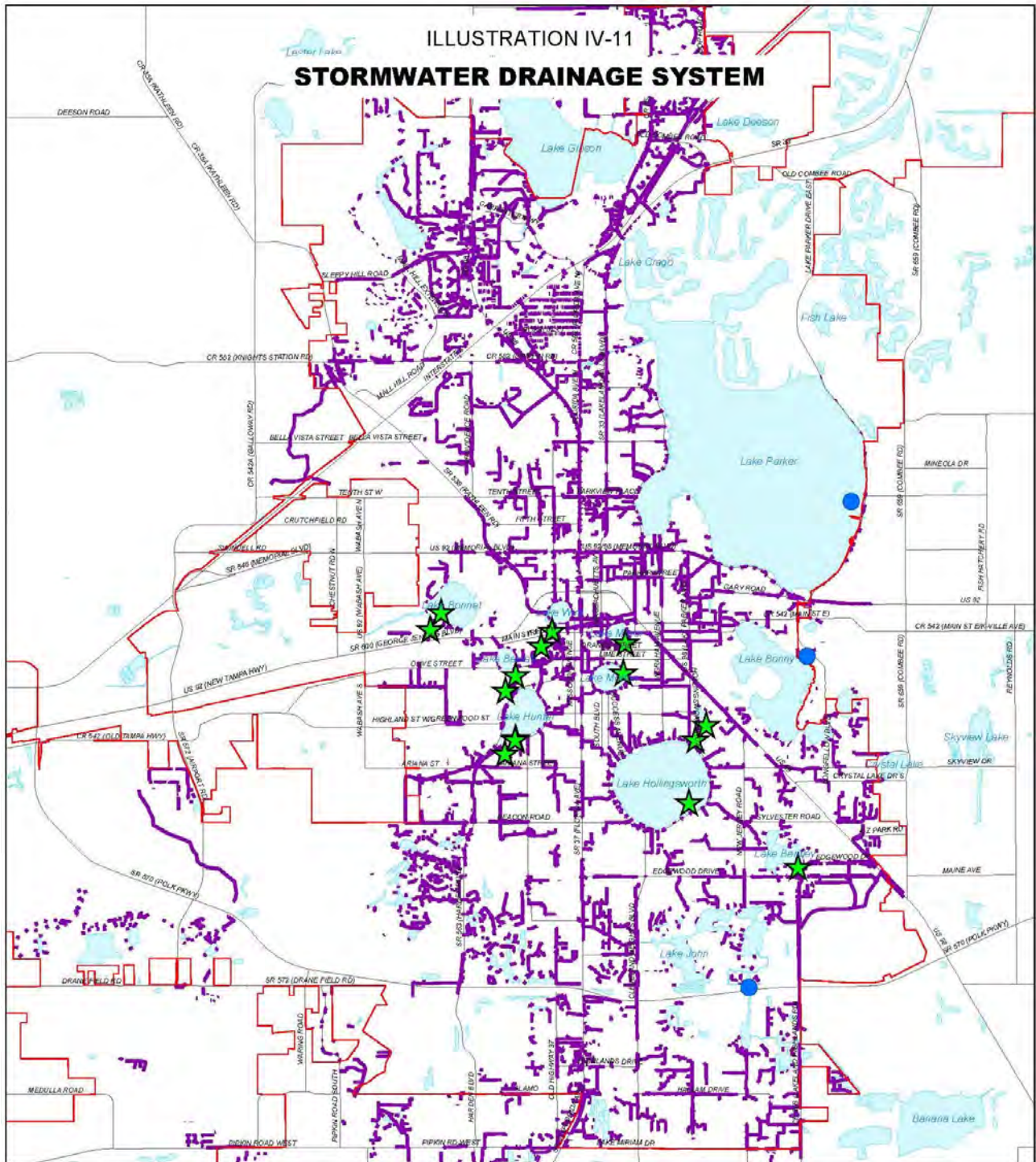
Source: Florida Department of Environmental Protection, 2010



-  Elevations
-  Principal Drainage Features
-  Lakeland Planning Area
-  Watershed Boundaries



k:\cd\maps\esri\comp\_plan\infrastructure\NATURAL DRAINAGE.mxd



Source: Lakeland Public Works department, 2010



- Corporate Limits
- Stormwater Line
- ★ City Owned Control Structures
- Non-City Owned Control Structures



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## NATURAL GROUNDWATER AQUIFER RECHARGE

Subsurface formations containing water reservoirs are called aquifers. In the Lakeland area there is a system of aquifers below the ground which includes a surficial or shallow aquifer, intermediate aquifer system, and the upper and lower Floridan aquifers. Public water supplies are drawn from the Floridan aquifer which holds the largest quantity of fresh water. The amount of water potentially available is much less since a large volume is needed to maintain hydrologic pressure against saltwater intrusion. Where a subsurface stratum confines the aquifer, hydraulic pressure may exist. The level to which the water would rise without the confining layer is called the potentiometric level. The groundwater in the surficial aquifer is unconfined and is free to rise or fall. Because of this and its nearness to the ground surface, it is highly susceptible to contamination from the surface.

Land areas which absorb rainfall and percolate it downward into underground water systems are aquifer recharge areas. Illustration IV-12 describes the geographical character of aquifers and how it relates to the natural water cycle. The aquifer systems below the Lakeland area are recharged by natural rainfall at a rate of recharge which depends upon soil-type, thickness of confining layers and geologic features such as sinkholes. The areas of high recharge correspond to thinner areas in the confining layers or units overlain with highly porous soil, while very low recharge corresponds to thicker areas and/or clay and other less permeable soil types.

Rule 9J-5, Florida Administrative Code, requires identification and protection of areas of prime or high recharge as designated by the relevant water management district. To date, no areas of prime or high aquifer recharge have been designated by the Southwest Florida Water Management District (SWFWMD), which is the district for Lakeland. Polk County Natural Resources Division staff used a model developed by the St. John River Water Management District to map current recharge rates for all of Polk County. Lakeland and its surrounding area are shown on our excerpt of the County map, Illustration IV-13, Aquifer Recharge Rates. The Scott Lake area remains the area with the highest recharge rate while virtually all the rest of the City has rates below 10 inches per year. Since the SWFWMD has indicated that they intend to use methodology similar to Polk's for the mapping of recharge areas in their district, this recharge rate information is the "best available data" for Lakeland.

Over time, surface water percolates downward through confining beds. In some thick layers, vertical transmission of water may take up to 85 years to reach the Floridan aquifer. In some areas of the Green Swamp, on the other hand, there are no confining layers and recharge occurs rapidly. The longer water is in the aquifer, the greater the concentration of dissolved minerals and other elements. The deeper that water is in the aquifer, the higher the concentration of dissolved elements. Therefore, freshwater north of Lakeland is generally of higher quality than that south of Lakeland.

The Floridan aquifer is exposed to a variety of contamination risks. The major sources of potential groundwater contamination include toxic agricultural chemicals, hazardous wastes, and landfill leachate. Surface contamination may reach the aquifer through conduits such as fractures, drain wells or sinkholes. Sinkholes are a source of potential contamination because of surface inflow into the holes. Illustration IV-14 shows alignments in Polk County where sinkholes have occurred. Within the Lakeland Planning Area there are two such sinkhole alignments. One alignment roughly parallels the CSX rail tracks from the northwest toward the southeast. The other alignment occurs through the Tenoroc State Reserve. In addition, since the aquifer is near the surface in the Green Swamp, any pollutants, with or without a sinkhole, are likely to leach into the aquifer. The continued use of septic tank systems in the Green Swamp may also translate into a potential contamination risk to the ground and surface waters that run through the swamp. It is critical that the Floridan aquifer be protected since it is the major source of potable water for the Lakeland water service area. Measures for protection include surface water quality improvement programs including drainage regulations, wellhead protection zones, and water conservation programs.

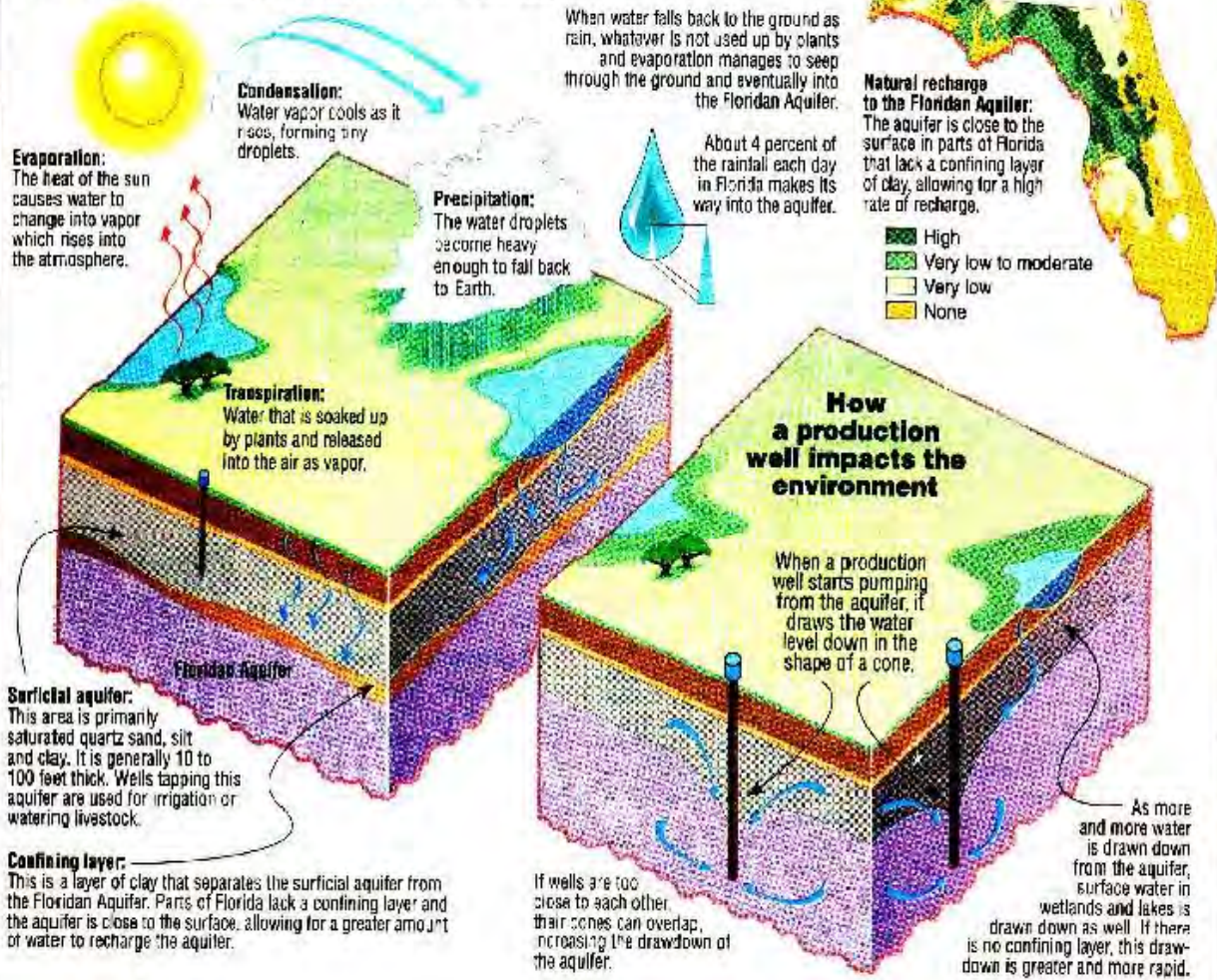
The land development regulations which were effective in early 1993 include a section that addresses wellhead and aquifer recharge protection. This section includes a list of prohibited uses and a list of restricted uses within the zones of protection of an identified high recharge area. Businesses which are located within the zone of protection and to which the restricted use provisions apply, must obtain restricted use permits. These permits require a management plan, which must be submitted to the City water department, and which in turn requires collection of quarterly data and annual inspections by City water officials. In addition, the section of the land development regulations which address stormwater management also help protect groundwater quality.

ILLUSTRATION IV-12  
**AQUIFER SYSTEM**

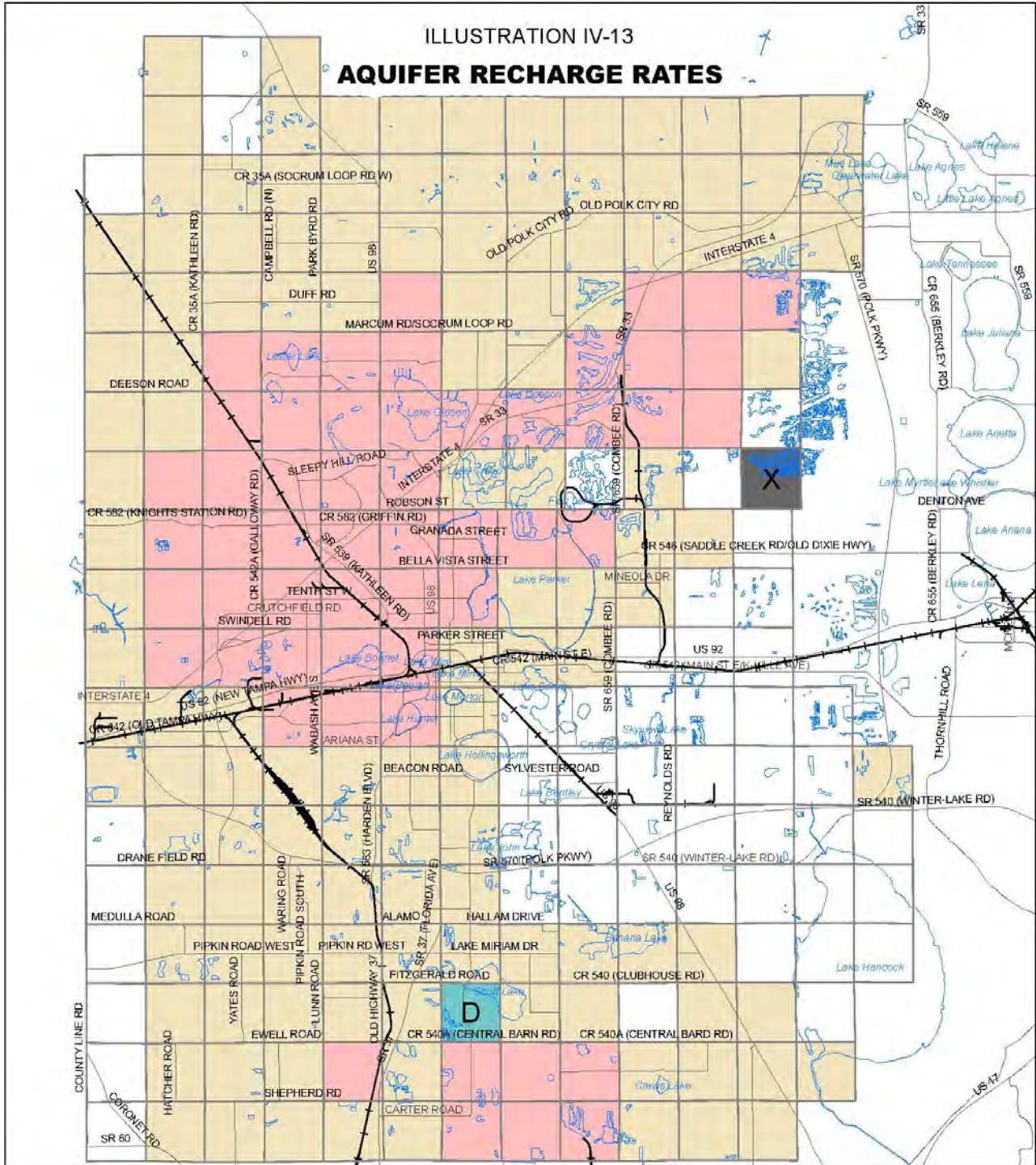
# Protecting the water below

Most of West Central Florida gets its drinking water from the Floridan Aquifer, a porous layer of limestone saturated with freshwater. Here's a look at how the water gets there, how it is tapped into and the impact we have on the environment when the water is removed faster than it can be replenished.

**The hydrologic cycle – the constant cycle of evaporation, transpiration, condensation and precipitation – recharges the aquifer with water.**



Source: Tampa Tribune, 03/31/1997.



Source: Polk County Natural Resources Division, 2001



- A** 0 - 2" / Year
- B** 2 - 5" / Year
- C** 5 - 10" / Year
- D** > 10" / Year
- X** Discharge area

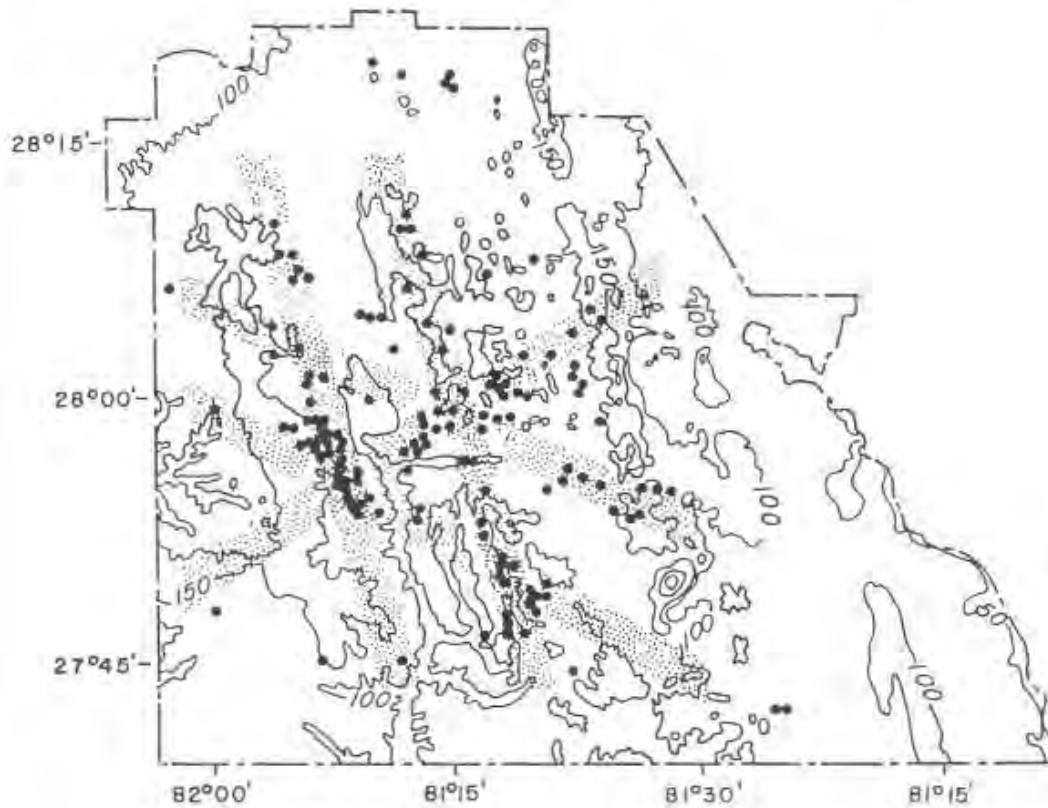


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ILLUSTRATION IV-14

**MAJOR LINEATIONS ALONG WHICH SINKHOLES  
HAVE OCCURRED IN POLK COUNTY**

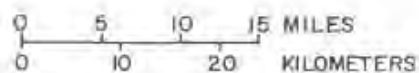


Base and land-surface  
contours from U.S.  
Geological Survey map  
of State of Florida, 1968

• LOCATION OF SINKHOLES

— — — ALIGNMENT OF SINKHOLES

—100— TOPOGRAPHIC CONTOURS--  
SHOWS ALTITUDE OF  
LAND SURFACE. CONTOUR  
INTERVAL 50 FEET.  
DATUM IS SEA LEVEL



Source: U.S. Geological Survey  
Water-Resources Investigations Report 85-4126

CITY OF LAKELAND, PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

## ISSUES AND OPPORTUNITIES

As this element addresses legislative requirements for several infrastructure issues -- potable water, wastewater, solid waste, stormwater and natural groundwater aquifer recharge -- a discussion of issues and opportunities for each subject is addressed separately. There are numerous issues which must be considered in ensuring adequate infrastructure to meet the needs of the entire Lakeland Planning Area.

### WATER SUPPLY PROTECTION

The City of Lakeland land development regulations require a 500 foot radial zone of protection around each wellhead within the City wellfields. The land development regulations list prohibited and restricted uses within the zone of protection. Businesses located in the zone of protection which handle or store materials that are restricted must submit a management plan to the City, collect data on a regular basis, and allow annual inspections by City water officials. In addition, the City's land development regulations require stormwater management systems to address the volume and quality of detained water; this in turn affects the volume and quality of groundwater since stormwater eventually drains into the ground, recharging or renewing the water in the aquifer.

The location of the City's Northwest wellfield and the T.B. Williams Water Treatment Plant is within the urban development area east of Kathleen Road and south of Exit 31 for Interstate 4, although 2 of the 13 wells are located west of Kathleen Road. A business park exists to the east of the water treatment plant. The surrounding area also contains some low density residential developments. It is in the City's best interest to protect the wellfield through prudent land use planning for the area surrounding the wells. The future land use designation of the treatment plant area east of Kathleen is Interchange Activity Center and could allow uses such as retail, restaurant, motel, and employment center businesses as appropriate for an interchange location. The west side of Kathleen where two other wells are located is designated as Residential Medium which allows residential and a small percentage of small scale office or retail. However, it is very important to have a reliable back-up system in case of a failure or problem, including intrusion of contaminants at the Northwest wellfield. This is the key role of the Northeast Wellfield and the C. Wayne Combee Water Treatment Plant which was put into service in October 2005. The Northeast Wellfield, comprised of approximately 870 acres located north of Old Polk City Road, was acquired in 1989 for approximately \$2,200,000 and was recently developed along with the construction of the C. Wayne Combee Water Treatment Plant, located four miles south on Old Combee Road. The City spent \$3,300,000 on pipelines and \$19,200,000 on the new water treatment plant.

Another cost of protecting the water supply is providing for a cross connection control program per State statutes. The City has had a program since 1977 although the scope has developed gradually over time to the present application. The utility must continue to address how to prevent water supply contamination through control over potential cross connections and backflows. For example, if water pressure suddenly dropped in the system, there is potential for backflow of contaminated water into pipelines from various sources such as mortuaries,

dentist offices, fire sprinkler lines, and even irrigation systems. This backflow might contain biological and infectious contaminants and/or pesticides and other human health hazards. In our current program, all new commercial customers are required to install proper backflow preventer (BFP) assemblies per City specifications. If existing commercial customers with no BFP assemblies pull permits for remodeling endeavors, they must bring their facilities up to specifications. These BFP assemblies are generally installed at the meter (point of service) and are owned and maintained by the utility. City utility personnel are certified BFP testers and provide consistency in the annual testing, repair, and recordkeeping.

## **WATER CONSERVATION**

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Conservation of water resources is important to ensure adequate future supplies and to stay within permitted water withdrawal parameters. The need for this strategy arises from increasing population growth. Much of the residential water use is attributable to the maintenance of landscaping, and residential appliances requiring water. The City has been working with the Water Management District to decrease this use. An opportunity to decrease the growth of individual water usage has been pursued chiefly by encouraging the modification of landscaping practices, adapting residential appliances and plumbing to low volume water techniques, and increasing public awareness of water shortages including restricted lawn irrigation periods. Watering restrictions introduced by the District have been in effect since 1988, when they were instituted on a temporary basis. Implementation of these watering restrictions by the City has had a dramatic effect on water use. In 2003, the Southwest Florida Water Management District adopted “Year-Round Water Conservation Measures”. This rule, contained in Chapter 40D-22, Florida Statutes, established normal water use as only twice-per-week lawn irrigation. A companion rule, Chapter 40D-21, “Water Shortage Plan”, addresses when and how additional restrictions may then be implemented, such as the once-per-week watering limit common in the last decade. Details of the city water conservation programs and initiatives may be found in the Conservation Element and in the City’s response to the SWFWMD’s Regional Water Supply Plan, TSD IV-Four (Response Letter to SWFWMD), found in the *Technical Support Document*.

The City of Lakeland adopted its first water conservation plan in 1987. This plan delineated demand and supply side conservation measures as outlined in the Conservation Element. In 1998, the City implemented an inverted block water rate structure with three tiers to further promote water conservation by those consuming 10,000 gallons or more each month. In order to continue to provide a basis for consistent and coordinated water conservation efforts, the Water Conservation Plan was updated in 2004. In 2006, the water rate structure changed from three tiers to four tiers with a considerable unit cost increase for users of over 19,000 gallons per month. An enhanced conservation program is proposed that would incorporate elements such as low-flow toilet rebates, customer irrigation education, irrigation enforcement, conservation kit handouts, and the Water CHAMP program. Water CHAMP stands for Water Conservation Hotel and Motel Program and is a Southwest Florida Water Management District initiative. The program encourages hotels and motels to offer extended-stay guest conservation options. Patrons may choose to have linens laundered every third day and towels laundered every other day as opposed to the normal every day change out.

In addition to water savings, the facility will also save costs on electricity and/or natural gas as well as a labor savings. As available water supplies decrease state-wide, the conservation of existing water supplies will continue to be an important issue.

## **EXPANSION OF WATER FACILITIES**

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In December 2008 the City's Water Use Permit was increased to an average daily quantity of 35.03 million gallons per day (MGD) with monthly peak of 42.04 MGD. This permit was issued for 20 years contingent upon the agreement with the Tampa Electric Company (TECO) to provide City reclaimed water to offset TECO's ground water withdrawal used in the power generation process.

The City's efforts to promote water conservation strategies such as the inverted block rate structure use of rainfall indicators for sprinkler systems and xeriscaped plantings on City lands and parks, leak detection and inspection programs resulted in reduced per capita consumption trends of the 1990s and delayed the need to expand potable water facilities until 2003. The Northeast Wellfield and the C. Wayne Combee Water Treatment Plant were expanded between 2003 and 2005 to accommodate a higher water use permit quantity. Additionally, installation of large finished water transmission mains has taken place in the northeast area of the community along SR 33 and also extended across Interstate 4 to serve the Williams DRI as well as the new Florida Polytechnic University Campus. Despite the expanded facilities, the previously mentioned conservation strategies must continue since the City is part of the Southern Water Use Caution Area (SWUCA) defined by the Southwest Water Management District (SWFWMD) and formally adopted as of January 2003. Moreover, to ensure sufficient future water supplies the Polk Regional Water Cooperative (PRWC) was formed in 2016 to develop future alternative water supplies. The PRWC is comprised of 18 public water utilities in Polk County, including Lakeland, Polk County BoCC, and Winter Haven.

City water use forecasts for the entire water utility service area (which is beyond the corporate limits) indicate water demand within the current permit parameters (35.03 MGD) through 2030 planning horizon.

## **WASTEWATER EFFLUENT REUSE**

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As mentioned above and discussed in detail in the Conservation Element of this Plan, the City pursues both demand and supply-side conservation strategies to reduce overall water consumption and pumping. The City organizationally combined water and wastewater operations into one department in the fall of 1998. This was to ensure a higher level of coordination between the two services and address mutual issues of concern and opportunity. One of those issues is water conservation through reuse of available wastewater effluent. Historically the majority of Lakeland's available wastewater has been used for power generation at Lakeland Electric facilities with the remaining effluent channeled to the City's artificial wetlands site located on S.R. 60. The artificial wetlands have been permitted for receiving and treating up to 20 MGD. This capacity clearly addresses the effluent needs of

the combined wastewater system capacity of the Glendale Facility (13.7 MGD) and the Northside Facility (8 MGD). Other options, such as supplying reuse water to an interconnect with Polk County or to industrial manufacturers, have been discussed but would require amounts of reclaimed water that are not yet available.

In 2007, the City of Auburndale approached the City of Lakeland and the Williams Holding Company to agree to supply reuse to the proposed FPU campus located near Interstate-4 for irrigation purposes. This agreement could solve a disposal issue for Auburndale, assist both Cities in addressing their water issues and Lakeland could see a reduction in potable water used for irrigation.

In 2009, the City enter into an agreement with the Tampa Electric Company (TECO) to divert the City's surplus treated waste water from the artificial wetlands to TECO's South Polk County Electric Generation Plant for cooling purposes. The use of the treated effluents will "free up" the potable ground water that TECO was previously permitted to withdraw for generator cooling which in turn can be allocated to serve future demand in Lakeland's service area. Pursuant to the agreement TECO completed connection to Lakeland's wastewater system in 2012 at the estimated cost of \$60 million. The funding for this project was jointly funded by TECO and SWFWMD.

## **INFILTRATION INTO WASTEWATER SYSTEM**

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The capacity expansions of both of the City's wastewater plants are expected to handle the anticipated growth in service demands for another 10 years subject to the augmentation of organic loading at the Glendale (formerly W. Carl Dicks) facility by 2008. The expansion of capacity at the Glendale facility also addresses any temporary higher flows resulting from infiltration during unusually wet years, such as in 2004. In addition, the City's sewer rehabilitation program has been accelerated to better control infiltration (of stormwater) into lines and manholes.

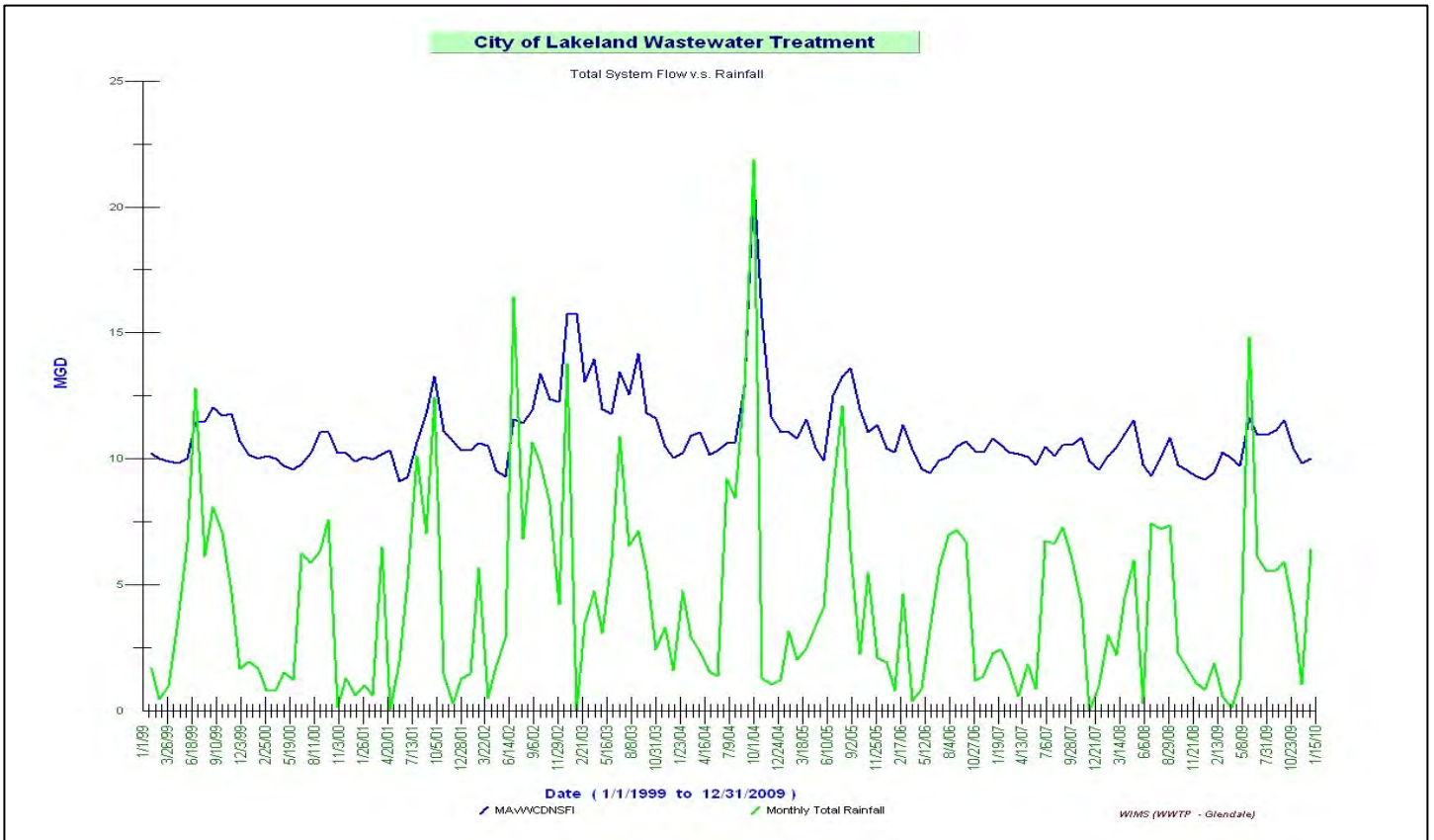
A program that includes efforts to abate infiltration and to assess trunk sewer capacity was significantly expanded in 1995. The challenge is to complete this assessment for a system of about 311 miles of pipeline and over 6,200 manholes through which potential infiltration can occur. Illustration IV-15, entitled "Total System Flow", shows the average flows and monthly rainfall from 1997 to 2007. The chart illustrates the significant effect of inflow during periods of exceptionally high rainfall. For example, during July-September of 2007, flows into the treatment plant averaged almost 2 MGD more than the previous quarter. Based on the observations in this chart, a redirection of efforts from abatement of infiltration (leakage below the water table) to reduction of inflow (direct collection of flood waters) was made as a CMOM project. CMOM stands for Capacity, Management, Operation and Maintenance of the Wastewater Utility. Preliminary observations are indicating significant reductions are probable as more areas are inspected and mitigated.

In order to address the problem of infiltration into the wastewater system, the City significantly increased funding in fiscal year 1996 to accelerate wastewater line rehabilitation. Objectives

of the accelerated wastewater line rehabilitation program were to inspect the pipeline by televising the entire gravity sewer system within 7 years, to log and prioritize sewer problems, to repair priority-one problems (e.g. where imminent cave-in of pipe is likely) in a timely manner, and to eliminate 0.5 MGD of infiltration by year 2000. The inspection is performed by a miniaturized robotic camera on treads or a skid, during which data is logged and later categorized and prioritized. While this program has been very effective in identifying problems, preventing imminent cave-ins and eliminating almost 0.5 MGD by fiscal year 1998, the number, and consequently the cost, of repairing priority-one problems was initially underestimated. Through inspections completed as of September, 2007, \$13.2 million in future priority-one and priority-two work\* have been identified, while the annual inspection and repair budget has increased from \$700,000 to \$900,000, and will gradually increase to \$1,000,000 in October 2012; (\*an example of priority-two work is repair for a pipe with a crack in it.)

The project has resulted in a declining Annual Average Daily Flow (AADF) at Glendale, in spite of increasing the customer base over the last ten years. In response to an EPA required CMOM audit, the City is now refocusing the project into shallower leaks which result in direct inflow to the system during rain events. The audit had to follow a structured outline which addressed various CMOM elements of the Utility's operations. The assessment was contracted through an experienced firm which had previously provided accepted reports and documentation to the US EPA from other utilities.

## ILLUSTRATION IV-15 TOTAL SYSTEM FLOW VS RAINFALL



**Source:** City of Lakeland Wastewater Division, 2007.

## UTILITY SERVICE & URBAN GROWTH

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As Lakeland and the surrounding urban area continues to grow in population and businesses, infrastructure needs of water and wastewater will continue to play a key role in where growth locates. The City has largely provided customers inside the City limits with wastewater service. For those customers located outside the City and willing to pay for connection to the City's wastewater system, an annexation agreement is required for the property; once the property becomes contiguous with the corporate limits, the City has the option of requiring annexation.

The City of Lakeland has various Wastewater Service policies which discourage urban sprawl. One compact growth policy results from Lakeland having defined a "Wastewater Utility Service Area." The lack of centralized wastewater service tends to limit the densities and intensities of growth outside of the service area. The delineated service area also serves as a tool in planning for the extension and sizing of wastewater lines. A second important City policy requires that new development pay for and construct wastewater line extensions necessary for the development. In addition, private lines can be designed to accommodate other future users through the City's policy on oversizing wastewater lines that allows the City to contribute funding for oversizing privately-funded line extensions and later recoup those funds from future customers who connect to or "infill" along the line route. This policy accommodates development needs and longer-range City capacity needs, while avoiding an inefficient system of small, limited-capacity individual line extensions.

While customers who connect to Lakeland's wastewater system normally pay for connection through either reimbursements by future tenants or through upfront capital costs plus impact fees, an exception to the City's policy was made in a decision in 1994 when the Lakeland City Commission agreed to fund the cost for wastewater service line expansions to "high growth areas" targeted by the Lakeland Economic Development Council. Medium-sized wastewater trunklines were extended south on U.S. 98/Bartow Road to C.R. 540/Clubhouse Road in order to service Traviss Technical Center, the University of South Florida-PCC Campus, existing industry and future growth in the corridor. Another extension was made for the businesses at the Lakeland Linder Regional Airport's Airside Center business park which provides substantial lease revenue to the City. Both of these lines will require upsizing in the future due to the growth in demand in these areas of the City and Polk County. A third extension was proposed for the area north of Interstate 4 along Griffin and Kathleen roads. No reimbursement was required from the private sector for these line extensions. The benefit of these extensions will be to infill areas already developed with future growth of compatible intensities and to discourage growth moving to isolated, less developed areas. This also maximizes existing infrastructure and public services provided in these areas.

The policy of service priority within the City and its urban development area, in conjunction with the absence of County wastewater service for County-approved development located outside of much of Lakeland, historically resulted in a proliferation of septic tank systems in those areas. This practice has been curbed in the last 10 years due to County wastewater system availability near the City. However, by law, those businesses or residences using



approved septic tank systems are not required to connect to a centralized sewer system unless it is available (within a ¼ mile or abutting the property, depending upon the situation). The City has been requested in a number of cases to consider servicing failing private development-installed wastewater package plant systems located in the County, including the Skyview development, Hidden Lakes Estates and others. These situations occur when the Department of Environmental Protection (DEP) and/or the County Department of Health begin fining the owners of the private package system due to system failures and health violations. If the private owners do not respond or simply abandon the system, the residents are then faced with how to finance the connection to a centralized system. In 2015, the City took over the Skyview Water Utility per an agreement with DEP and Polk County. The risk of the failure of package treatment plants will continue to be an issue until the package systems are connected to regional wastewater systems.

The utility is now designing a major expansion to the area southwest of the Lakeland Linder Municipal Airport. Proposed growth and development in this southwest area of the City is much more than the existing collection system can handle. The Wastewater Utility has had to move up its schedule of capital improvements to the capacity and the range of its collection system. Projects titled English Oaks I, II, and III are being implemented. English Oaks I involved the installation of an additional pump station and the upgrading of some force mains and an existing pump station south and west of the airport. English Oaks II provided for a new pump station to be sited north and east of the airport on Drane Field Road in order to move the larger future waste stream that this growth will deliver. English Oaks III provides for the installation of a large diameter force main from the new English Oaks II pump station all the way to the Glendale WWTP; the route is generally the same as that of the Polk Parkway. Completion is not expected until after 2017. The area's increase in water and wastewater service demand may increase effluent available for reuse as well.

## **HAZARD MITIGATION**

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The County Local Mitigation Strategy (LMS) was adopted in 1999 and updated in 2009. The LMS is a multi-jurisdictional plan that assesses the vulnerability of the county and its jurisdictions to hazards and elaborates on the risk associated with each type of hazard. It evaluates local mitigation efforts that should be taken and their usefulness, as well as providing guidance for implementation at the jurisdictional level. Through adoption of this plan, the county and its jurisdictions are eligible for federal funds to carry out mitigation actions. Many federal grants available for hazard mitigation are targeted for retrofitting and reinforcing essential infrastructure to both prevent hazards such as stormwater facilities and to withstand hazards as with electrical service or potable water.

On a much larger scale and a longer term perspective Polk County and its 15 municipalities participated in a State pilot program to draft a county-wide Post Disaster Redevelopment Plan (PDRP). The PDRP was adopted in June 2009 and is posted on the County's website. A post-disaster redevelopment plan (PDRP) is a requirement of all Florida coastal counties and municipalities, and is encouraged for inland communities. It identifies how a community will

redevelop and recover long-term after a disaster. As witnessed by the 2004 hurricane season and the post-Hurricane Katrina devastation of New Orleans, Louisiana, such a natural disaster could create significant challenges for infrastructure systems from electrical power distribution and transportation networks, to municipal potable water systems, to public school facilities. The PDRP considers the implications of a disaster of similar magnitude occurring in Polk County and what policies, regulations and other mechanisms would be required to recover and redevelop in the aftermath. Emphasis is placed on seizing opportunities for hazard mitigation and community improvement, in line with the goals of local comprehensive plans. Infrastructure is extensively considered and some recommendations are made regarding infrastructure restoration and mitigation, as well as for short-term recovery actions that affect long-term redevelopment. As urban growth continues, such preparation becomes essential in a region subject to severe weather conditions

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### **SOLID WASTE COLLECTION**

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The City currently collects solid waste for all areas inside the city limits. As the City continues to grow, additional collector personnel and/or trucks will become necessary. To contain costs and subsequent rate increases the City will need to examine alternative methods of efficient collection. The City currently uses a three-man collection system (one driver and two collectors). Alternative collections using two-man semi-automated systems or one-man fully automated systems will be examined. Given the advent of separated recycling collections in addition to collection of yard wastes and collection of all other garbage, the City will periodically re-examine the costs and benefits of twice weekly collection of garbage.

The City presently does not provide roll-off services to city residents (i.e. to collect construction debris). These services are provided through private contract haulers. The City will examine the feasibility of providing roll-off collections to increase revenues, which in turn will contain overall solid waste rates. The addition of roll-off services will assist the city in providing increased efficiencies to yard waste and apartment complex collections.

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### **SOLID WASTE COLLECTION AND DISPOSAL**

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Significant changes in the City's Solid Waste operations have hindered efforts to reduce waste. In 2003, the Lakeland Electric's waste-to-energy burn facility was permanently taken off line due to the age of the incinerator resulting in inefficiencies, exorbitant maintenance costs, and concerns about air quality impacts. Consequently, the City's capability to dispose of solid waste through waste-to-energy conversion was significantly diminished. The last year the incinerator was in operation, the City disposed of approximately 33% of the total annual tonnage collected via waste-to-energy conversion. Five years after the closing of the City's facility only about 15% of the total annual tonnage collected has been sent to third party companies such as Wheelibrator for waste-to-energy conversion. In 2008, Wheelibrator took approximately 15,000 tons of yard waste and discarded tires. Thus the City is no longer implementing or able to meet the 30% minimum of annual solid waste disposal via the Lakeland Electric refuse-derived fuel operation as stipulated in the previous Comprehensive Plan.

The City is considering automated collection for residential waste pick-up. Automated garbage collection utilizes a mechanical arm on the collection vehicle, instead of workers lifting and emptying household waste containers. Automation of collection is expected to offer residents reliable service, more efficient collection with decreased personnel and fuel costs, and potential for increased recycling. If implemented citywide, the City will supply one cart at no cost to each residential household within the incorporated City limits a specially designed wheeled container for garbage; either, 96-, 64-, or 35-gallon containers. Then instead of two pickups per week, residential garbage will be collected once each week. National surveys indicate the 96-gallon container is adequate for the average home of four (4) people. Each container will hold the equivalent of three (3) normal trash cans. However, the monthly charges to residents will be lower for those who choose to use the smaller sized containers; this fee structure is intended to encourage residents to recycle more wastes. The refuse containers used for automated pick up are relatively easy to roll/maneuverable and extremely durable. All household garbage must be placed inside the container rather than in bags at the curb so that the operator can utilize the mechanical arm to lift the container and empty it. Automation should enhance neighborhood cleanliness by keeping refuse in a durable containers that protect the refuse from animals and heavy winds that might spread the refuse onto the streets.

Prior to full implementation, the City will develop new routes that aim to collect garbage from every residential and commercial container customer one day per week. Affected solid waste customers will be informed via several public education strategies about this change in collection frequency and will be assigned one day of the week on which they are to set their container out for collection using the automated system. Due to the design of the containers, residents are expected to experience less litter, odor and pest problems because the lids are attached and remain secured on the container. There is also a potential cost savings to the City of Lakeland's operations because automated collection is more efficient using only a driver for normal routes rather than a crew of three and reduces city exposure to major health claims due to the strenuous nature of manual garbage collection.

## **SOLID WASTE RECYCLING PROGRAM**

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Residents are encouraged to take advantage of the current recycling options available to them to reduce the amount of garbage they need to place at the curb. The more you recycle, the less garbage is produced. An additional normal refuse container can be made available for large families, but the City encourages recycling before adding containers. All containers remain the property of the City and are assigned to each residence by serial number. The City's strategic efforts are intended to encourage residents to reduce, reuse, and recycle. Recycling decreases household waste, helps the environment, and can lead to lower solid waste bills by using the option of smaller regular refuse containers.

In February 2009, the Lakeland Vision Update culminated with the identification of 11 strategic community priorities and among them was the City's environment as it relates to

recycling. The Lakeland Vision Update established the following goal and strategies for recycling:

*Recycling is easy, expected, and becomes part of the daily habits of all citizens throughout Lakeland, including schools, businesses and public spaces.*

#### *Strategies*

- 1. Develop a comprehensive, city-wide recycling program to include schools, businesses, and public spaces.*
- 2. Conduct a public education campaign to inform the public about recycling benefits and procedures.*

The goal and strategies set forth the principles that this element should validate and support in order to create the community envisioned by the City's residents and stakeholders.

A new project initiated in January 2010 was the downtown commercial Recycling program. This is a voluntary program for businesses in the downtown historic district to dispose their paper, plastic, aluminum, steel and glass in 96-gallon containers placed in designated alleyways. The City collects these recyclable materials once a week for processing. This project was a direct response to the Lakeland Visioning process and will be monitored for its success over time to determine if such commercial recycling efforts can be expanded throughout the City. The City will continue to seek innovative solutions and options.

## **EXISTING STORMWATER SYSTEM**

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The existing drainage system consists of various combinations of curbing, drains, ditches, culverts, outfalls and other structures which have historically relied upon the lake reservoir system for stormwater retention and storage. On-site retention has been required for new construction in order to maintain pre-development runoff amounts. Appropriate stormwater management practices can ensure no new flooding problems from development and redevelopment. In order to optimize management of stormwater in the City and coordinate the City's systems with the larger urban area drainage characteristics, the City has compiled and must maintain detailed inventories, with data then entered into a database to allow for computer analysis. The necessary inventories and studies are costly. Follow-up actions to retrofit or upgrade the drainage system usually involve significant additional costs. Priorities for studies and follow-up actions must be coordinated with the capital improvements budget. In December of 1999, the City adopted a stormwater utility fee as a dedicated source of funding for drainage improvements and upkeep.

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## **WATER QUALITY OF AREA LAKES**

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### **LOCAL ACTION**

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Lakeland has a lakes management program which has established data on various area lakes, and a 20-year Comprehensive Lakes Management Plan formulated in 1996 (see Conservation Element). The lakes management program and 20-year plan includes information on lake water levels, water quality, fisheries, recreation demand and how each lake fits into the overall drainage system. Since lakes were historically integrated into the urban drainage system, water quality is constantly degraded by urban stormwater runoff. In fact, most of the stormwater infrastructure in the City of Lakeland was constructed before any concerns about the effects of stormwater on lake water quality. Sites developed prior to the implementation of stormwater treatment regulations discharge untreated runoff directly into our lakes. To improve both water quality and wildlife resources, and to meet existing state and federal water quality standards, Lakeland will need to maintain a long-term commitment to retrofitting the stormwater systems in the city. Retrofits, however, are expensive; there are hundreds of pipes that discharge into our surface waters.

Projects that have been carried out by the Lakes Management Division typically target major improvements of water quality, through lake bottom dredging technology, and through retrofitting drainage patterns to pre-treat or divert polluted runoff prior to its entering the surface water with the intent of maximizing the investment in the surface water clean-up. These projects are primarily funded through the stormwater utility fund. State grants, taxes, and other capital projects revenue sources are all possible alternatives and/or supplements to help leverage dedicated funds. As intergovernmental coordination advances, the City has become involved in more City-County projects that impact the Lakeland Planning Area. This could include Basin Board funding, where regional surface water benefits are evidenced by such a joint project. Funding assistance provided by state and federal assistance programs should be utilized to the maximum extent possible. However, competition for these limited resources is intense, and therefore a local dedicated funding source such as the City's stormwater utility fee is optimal.

### **NEW FEDERAL REQUIREMENTS**

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In 2009, a federal court ruled that the US Environmental Protection Agency (EPA) must set limits for pollution entering Florida's lakes, rivers and bays consequent to the State Department of Environmental Protection's inability to adopt sufficient standards as mandated by the federal Clean Water Act. The federal Clean Water Act requires all states to implement numeric nutrient criteria to limit nutrient pollution (i.e.: excess nitrogen and phosphorus levels in water bodies that can harm aquatic ecosystems and threaten public health). The EPA is expected to impose the State numeric nutrient criteria sometime between 2010 and 2011.

There is significant concern, as expressed by the State Department of Environmental Protection (DEP), that the criteria may be arbitrary. The DEP has stated that the proposed criteria will not reflect a true relationship between nutrient enrichment and the biological health of Florida's water bodies. Furthermore, as much as 80% of the State's surface waters could

be deemed impaired and may require billions of dollars of remediation to meet these arbitrary limits. Another concern is that the criteria may be applied as a “one-size-fits all” limit to urban centers, suburban areas, and rural hinterlands which could run counter to recent efforts to strategically focus growth in compact urban centers and corridors. The significant amounts of land required for traditional stormwater retention and treatment facilities such as swales and retention ponds makes development and redevelopment in urban areas more expensive and densely compact walkable communities less feasible.

### **GREEN SWAMP AREA OF CRITICAL STATE CONCERN**

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The Green Swamp comprises approximately 6,985 acres in Polk County. In the 1990s the Lakeland city limits came to include a small portion (101 acres) of the Green Swamp in the northeast area of the City. The further annexation of 1,796 acres which expanded the total area of the Green Swamp within the City’s jurisdiction to 1,897 acres led to the subsequent adoption of policies and regulations for development in the Green Swamp in the *Lakeland Comprehensive Plan* and the *Land Development Regulations* in 2006. The annexation included the Northeast well field thereby allowing the City to have jurisdiction over that important resource. The Green Swamp carries the designation “Area of Critical State Concern” (ACSC) because of its important hydrologic resources. The Green Swamp is the headwaters of four major Florida rivers, functioning as a substantial natural storage area for flood waters and as an aquifer recharge area. The overall elevation of the Floridan aquifer above sea level provides water pressure which counters salt water intrusion and causes natural spring flow. Within the Green Swamp the aquifer is often close to the surface and therefore vulnerable to contamination. Development in the Swamp and just north of Lakeland includes residences, schools, an auto auction, a slaughterhouse, a former auto racetrack and various small industries. Polk County’s Comprehensive Plan includes provisions to significantly restrict development in the ACSC in what is deemed the “Core Area” of the Swamp. Other restrictions apply to “Special Provision Areas,” such as near Polk City and U.S. 27; new development applications are most prevalent in the Special Provision Areas. Extension of sewer into these areas may address the septic system threat but also leads to the potential for higher intensities and densities of development. A careful balance between development rights and environmental concerns must be sought. Preserving the Green Swamp’s natural functions of flood control and aquifer recharge will benefit the City, the County and the region.

## GOALS, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to potable water, wastewater, solid waste, drainage and natural groundwater aquifer recharge systems. For purposes of definition, goals are generalized statements of a desired end state toward which objectives and policies are directed. Objectives provide the attainable and measurable ends toward which specific efforts are directed. Policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goals.

The goal, objective and policy statements in the Infrastructure Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this plan and with the goals and policies of the *Central Florida Comprehensive Regional Policy Plan*.

**GOAL 1: Provide an adequate supply of high quality water to customers throughout the service area.**

**Objective 1.1:** Upon plan adoption, achieve and maintain acceptable levels of service for water quality and availability.

**Policy 1.1A:** The City of Lakeland will plan for capital improvements for water facilities, in order of priority, 1) to correct existing facility deficiencies, 2) provide for future facility needs and 3) to replace existing facilities as required.

**Policy 1.1B:** The City of Lakeland will provide potable water at the following levels of service:

### LEVELS OF SERVICE

**(a) Quality**

Compliance with all Florida Department of Environmental Protection (FDEP) and Federal Drinking Water Standards.

**(b) Quantity**

- System-wide water quantity will be sufficient to furnish a minimum of 150 gallons per capita per day, on an average annual basis, to address both residential (domestic) and commercial water supply needs;
- domestic service is targeted at approximately 130 gpd per capita;
- per capita consumption targets are given in Infrastructure Element Objective 1.3;
- minimum flow pressures are also established as follows:
  - 20 psi for fire flow events
  - 30 psi for peak demand periods

**Policy 1.1C:** Lakeland will adopt an ordinance meeting all FDEP requirements for a Cross Connection Control Program. This ordinance will replace the City's existing policy for cross connection control. Funding for program implementation will be identified prior to ordinance adoption. Commencement of the program will be dependent upon FDEP deadlines and City budgetary resources.

**Policy 1.1D:** The City of Lakeland will enforce the minimum wellhead radial zone of protection as defined in the City's land development regulations.

**Objective 1.2:** Upon plan adoption, prioritize and execute needed system improvements in a manner which protects existing investments, promotes orderly growth, and is consistent with the Capital Improvements Element and Capital Improvements Program of this plan.

**Policy 1.2A:** All improvements, expansions, replacements or increases in potable water capacity to existing facilities will meet established level of service standards.

**Policy 1.2B:** New urban development will only occur within areas where potable water services are available concurrent with development.

**Policy 1.2C:** The City of Lakeland will continue to require necessary on-site water system improvements to be completed at the expense of the property owner.

**Policy 1.2D:** Where service area agreements exist, the City of Lakeland will continue coordination efforts to ensure availability of service and ascertain any needed revisions of boundaries.

**Policy 1.2E:** The City of Lakeland will extend water service in a pattern consistent with the Future Land Use Map, the Future Land Use Element, and all policies of the comprehensive plan, adhering to a compact urban growth area, promoting infill development and discouraging urban sprawl. Water service will be given priority within the Urban Development Area depicted in the Future Land Use Element.

**Policy 1.2F:** Back-up power generators at the City's water treatment plant shall be tested and maintained on a regular basis.

**Objective 1.3:** Continue promoting the conservation of potable water resources to achieve a reduction in actual daily per capita consumption. Using the methodology for the Southern Water Use Caution Area to calculate per capita consumption, the City will target a reduction in domestic per capita water consumption to 120 gpd by 2015, and approximately 110 gallons per capita per day (gpcd) by 2020. This target recognizes that the City's per capita consumption in 1998 was approximately 125 gpd using SWUCA methodology.

**Policy 1.3A:** The City of Lakeland will reduce per capita consumption of potable water through implementation of the Conservation Element of this comprehensive plan.



**Policy 1.3B:** The City of Lakeland will support education and awareness of water use restrictions within the corporate limits during SWFWMD declared water shortage periods and provide enforcement of such restrictions wherever possible.

**Objective 1.4:** The City will utilize and maintain a Water Supply Facilities Work Plan as part of its Potable Water Sub-Element to address water supply facilities necessary to serve existing and future development within the City’s water utility service area for at least a ten year planning period.

**Policy 1.4A:** The Water Supply Facilities Work Plan will be consistent with the potable water level-of-service standards established in Policy 1.1B.

**Policy 1.4B:** The City’s Potable Water Sub-Element (Water Supply Facilities Work Plan) will be updated subsequent to the State required five year updates of the Southwest Florida Water Management District (SWFWMD) Regional Water Supply Plan.

**Policy 1.4C:** When updating the Water Supply Facilities Work Plan, the City will consider the feasibility of alternative sources of water in order to meet projected water demands.

**Policy 1.4D:** The City will utilize its Water Supply Facilities Work Plan to assist in prioritizing and coordinating the expansion and upgrade of facilities used to withdraw, transmit, treat, store and distribute potable water to meet future water demands.

**Policy 1.4E:** The City will maintain, at a minimum, a current 5-year schedule of capital improvements for the improvement, extension and/or increase in capacity of potable water facilities reflecting those projects in the corresponding five (5) years of the Water Supply Facilities Work Plan.

**Objective 1.5:** The City will identify sources of water that can be used to meet existing and future needs when maintaining and updating the Water Supply Facilities Work Plan.

**Policy 1.5A:** In conjunction with the SWFWMD and other local governments, the City will consider the development of efficient, cost-effective, and technically feasible water sources that will meet future demands without causing adverse impacts to water quality, wetlands and aquatic systems.

**Policy 1.5B:** The City will maximize the use of existing potable water facilities through the implementation of techniques that can enhance a source of supply, sustain water resources and related natural systems, and/or optimize water supply yield. The management techniques may include, but are not limited to, developing water reservoirs for reuse/reclaimed water, requiring alternative sources for meeting irrigation needs of new “Greenfield” developments, enhancing or adding water or reuse water system interconnects, and continuing to enhance all feasible methods of water conservation.

**GOAL 2: The City of Lakeland will provide high quality and economical wastewater service while protecting the environment by preserving water quality.**

**Objective 2.1:** The City of Lakeland will annually examine capital improvements priorities as funded in the Five-Year Capital Improvements Program in order to prevent deficiencies in Publicly Owned Treatment Works (POTW) capacities to meet projected demands within established service areas at adopted service levels.

**Policy 2.1A:** Customer charges and impact fees will support the rehabilitation, replacement, maintenance, and expansion needs of the wastewater system, consistent with the City's long-range wastewater planning.

**Policy 2.1B:** The orderly maintenance, expansion and extension of the POTW's will be prioritized and scheduled through the Five-Year Capital Improvements Program, and will be updated annually.

**Policy 2.1C:** The City will maintain an industrial pretreatment program in accordance with Florida Department of Environmental Protection guidelines. Through this program, Wastewater Discharge Permits will be required of Significant Industrial Users.

**Policy 2.1D:** The remaining phases of wastewater trunk line extensions identified in the 1995 Master Sewer Plan study will be completed within the 20-year planning period as it becomes financially and practically feasible.

**Policy 2.1E:** In conformance with the City's 20-year plan for the wastewater trunk line system, the City will prevent excessive infiltration and inflow of groundwater and stormwater into the wastewater collection system through reoccurring funds in 5-Year Capital Improvement Plan to support ongoing monitoring, repair, replacement and rehabilitation throughout the planning period.

**Policy 2.1F:** Routine inspection of the collection system will be performed by closed circuit television. Deficiencies identified will be prioritized and repaired on a priority basis. Emergency power generators for lift stations and treatment plants shall be tested and maintained on a regular basis also.

**Policy 2.1G:** The City of Lakeland will provide wastewater service at the following levels of service:

**LEVELS OF SERVICE**

- (a) Quality**  
Compliance with all standards of the U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP).

**(b) Quantity**

System-wide wastewater collection and treatment will be sufficient to provide a minimum of 128 gallons per capita per day on an average annual basis. Plant expansion shall be planned in accordance with F.A.C. 62-600.405.

**Objective 2.2:** Wastewater Service will be made available to new development in a manner to promote compact urban area growth, promoting infill development, and discouraging urban sprawl.

**Policy 2.2A:** The City's Wastewater Division will coordinate wastewater service for new development with the City's Community Development Department to ensure compliance with the Future Land Use and the Infrastructure Elements of the Comprehensive Plan. Wastewater service shall be primarily limited to the designated urban development area for Lakeland.

**Policy 2.2B:** Wastewater service will be offered to new development only when all concurrency mandated facilities can be provided concurrent with the new development.

**Policy 2.2C:** Wastewater service will not be provided within any area designated as a greenbelt in the Conservation Element of this plan. (See the Greenbelt illustration in the Conservation Element.)

**Policy 2.2D:** To promote compact urban area growth, virtually all wastewater line extensions for new development will be funded by development.

**Policy 2.2E:** All proposed development will be analyzed to determine the availability of adequate wastewater capacity and a development order or permit will not be issued unless sufficient capacity at acceptable service levels exists.

**Policy 2.2F:** The City will continue to equitably allocate the cost of new facilities between existing and new residents with on-site improvements made at the property owner's expense.

**Policy 2.2G:** Wastewater customers served by an existing package plant may be connected to the City POTW when impact fees are paid for each customer, wastewater line extensions to the City system are constructed by the applicant, and annexation agreement provisions are met.

**Objective 2.3:** Wastewater treatment by-products will be reclaimed or disposed of in an environmentally acceptable manner while maximizing resource recovery.

**Policy 2.3A:** The City's Wastewater Division and Electric Utility will coordinate regarding potential for incineration of wastewater sludge such that, when and if it becomes feasible, the City will begin incineration of wastewater sludge at the McIntosh power plant.

**Policy 2.3B:** Wastewater effluent water will be reused as power plant cooling water and plant process water. As opportunities become feasible, effluent reuse at the power plant will be increased, and/or will be made available to other users of the effluent.

**Policy 2.3C:** Wastewater effluent from existing plants which is not reused will be disposed of by means of the City's artificial wetlands. The City will monitor the outflow from the effluent wetlands to assess any affect on State surface waters in compliance with all applicable State water quality rules.

**GOAL 3: The City of Lakeland will manage solid waste in a sanitary, economic and environmentally safe manner.**

**Objective 3.1:** Continue to ensure satisfactory and economical solid waste management for all City residents through the 2010-2020 planning period through adopted minimum levels of service standards.

**Policy 3.1A:** The City of Lakeland will maintain a self-supporting solid waste system within the municipal service area.

**Policy 3.1B:** Solid waste franchise areas will furnish solid waste services at the same cost and level of service as the City system.

**Policy 3.1C:** The City of Lakeland will provide solid waste service at the following levels of service:

#### **LEVELS OF SERVICE**

**(a) Quantity**

Provide adequate pickup and disposal service to accommodate a *minimum* of five pounds (5.4 lbs.) per capita per day. Intergovernmental coordination efforts with Polk County will include an annual report to the Polk County Environmental Services Director stating the City service area population and the anticipated annual tonnage of solid waste to be disposed of at the North Central Landfill.

**(b) Pickup**

Provide for a minimum of twice weekly residential garbage and containerized trash pickup for conventional garbage truck collection and once weekly where automated garbage truck collection is implemented, with collection of recyclables and yard/bulk trash and tree trimmings at a minimum of once a week.

**Policy 3.1D:** The City of Lakeland will maintain a five-year Capital Improvements Program updated annually which will, in order of priority, 1) correct system deficiencies, 2) provide for the extension of, or increase, the capacity of facilities to meet future needs, and 3) provide for the replacement of equipment and facilities in a timely manner.

**Policy 3.1E:** The City of Lakeland will ensure the proper disposal of wastewater sludge in accordance with the Wastewater section of this plan.

**Policy 3.1F:** The City will continue to pursue economically feasible opportunities to increase the total annual tonnage diverted through its curbside recycling program.

**Objective 3.2:** Reduce the amount of solid waste disposed of in landfills in compliance with the Florida Solid-Waste Management Act and applicable State mandates.

**Policy 3.2A:** Solid waste going to landfills will be reduced, in order of priority, by 1) recycling of materials, 2) tree and yard trash composting, and 3) through public-private partnership opportunities.

**Policy 3.2B:** Hazardous wastes will be managed separately from the City and franchise solid waste collection systems. The City will continue to support the annual County Amnesty Day program for collection of hazardous wastes from small-volume generation.

**Policy 3.2C:** The City of Lakeland will support Polk County efforts to recycle solid waste material sent to the County landfill through curbside recycling, waste incineration and diversion of vegetative wastes and construction debris.

**Policy 3.2D:** The City will pursue pilot programs to automate garbage pickup and reduce overall waste while increasing recycling via billing policies associated with the automation effort.

**Policy 3.2E:** The City will continue to examine new means of re-use and recycling of solid waste, and/or the reduction of waste sent to a traditional landfill facility.

**GOAL 4: The City of Lakeland will manage and protect natural surface water functions to minimize adverse impacts.**

**Objective 4.1:** Maintain a database on all existing and newly constructed drainage systems in the City.

**Policy 4.1A:** The City of Lakeland will study and document water quantities and associated drainage structures and facilities.

**Policy 4.1B:** The City of Lakeland will continue to monitor water quality for City lakes and surface waters associated with natural drainage features.

**Policy 4.1C:** The City of Lakeland will continue to coordinate with Polk County in maintaining and updating the City database for surface waters and drainage characteristics.

**Objective 4.2:** Continue to ensure the provision of drainage and stormwater retention to minimize flooding and water quality degradation.

**Policy 4.2A:** The Lakeland Stormwater Management Database will be used by the City to determine priorities for upgrading existing drainage facilities to adopted levels of service.

**Policy 4.2B:** All applicable Federal, State, regional and local regulations pertaining to flood control and water quality preservation will continue to be met in public and private project design.

**Policy 4.2C:** The City will continue to coordinate stormwater projects with adjacent local government comprehensive plans and public or private agency plans to achieve a compatible and integrated approach to stormwater management.

**Policy 4.2D:** The City of Lakeland will use the following minimum level of service standards when evaluating the stormwater protection ability of all existing and any proposed development:

- (a) All development is required to manage runoff from the 25-year frequency, 24 hour duration design storm event on-site so that post-development runoff rates, volumes and pollutant loads do not exceed predevelopment conditions.
- (b) All development must utilize SWFWMD's latest stormwater-management, engineering design, and construction standards for on-site stormwater management systems.
- (c) All development must utilize acceptable erosion and sediment controls during construction.
- (d) All development must provide periodic inspection and maintenance of on-site stormwater management systems and provide evidence of such inspection and maintenance as a condition of system permit renewal.
- (e) All stormwater treatment and disposal facilities must meet the water quality standards established in the Florida Administrative Code. Specifically, all stormwater discharge facilities must be designed so that the receiving water body is not degraded below the minimum conditions necessary to ensure suitability for its classification. Any exemptions, exceptions or thresholds found in Chapters 17-25 or 17-40, Florida Administrative Code are not applicable as a deviation from these locally established standards.

**Policy 4.2E:** All new development and redevelopment must adhere to adopted levels of service for stormwater management.

**Policy 4.2F:** Priorities for upgrading existing drainage facilities will continue to be scheduled in the Capital Improvements Element of this plan and updated annually.

**Policy 4.2G:** Rivers, lakes, floodplains and wetlands will be shown on the future land use map series.

**Policy 4.2H:** Protection of property and infrastructure from flood damage will be accomplished during the site plan review process by enforcing pertinent FEMA, State and local government regulations, including the City's land development regulations.

**Policy 4.2I:** Lakeland will continue implementation of its 20-year Lakes Management Plan as funding is available, to ensure surface water quality improvements are made to protect and enhance local lakes and habitats for lake-dependent plant and animal species. Retrofitting old drainage systems and maintaining existing and new drainage systems shall be part of the City's strategy to improve and/or protect surface water quality.

**Policy 4.2J:** The City will utilize revenues from the adopted stormwater utility fee as one source of funding for stormwater improvements and maintenance.

**Objective 4.3:** Ensure that development approved in flood-prone areas is consistent with the functions of natural systems.

**Policy 4.3A:** The City of Lakeland will protect natural drainage systems through provisions of the Future Land Use Element of this plan and implementation of land development regulations. The regulations require development in the FEMA 100-year flood hazard zone to be constructed so that the lowest finished floor elevation is *at least* one foot above the base flood elevation (BFE) as established by the FEMA Flood Insurance Rate Maps, or as per City regulations, whichever is more stringent.

- (a) Dredging and filling of lands within floodplains will be restricted so as to preserve the natural function of the 100-year floodplain. All proposed development or redevelopment shall be located primarily on the non-floodplain portion of the site and the City shall use gross density provisions given in the Future Land Use Element to encourage development or redevelopment to be clustered on the upland portion(s) of the property.
- (b) For proposed development or redevelopment areas that lie within the 100-year floodplain, residential structures shall be required to be elevated and non-residential structures shall be required to be either elevated or flood-proofed. Elevations shall be at least 1 foot above the BFE.
- (c) Floodplain dredge and fill activity shall require adequate compensation for stormwater management in accordance with City engineering standards and applicable standards of the Southwest Florida Water Management District and the Florida Department of Environmental Protection.
- (d) No development activity shall be allowed that will raise the 100-year base flood elevation.

- (e) No hazardous materials or waste shall be stored within the 100-year floodplain.
- (f) Development of property that is entirely within the 100-year floodplain shall be prohibited except where such would result in a “taking” of private property or where already permitted by the appropriate regulatory agency (SWFWMD or FDEP) and consistent with all City development regulations.
- (g) Within the Green Swamp Area of Critical State Concern, no new lots shall be created which are entirely within a 100-year floodplain area unless such would result in a taking of private property. In the remainder of the City, lots within the 100 year floodplain shall be discouraged through provisions which allow clustering of lots on the upland portion of a site and reduced lot sizes.

**Policy 4.3B:** For the area of the City which extends into the Green Swamp Area of Critical State Concern, development regulations will continue to meet or exceed State requirements.

**Policy 4.3C:** The City of Lakeland will continue to enforce land development regulations which protect property and infrastructure from flood hazards through the maintenance of natural drainage features.

**GOAL 5: The City of Lakeland will protect and enhance the function of natural groundwater aquifer recharge areas.**

**Objective 5.1:** Continue to enforce standards and criteria within local land development regulations which protect groundwater aquifer recharge areas and wellfields from activities adversely impacting groundwater quality consistent with the policies set forth in the Conservation Element of this comprehensive plan.

**Policy 5.1A:** Upon identification of high or prime recharge areas by the Southwest Florida Water Management District, the City will adopt land development regulations which list uses incompatible for location in those areas including setting specific standards for stormwater management in high or prime recharge areas.

**Policy 5.1B:** The City of Lakeland will coordinate with the SWFWMD to maintain minimal surface water levels during dry years.

**Policy 5.1C:** The City of Lakeland will protect wellfields through the continued enforcement of land development regulations which establish specific prohibitions, restrictions, standards and criteria for any proposed development which could potentially contaminate the water supply. The specific minimum zone of protection is found in Article 34 of the land development regulations. All determinations concerning wellfields and wellfield protection will be consistent with the policies set forth in the Conservation Element of this comprehensive plan.



**Policy 5.1D:** The City will continue to prohibit stormwater discharge directly or indirectly into any geological feature possessing unrestricted connection to the aquifer system, and to require that fill material used for sinkhole cavities be free of listed contaminants as per Article 34 of the City's land development regulations.

**Policy 5.1E:** The City of Lakeland will continue to meet all limiting conditions of the SWFWMD Water Use Permit.

**Policy 5.1F:** The City of Lakeland's wellfield protection program will be coordinated with the regulatory and land use regulations of Polk County, to the maximum extent feasible.

**Policy 5.1G:** The City of Lakeland will consider incentive based regulatory provisions to encourage low impact development practices that emphasize conservation and use of natural features of a site to maximize on-site stormwater filtration and improve stormwater quality. These standards may include, but are not limited to, reducing impervious areas, use of alternative permeable surfaces for parking, use of bio-swales, rainwater harvesting via rain barrels and/or cisterns, and "green" or vegetated roofs.

# RECREATION AND OPEN SPACE ELEMENT

## INTRODUCTION

The population of the City of Lakeland increased from 78,452 residents in 2000 to an estimated 94,163 in 2009 according to the Bureau of Economic and Business Research (BEBR). With continued growth and perhaps some annexation, the City's population could exceed 100,000 by 2015. As a result, the demand for greater recreational opportunities and valuable open space resources has become an increasingly important issue. In the broadest sense, a recreation plan is concerned with human development and stewardship of the land by relating people to their environment and to each other. This intent has been achieved locally through the development of extensive park and recreation sites, facilities and programs.

In February 2009, the Lakeland Vision Update culminated with the identification of 11 strategic community priorities and among them were the City's parks and recreation programs. The metro area's "Lakeland Vision Updated" established the following goals:

1. Lakeland builds, supports, and maintains a network of community and regional parks and trails that are clean, accessible, and provide a variety of active and passive programming.
2. Affordable public athletic and recreation facilities and programs throughout all sectors of the city for residents of all ages support a healthy, active Lakeland.

These goals set forth the principles that this element should validate and support in order to create the community envisioned by the City's residents and stakeholders.

The quality and distribution of adequate park and recreation sites is a fundamental reflection of a community's character and livability. In Lakeland, park and recreation facilities are an integral part of the City's quality of life readily evidenced by the highly accessible lakes and the many recreation sites and facilities available to the public. Nevertheless, the ease of access to these facilities is increasingly impacted by sometimes rapid population growth throughout the Lakeland Planning Area.

In order to view the supply and demand relationship of recreation and open space in the Lakeland Planning Area, an examination of those factors which exert a significant influence upon it is required. The single most important factor influencing the availability and accessibility of recreation and open space in the area is growth.

As resident population grows, demand on limited recreation amenities increases. In addition, growth in the annual number of (often seasonal) visitors to the area results in an increase in the need for recreation and open space facilities. Perhaps the most important effect of growth is that, as the population grows, available open space areas are replaced with urban development. Thus, as residential growth occurs, demand for recreational

service typically increases while at the same time areas which might be developed for recreation or open space are utilized for other urban uses.

Another factor which must be considered in a study of recreation and open space is the quantity and diversity of the natural resources of the area. A secondary purpose of a recreation and open space element is to consider sensitive or unique environmental areas and integrate these with the open space plan. Many communities have found it advantageous to combine efforts for preservation or protection of sensitive lands and valuable natural resources with nature-based recreational facilities like hiking and birding trails and programs such as nature centers. In this way, lands which are unsuitable for development or which cannot support normal urban uses without disruption of valuable natural functions, such as flood abatement and water purification, can be utilized as public open space or recreation areas without requiring significant alteration.

A final set of influences which should be considered are socioeconomic influences which affect demand. The most significant of these is the age structure of the population; a high proportion (21% in 2008) of Lakeland residents are retired (65 and older) and have an abundance of leisure time. Other factors which relate to the demand for recreation and open space are income level, occupation and place of residence of the population living in or near the City. As these socioeconomic factors gradually undergo changes over the planning period, they will likewise cause shifts in demand for recreation facilities. Further analysis can be made after 2010 U.S. Census data is available but the national and state demographic expectation is that the “baby boom” generation will be retiring in the next 10-20 year period, creating higher demand for recreational services for “active retirees.”



Hollis Garden in Downtown

In late 2006, the City adopted an internal document referred to as the Parks and Recreation Master Plan, drafted with the assistance of a private consultant (RMPK). In examining the City's current park and recreational facility inventory, certain assumptions were made to generate in the Master Plan a projected Phase I, 2015 Needs Plan, and a Phase II, 2025 Needs Plan. The support documentation for this element has been updated to reflect an updated inventory for Parks based upon the

new Parks and Recreation Master Plan. Additionally, recommended levels of service standards have been adjusted to reflect the inventory and the objectives of the Master Plan. In a growing urban community such as Lakeland the acquisition of public sites will become increasingly more difficult and expensive over time. Funding partnerships and other revenue choices will be critical to providing adequate open space and recreation to continue to meet the needs of the Lakeland metropolitan area population.



Dobbins Park in Dixieland

## SUMMARY OF FINDINGS

An important first step in the preparation of this Recreation and Open Space Element was an inventory of existing facilities. The City has kept an extensive inventory and analysis of Lakeland's existing recreation and open space system up to date through periodic revisions of the inventory. This inventory has been updated with data from the 2006 Parks and Recreation Master Plan (PRMP). The inventory is contained in the *Technical Support Document* to the Comprehensive Plan as TSD V-One to the Recreation and Open Space Element.

The primary purpose for maintaining an extensive inventory of local recreation sites and facilities is to analyze how well the existing recreation system is meeting present needs and how well it can be expected to meet future needs. This analysis can most effectively be made through an examination of local historical trends in meeting recreation demand, an analysis of local applicability of State standards, and an examination of possible level of service requirements.

### LOCAL STANDARDS FOR MEETING RECREATION DEMAND

Historically, the City of Lakeland has attempted to meet local recreation demand through the provision of various types of parks and special use facilities. One of the key elements used to meet local demand has been an effort to provide one neighborhood park in each residential area. Per the 2006 Parks and Recreation Master Plan, the objective is to provide a neighborhood park, one per 6,500 persons, with a target of a one mile walking distance. With constrained available land and revenues, and substantial development continuing, this standard will be a challenge to achieve. The Parks and Recreation Master Plan also recommends one community-level park per 25,000 persons in order to serve community-wide needs, including at least one community play or sports field facility.

Multi-use recreation complexes are buildings and (typically) indoor facilities intended to meet other types of recreational demands and may include facilities such as gymnasiums, swimming pools, meeting/classrooms, weight/exercise rooms, craft areas, indoor courts, etc. in whatever combination is necessary for the general public as well as any target groups. The Scott Kelly Recreation Complex, the Lake Mirror Recreation Complex and the Simpson Park Recreation Complex are examples of multi-use recreation complexes currently serving the area. The City has an adopted standard of one multi-use complex per 30,000 persons.

The City has a wide variety of recreation and open space facilities. The City's park classification is shown on the legends of Illustrations V-1 and V-2 and was updated to reflect the findings of the 2006 Parks and Recreation Master Plan. The City's park system includes scenic, neighborhood, and community parks as well as sports and field-oriented complexes and urban parks such as Munn Park or Heritage Park in the downtown area. The updated inventory also added recently-developed parks such as the Barnett Family Park. Illustration V-3, Open Space, depicts areas of surface waters (named lakes) and

preservation and conservation lands as designated on the City's future land use map and which are typically set aside to protect wetland, floodplain or other natural features.

**Scenic Parks:** Scenic parks are primarily passive recreation oriented parks for lakeshores, greenways, scenic views, or historical sites. These areas are generally small and attract the pedestrian rather than the motorist.

**Neighborhood Parks:** Neighborhood parks provide the basic recreational needs to neighborhoods. They are accessible and ideally within walking distance of the residents of each neighborhood.

**Community Parks:** Community parks serve a larger population than neighborhood parks, and provide more intensive or major recreational services and activities. A community park is a land-based park and is, ideally, paired with one multi-use facility.

**Urban Parks:** Urban parks serve the entire city and are located primarily in the downtown area. These parks often contain public art such as sculptures.



Community Park Concept

**Sports Complexes:** Sports complexes are specialized to primarily provide sports venues/field complexes but may include other facilities such as multi-purpose fields and/or play equipment. A sports complex may include a stadium or clubhouse.

**Special Use Parks & Facilities:** Special use parks and facilities (buildings) have been created to fulfill certain unique needs of the city, such as meeting facilities.

**Conservation/Preservation:** Conservation/Preservation areas in some cases could support development with special conditions to reduce environmental impacts, while maintaining their natural functions typically including floodplain functions and wetland functions. The City has set aside these areas to maintain environmental quality, especially for water resource features such as water quality and filtration, flood control, recharge, wellfields, and other such purposes. Consequently, these areas will most likely remain undeveloped and are not generally accessible by the public for recreation purposes although passive recreation, trail, boardwalk or other complementary recreational uses could be proposed.

**Proposed Parks:** Proposed park land is public land under City ownership with plans and, in some cases, funds to develop a variety of park and recreation amenities. This land is available to ensure that the City of Lakeland meets local, state and national standards for meeting recreation demand.

The City's developed and proposed parks inventory clearly indicates a strong commitment to parks and recreation in the City of Lakeland. The above park types are augmented by other facilities used by residents and maintained by the City, but are not part of the traditional parks system such as cemeteries, museums, and libraries. Difficulty in maintaining the historical neighborhood park standard indicates a need to reevaluate the methods used in the past to provide recreation opportunities.

## **MULTI-USE RECREATION FACILITIES**

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**Lake Mirror Recreation Complex** - Outdoor and indoor recreation activities and facility rentals; primary functions include programmed recreation rooms, auditorium, theatre; primary service group - seasonal residents, elderly, tourists, general public.

**Scott Kelly Recreation Complex** - Outdoor and indoor recreation activities; primary functions include programmed recreation rooms, swimming, weight room, tennis courts, cardio room, classrooms, game room, and billiards; primary service group - teenage youths, adults, children, primarily south side service area.

**Simpson Park and Recreation Complex** - Outdoor and indoor recreation activities; primary functions include programmed recreation rooms, gymnasium, crafts, weight room, swimming, tennis courts, fields, community park; primary service group – teenage youth, children, adults, primarily northwest service area.

## **STATE AND NATIONAL STANDARDS**

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Traditional recreation standards have focused on quantifiable factors such as total acreage, number of facilities of various types, amount of recreation staff time spent on individual programs or services, and amount of recreation opportunities available at different times. National recreation studies are more generalized and tend to focus on total acreage available to serve a given population. A standard of two acres of park space per 1,000 population has been found to be generally acceptable as a national standard. As of 2009 the City had 628 acres of developed parklands, and about 103 acres of proposed parks, plus additional undeveloped park or conservation lands. The City of Lakeland also owns and operates over 200 acres of special non-park recreation facilities such as cemeteries, and maintains a 200+ acre community golf course as well as Marchant Stadium for professional baseball spring training and other activities. Lakeland has one of the longest tenured relationships of any Florida community with its spring training professional baseball team, the Detroit Tigers.

The City's 2009 population estimate of about 94,163 persons taken with the City's inventory yields a current level of service ratio of about 6.2 acres per 1,000 persons. Using a proposed City level of service standard of 5.98 acres/1,000 persons, approximately 563 acres of land is required to serve the 2009 population. Given the inventory of 628 acres, this leaves a surplus of about 65 acres of developed parklands. Estimated 2010 and future population totals are found below and discussed in reference to the current level of service. An increase in City revenues devoted to parkland purchase and development would be

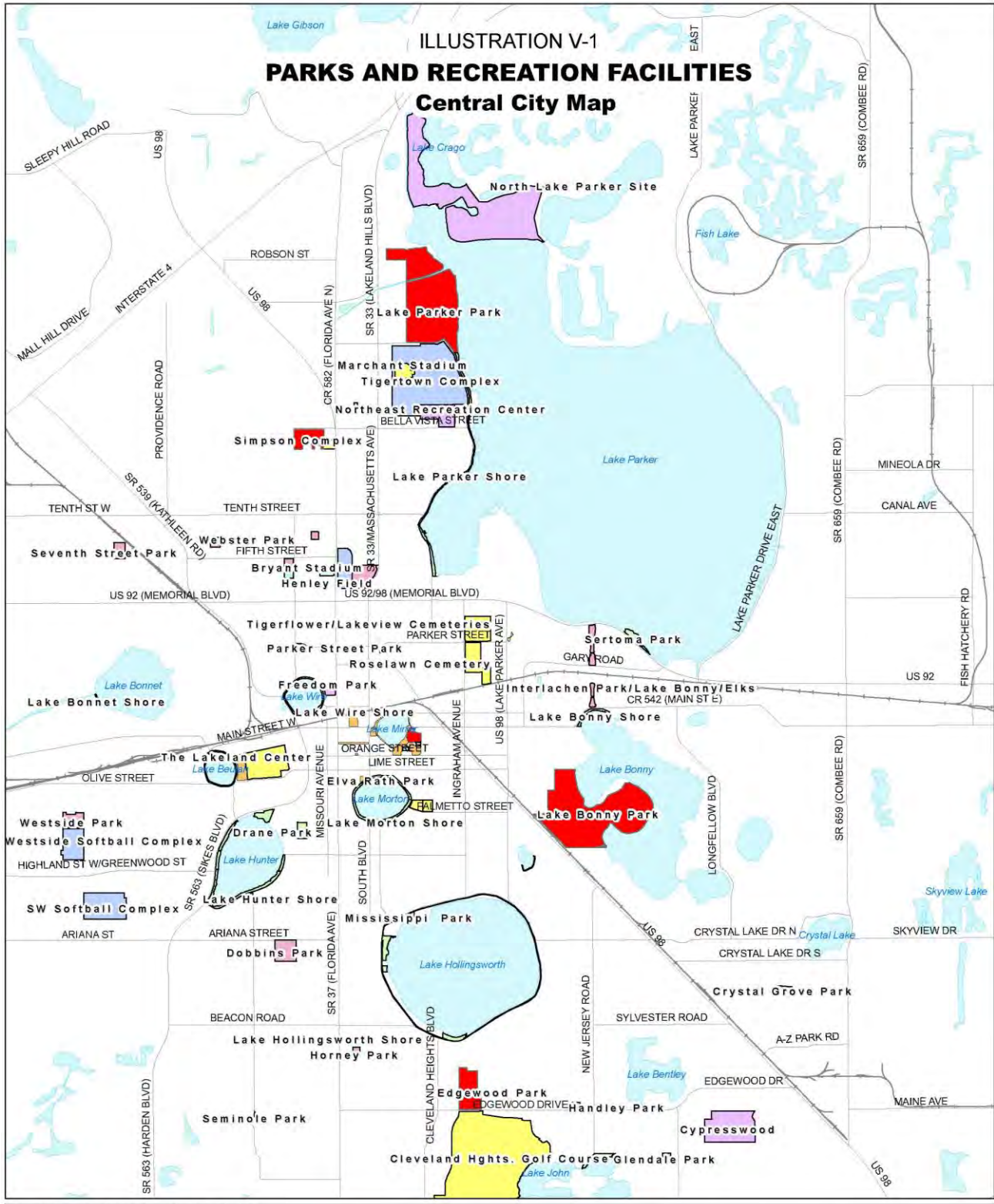
required to support the 2006 Parks and Recreation Master Plan. Impact fees can assist in park land purchases or equipment purchases and grant funds can be pursued to help to build new or substantially redevelop park facilities, but in a slow economy, impact fee revenues slack off and the annual grant process is competitive throughout the State and subject to State funding level. Moreover, some type of recurring source of revenue is necessary to maintain the city's extensive parks inventory. Potential recurring revenue sources could include increasing a portion of a property tax/millage increase and/or establishment of a municipal utility tax that is at least in part devoted to parks.

The State of Florida has prepared recreation standards and guidelines for activity-based recreation. However, the City's 2006 Parks and Recreation Master Plan utilized National Recreation and Parks Association or NRPA guidelines. Table V-1 includes the generalized population guidelines for activity-based outdoor recreation and Table V-3 indicates general State and National park standards. Based on the guidelines, the City can determine its existing need for specific types of facilities. Table V-1 indicates the existing need for activity-based recreation facilities given the 2009 population. Table V-2 indicates the future need for these facility types based upon the projected population through 2020. Given that this Element must adhere to financial feasibility, and given limited committed future revenue sources for facility development, these tables represent targeted standards that are not incorporated into the formal level of service standards in this Plan but act as guidelines for provision of future recreation services.



*“Affordable public athletic and recreation facilities and programs throughout all sectors of the city for residents of all ages support a healthy, active Lakeland”.*

*Lakeland Vision*



Source: City of Lakeland Parks and Recreation Master Plan, 2006



- |  |   |  |
|--|---|--|
| <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Community Park          | <span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> Proposed Parks            | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> Sports Complex |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightpink; border:1px solid black;"></span> Neighborhood Park | <span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Scenic Park           | <span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> Urban Park   |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Other                | <span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> Special Use Facilities |  |

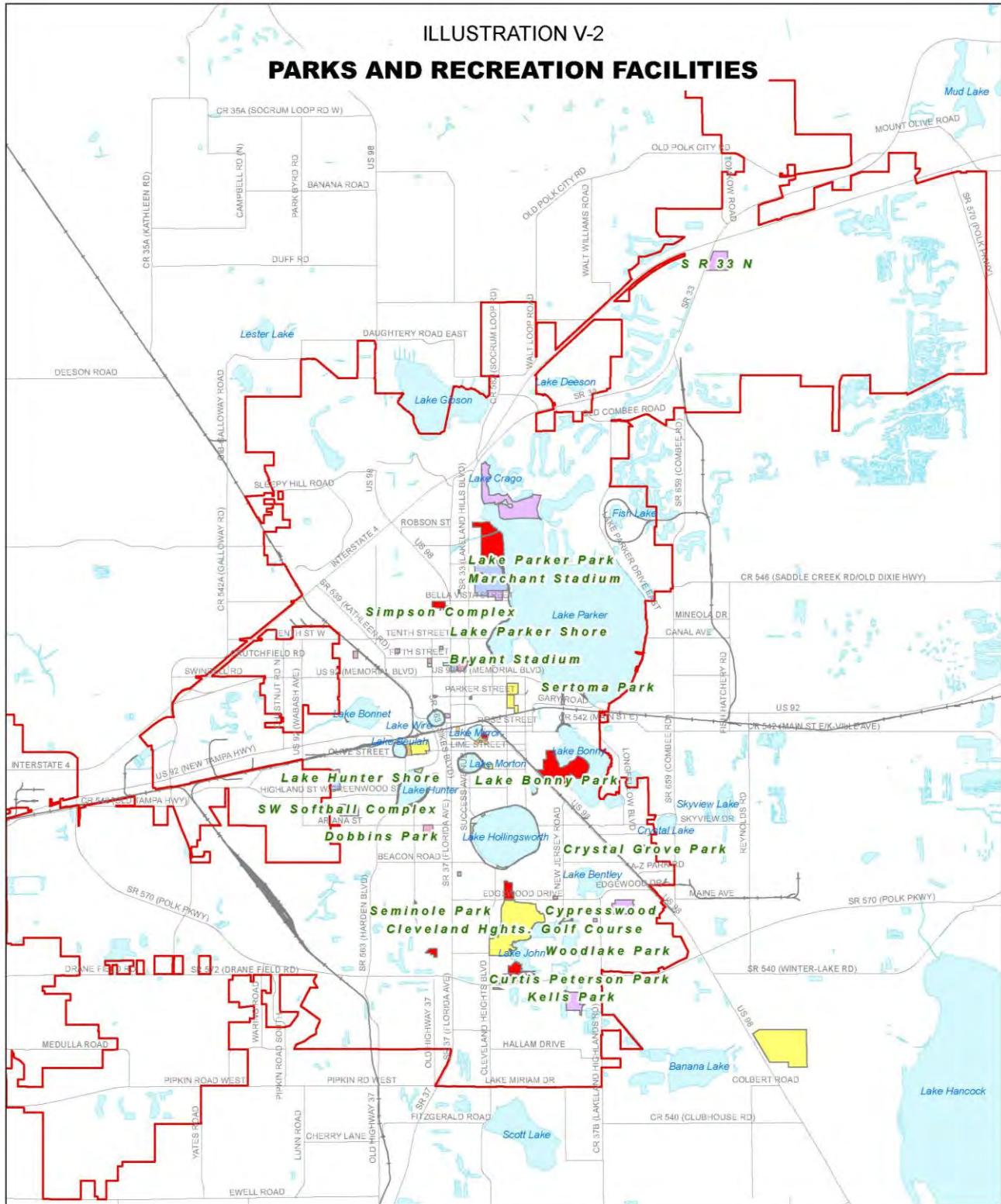


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ILLUSTRATION V-2

**PARKS AND RECREATION FACILITIES**



Source: City of Lakeland Parks and Recreation Master Plan, 2006

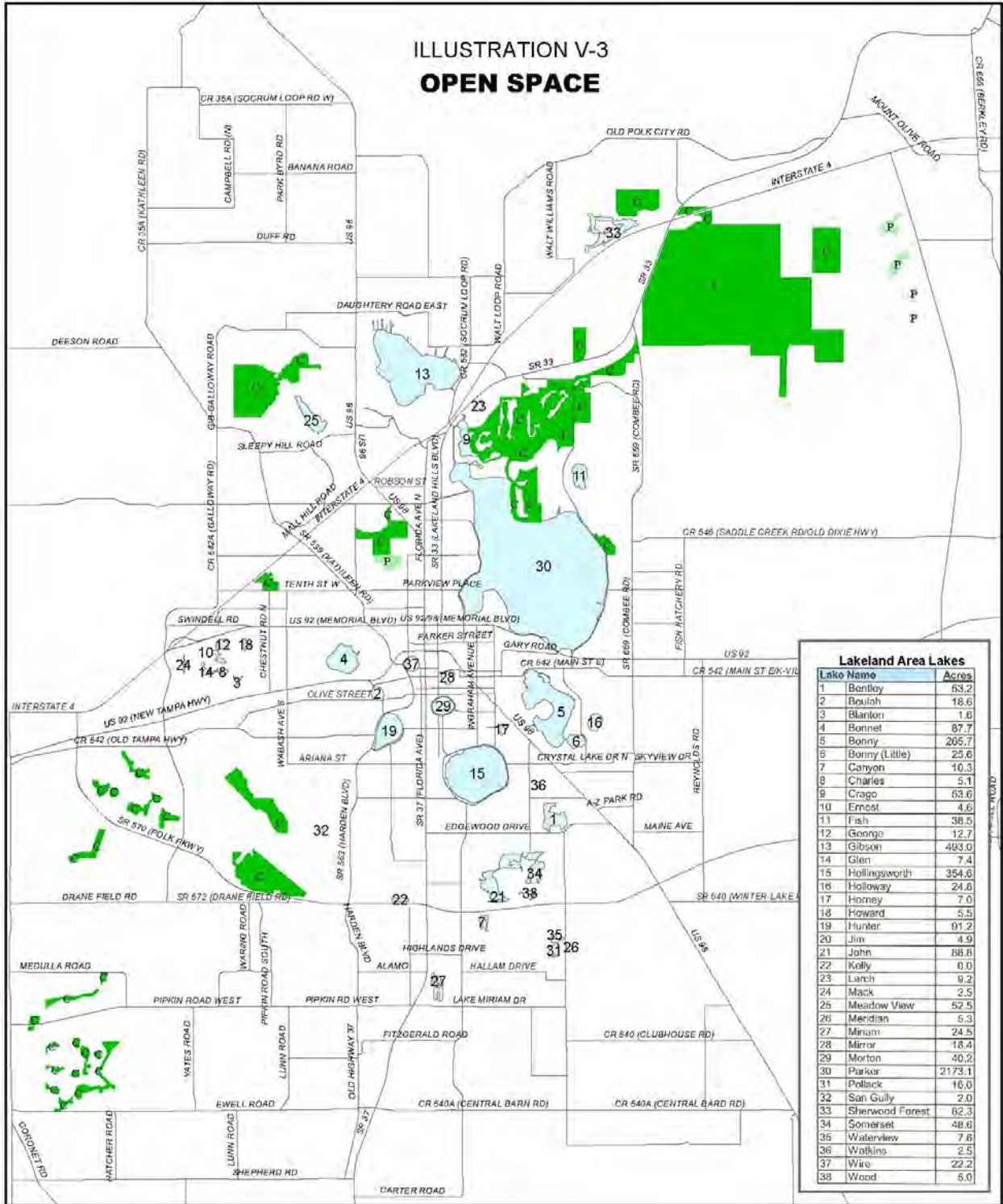


- City Limits
- Other
- Special Use Facilities
- Community Park
- Proposed Parks
- Sports Complex
- Neighborhood Park
- Scenic Park
- Urban Park



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### ILLUSTRATION V-3 OPEN SPACE



Source: Lakeland Community Development Department, 2010



■ Conservation  
■ Preservation



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**TABLE V-1  
EXISTING DEMAND FOR PUBLIC ACTIVITY-BASED FACILITIES**

ACTIVITY	FACILITY	POPULATION STANDARD (NRPA)	EXISTING (2009)	SURPLUS/ DEFICIENCY
Golf	18-Hole Course	1 per 50,000	1.5 <sup>1</sup>	-0.3 courses
Tennis	Tennis Court	1 per 2,000	38	-9.1 courts
Baseball/Softball	Baseball/Softball Field	1 per 5,000 <sup>2</sup>	27	+8.2 fields
Football/Soccer	Football/Soccer Field	1 per 5,000	12	-6.8 fields
Handball/Racquetball	Hand/Racquetball Court	1 per 20,000	8	+3.4 courts
Basketball	Basketball Court	1 per 5,000	16	-2.3 courts
Swimming	Swimming Pool	1 per 20,000	2	-2.6 pools

<sup>1</sup> Cleveland Heights Golf Course has 27 holes; this deficiency does not count the capacities of the numerous private golf courses in and near Lakeland, including Lone Palm, Grasslands, Highland Fairways, Bridgewater and a quasi-public Lakeland Tee course for youth play and instruction.

<sup>2</sup> 1 per 5,000 is based on the NRPA standard for soccer fields; standard for football fields is 1 per 20,000.

**Source:** State of Florida, Department of Natural Resources; Outdoor Recreation in Florida, 1987; City of Lakeland, Parks and Recreation Master Plan, 2006; Community Development Department, 2009.

**TABLE V-2  
PROJECTED DEMAND FOR PUBLIC ACTIVITY-BASED FACILITIES**

ACTIVITY	FACILITY	POPULATION STANDARD (NRPA)	2020 NEEDS*	SURPLUS/ DEFICIENCY
Golf	18-Hole Course	1 per 50,000	2.2	-0.7 courses
Tennis	Tennis Court	1 per 2,000	55.2	-17.2 courts
Baseball/Softball <sup>1</sup>	Baseball/Softball Field	1 per 5,000	22.1	+4.9 fields
Football/Soccer <sup>2</sup>	Football/Soccer Field	1 per 5,000	22.1	-10.1 fields
Handball/Racquetball	Hand/Racquetball Court	1 per 20,000	5.5	+2.5 courts
Basketball	Basketball Court	1 per 5,000	22.1	-6.1 courts
Swimming	Swimming Pool	1 per 20,000	5.5	-3.5 pools

\* 2020 population projection of 110,315 persons.

<sup>1</sup> Although the number of baseball/softball facilities exceeds the State Standard, local demand exceeds the City's present facilities and thus the Parks and Recreation Master Plan recommends 16 additional softball/baseball fields based upon NRPA standards to serve future population levels similar to estimate for 2020 population show below.

<sup>2</sup> This standard is for soccer fields & the PRMP recommends 8 more fields; NRPA recommends football fields at a 1:20,000 standard.

**Source:** City of Lakeland, Community Development Department, 2009.

**TABLE V-3  
GENERAL STATE & NATIONAL PARK STANDARDS**

Lakeland Acreage	Lakeland # of Parks	Parks	Size In Acres	Function	Typical Facilities	Population Served	Acreage Per Population	Service Radius	Access Method
184	17	Scenic Parks	1 or more acres	To serve as an active play or passive recreation area or ornamental green-space depending on the nature of area served.	Landscaping, sometimes benches, but usually no other improvements.	Up to several thousand	.5 per 1000	Depends on size	Varies
57	16*  *+10 urban parks (21 acres)	Neighborhood Parks	2 to 15 acres; Ideally 3.75 ac.	To serve a neighborhood in a variety of passive and active recreation functions.	Benches, picnic tables, equipment; multi-purpose courts; shaded play.	1,000 to 10,000 (6,500 local target)	2 per 1000	One mile of residential area; ½ mile of elementary school radius	Walk to
293	8	Community Parks	50 to 100 acres; usually 20 or more	To serve several neighborhoods in a variety of recreational activities, family functions. Often the location of recreation centers.	Benches, picnic tables, fields for organized athletics, recreation bldg., tennis cts., pool, playground equipment, benches, landscaping, multi-purpose courts, parking.	Up to 25,000	5 per 1000	3 to 4 miles or high school radius; 30 minutes drive	Drive to
73	3	Community Play (or Sports) Fields	Varies, 25+ acres; One per community	To serve recreational needs of community for an athletic complex, perhaps as a portion of a community park.	Athletic complex with lighted court and field areas, parking, & may have picnic and play areas.	30,000 and up (PRMP, Vol 1, pg 91)	5 per 1000	30 minutes driving time	Bike or Drive to

**Source:** State of Florida, Department of Natural Resources. Outdoor Recreation in Florida. p. 101. 1987. City of Lakeland, Parks and Recreation Master Plan, 2009.

As can be seen, a deficiency exists in basketball courts. It should also be noted that the facilities list examined is not unique to the City of Lakeland. It was derived from the State of Florida former Department of Natural Resources plan for outdoor recreation in Florida. The guidelines are generalized and can be modified to meet needs specific to the local area. The City's PRMP has identified further park facility needs based upon national park standards. Additionally, the PRMP identified urban park needs such as a dog park and another skate park based upon local focus group and other data.

Using the National and State guidelines for comparison, it becomes apparent that the City of Lakeland has historically maintained a high quality parks and recreation system. In the face of growth and urbanization, the City has managed to preserve fairly adequate park acreage and provide an extensive activity-based recreation program. Clearly, however, additional developed parkland will be needed if the City is to implement the recommended 2006 Parks and Recreation Master Plan including a recommended level of service standard of one community park per 25,000 persons and one neighborhood park per 6,500 persons. A full inventory of all City parks and an associated classification for the parks is located in TSD V-One in the *Technical Support Document*. Also, the Future Land Use Map (FLUM) includes a category for Recreation (R) as a land use. This land use reflects most major existing and some proposed City recreation areas.

## **LEVELS OF SERVICE**

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The ultimate goal of the extensive inventory and analysis of recreation sites, facilities and open space is to allow the City to determine future facility and land needs for recreation. This can most effectively be achieved through the establishment of levels of service -- guidelines to assist the City in determining what is acceptable in terms of service delivery and when, where and how recreation dollars should be spent. The proposed levels of service are designed to accommodate needs for both passive and active recreation.

The City of Lakeland's historic base level of service standard of 3 acres/1,000 persons has been surpassed by local governments in our vicinity. Since at least year 2000 or earlier, Polk County's level of service standard has been 6.95 acres/1,000 persons; the City of Bartow's is 5.5, and Plant City's is 5.0 acres/1,000 persons. Multi-purpose recreation centers along with neighborhood and community parks have formed the backbone of Lakeland's public recreation system. In order to maintain reasonably high service delivery, the proposed levels of service for passive and active recreation are as follows:

- A minimum of 5.98 acres of park/open space (scenic, urban, neighborhood or community parks) per thousand City residents with 50% of this acreage in active facilities such as community and neighborhood parks.
- One facility-based Multi-Use Recreation Complex per 30,000 City residents.
- One Community Park per 25,000 City residents.
- One Neighborhood Park per 6,500 City residents.

The target for neighborhood parks should include walking distance of one mile, as may be feasible. Additionally, the 2006 Parks and Recreation Plan recommends at least one community play field (athletic field complex) for the community. A variety of existing neighborhood and community parks and three existing recreation complexes are shown in TSD V-One in the *Technical Support Document* and together more than exceed these minimum levels of service identified above. The Scott Kelly, Lake Mirror and Simpson Recreation Complexes meet the general criteria for multi-use recreation complexes. The City has completed two major expansions of the Simpson Complex and major improvements at the Scott Kelly Complex. Subsequently, the City plans to evaluate the future function of the Lake Mirror Complex and is planning for one or more additional multi-use complexes in the planning period. The standard of one facility per 30,000 persons is not incremental. For example, a population of 87,500 would equal a need for 3 centers with planning taking place for a fourth center to serve a population of 120,000.

The State and National guidelines discussed earlier are the basis for determining existing levels of service. They are also useful in projecting future recreation and open space needs based on anticipated population. A combination of these guidelines allows the City flexibility in determining how and where recreation dollars should be spent to assure maximum utilization of proposed facilities. It also allows the City to respond to local demand. Some neighborhoods might have a high proportion of school age children and a resulting demand for playgrounds, ballfields, and similar facilities. Another neighborhood might have a high proportion of retirees and a resulting demand for programmed recreation which is lifestyle appropriate. By using this flexible approach to level of service the City can achieve its ultimate recreation and open space objective -- to provide the maximum level of availability and accessibility to recreation sites, facilities and open space.

Lakeland's park facility development is a significant cost factor for its park system. Beyond land acquisition, it involves preparation of the land, irrigation, plantings, play equipment, bathrooms, trails or paths, parking, pavilions and many other types of typical facilities. A 2010 Parks and Recreation Impact Fee Study rendered for the City by Tindale-Oliver and Associates, Inc., includes an estimated parks facility asset value per resident of approximately \$1,457 (in 2010 dollars). The study consultant recommended the City incorporate this asset value as part of its parks minimum level of service standards given it reflects a relatively high commitment to the quality of the parks provided to the citizens of Lakeland.

## **FUTURE RECREATION NEEDS**

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Future demand for recreation facilities and programs will be influenced by the size and socioeconomic characteristics of the population being served. The general population in the planning area has grown older with decreases in household and family size indicating areawide trends toward single member households, childless couples, and couples with fewer children. As the characteristics of the population change, the City will respond to changing recreation needs. An important first step in planning for future recreation needs,

however, is to make projections based on anticipated future population and locally established standards.

**Projected Needs Based on Population:** The 2009 population estimate from the State-accepted source BEBR, is 94,163. Excluding population gain from annexation, the City has historically averaged an increase of about 1,000 persons per year. Future annexation may potentially increase population gain at a higher rate. Table V-4 shows the low, medium and high population projections out to 2025.

**TABLE V-4  
CITY OF LAKELAND POPULATION PROJECTIONS  
2000 – 2025**

YEAR	LOW PROJECTION	CENSUS AND MEDIUM PROJECTION	HIGH PROJECTION
2000	-	78,452	-
2005	-	89,562	-
2010	92,259	95,472	117,475
2015	98,934	101,439	132,421
2020	105,608	110,315	147,753
2025	112,283	116,658	163,085

**Source:** City of Lakeland, Community Development Department, 2009.

Using these projections, the City can project the amount of park space and the number of recreation complexes that will be needed to accommodate the future population. Table V-5 indicates the projected amount of park acreage needed to serve future populations based on a standard of 5.98 acres of park space per 1,000 persons.

**TABLE V-5  
PARK ACREAGE NEEDED TO ACCOMMODATE PROJECTED POPULATION  
2010 – 2025**

YEAR	POPULATION SERVED	ACREAGE REQUIRED	SURPLUS/DEFICIENCY +/-
2010	95,472	571	57
2015	101,439	604	24
2020	110,315	660	-32
2025	116,658	698	-70

**Source:** City of Lakeland, Community Development Department, 2009.

Using estimates of about 110,315 persons in 2020, the proposed standard of one neighborhood park per 6,500 equates to 17 parks, or one additional such park. However, this will not necessarily be adequate to address neighborhood or sector plan needs where residents and the City agree to a locally identified need in a specific geographic area and/or

that more closely meets the target of a one-mile or less walking distance for each residential neighborhood. Thus, local needs coupled with seasonal population demands could warrant additional neighborhood parks within the planning period. Seasonal (or peak) population estimates for 2010-2020 could equate to between 19 to 21 neighborhood parks, or up to five additional neighborhood parks by 2020. This would exceed the minimum level of service standard but may more accurately reflect actual local demand and therefore should be considered in future park funding scenarios.

The proposed community parks standard of one per 25,000 persons would equate to almost 4.5 community parks over the next planning period, i.e., requiring at least one new community park by 2020. Considering peak seasonal population, the 2020 demand could be closer to five community parks; one option in meeting that seasonal demand might be by adding in the aforementioned community play field complex. Higher than expected annexation activity or population growth would require an upward revision of the park demand figures but given the economic slowdown, that is not likely a concern.

Table V-6 indicates the number of recreation complexes required to serve future populations based on a standard of one recreation complex per 30,000 persons.

**TABLE V-6  
RECREATION COMPLEXES NEEDED TO ACCOMMODATE PROJECTED POPULATION  
2010 – 2025**

YEAR	POPULATION SERVED	COMPLEXES REQUIRED
2010	95,472	3
2015	101,439	3
2020	110,315	3
2025	116,658	4

**Source:** City of Lakeland, Community Development Department, 2009.

**Local Desires:** Recreation demand is also influenced by the popularity of various kinds of recreation, the amount of leisure time available, and the amount of recreation demand created by the non-resident population. Historically, the Parks and Recreation Department responded to local desires through the provision of special programs or facilities as the demand was voiced. For example, if the Parks and Recreation Department received numerous calls requesting a ceramics class, one would be sponsored. Another approach has been to survey residents and visitors to determine which facilities and programs are desired. The survey results would be used as a guide in planning future facilities and programs. The proposed levels of service are general enough to provide adequate flexibility in meeting specific citizen demand.

**Financial Feasibility:** Ability to respond to future demand for parks and recreation facilities is limited by the financial feasibility of the parks and recreation capital improvements plan.



As was indicated, the City of Lakeland will require 660 total (71 additional) acres of park space and 3 recreation complexes (with a fourth in planning) to support its projected 2020 population. The costs associated with this need will not immediately require the acquisition of potential park or recreation complex sites nor the construction of an additional recreation complex. However, improvements at existing park sites will likely be needed to keep parks in good condition, and a fourth recreation complex will most likely be needed by 2025 if seasonal population is considered. Therefore, planning for that complex, including identification of funding sources, should begin no later than 2015 to 2020. In actuality, the City has planned for a Northeast Lakeland Recreation Complex and has the land through a land trade with the State of Florida; the site is located on the north end of Lake Parker and a conceptual facility plan has been rendered. The Capital Improvements Program (CIP), a five year budget adopted with the Comprehensive Plan, as well as the Parks and Recreation Department's Operating and Staffing budgets, will outline where the City's recreation dollars will come from and where they will be spent. A potential ranking of priority park projects for the near-term is located in Table V-One(B), TSD V-One. A ranking of longer term park acquisition projects to meet future needs is located in Table V-One(C), TSD V-One. TSD V-One is found in the *Technical Support Document*.

## ISSUES AND OPPORTUNITIES

There are several issues which must be considered in assuring the overall availability and accessibility of open space and recreation resources. Among the key issues to be considered are:

1. Managing open space and recreation investments to support the future land use plan and overall City beautification;
2. Ensuring that future needs for recreation are met for new development and existing residents/neighborhoods, recognizing changing socioeconomic characteristics and associated changes in recreation demands over the planning period and adjusting plans accordingly;
3. Ensuring that recreation programs are available and accessible to meet special needs;
4. Seeking ways to manage declining land resources for recreation, given continued urban growth and the desire to conserve the area's natural resources;
5. Continuing new park development and acquisition of City-owned parkland; and
6. Pursuing coordination between public and private entities providing recreation opportunities.

Giving consideration to each of these issues will help to ensure the maximum use and enjoyment of the City's recreation and open space system.

### MANAGING OPEN SPACE AND RECREATION IMPROVEMENTS TO SUPPORT THE FUTURE LAND USE PLAN

The City sponsors a wide range of activities designed to encourage an attractive urban environment. These efforts require close coordination with the chosen future land use plan.

**Lake-To-Lake Greenway Connector:** One of the City's strategies to promote green space has been to implement the Lake-to-Lake Greenway Connector. This is a system of bike and foot trails circling various City lakes and City parks. The lakefront is totally public around Lakes Beulah, Mirror, Morton, and Wire and mostly public around Lakes Hollingsworth, Hunter, and Parker. The City has added a sidewalk around Lake Hunter as part of the Lake-to-Lake Greenway discussed below.

In order to promote public access to these lakefronts and other recreation amenities, the City has delineated a "greenway" connector network. The City's comprehensive Lake-to-Lake Greenway Connector is based upon four anchor community park locations in the four quadrants of the City. The Lakeland Lake-to-Lake Greenway Connector, as depicted in Illustration V-4, is designed to promote both utilitarian and recreational uses by all residents. The Lake-to-Lake Greenway Connector links Lakeland's central city lakes and park lands with existing and proposed routes extending from Lake John/Peterson Park on the south, to Lake Parker Park on the north, Lake Bonny on the east and Lake Bonnet on the west. There are also plans to provide pedestrian and bicycle access to the regional trail system in

Polk County as depicted in Illustration III-17 in the Transportation Element. This includes a link with the City Connector from Lake Parker Park east to Tenoroc State Reserve and then to the Van Fleet Trail located in Polk City. Another regional link to the City Connector will be from Lakeland to Bartow along the proposed Rails to Trails route on U.S. Hwy 98/S.R. 35/Bartow Highway, known as the Fort Frasier Trail. The southern portion of the trail, located south of CR 540/Winterlake Rd and extending into Bartow, opened for public use in late 2006. The City managed this entire project with funding from FDOT and Polk County. Additional coordination has been on-going to link the trail to other regional systems and environmental lands such as the Circle Bar Reserve (Bellato tract) south of CR 540. However, Lakeland's first priority will be to extend the trail northward into downtown Lakeland to the Lake Mirror Park area and the proposed inter-modal park and ride lot located nearby.

Overall, the Greenway network includes numerous recreational amenities both passive and active, such as a designated Lake-to-Lake Bikeway route, and several City destinations including the Lake Mirror Promenade Park, the Lemon Street Promenade, Lake Hollingsworth, Florida Southern College and Johnson Avenue. See the Transportation Element for additional discussion of the City's *Pathways Plan*, which includes a prioritization of linkages needed to better connect the city, including access to public parks; the Pathways Plan is depicted in Illustration V-5 and the Parks Connectivity Projects is shown in Illustration V-6.

Distinctive signage along the Lake-to-Lake Greenway Connector promotes public awareness of the route and enhances safety for both pedestrians and bicyclists. Maps and brochures are also available to direct users along the route and to highlight destination points along the route.

A distinction should be made between the Lake-to-Lake Greenway Connector and the greenbelt recommended around the City. While the Lake-to-Lake Greenway Connector focuses on serving the City, a recommended greenbelt is comprised of large tracts of land to serve as natural lands buffer and preservation area between Lakeland and the Auburndale/Winter Haven urban areas.

**“Greenbelt”:** To the north, east and south of Lakeland there are thousands of acres of open space in public ownership. These tracts include parts of the Green Swamp, Tenoroc State Preserve, Saddle Creek Park, Audubon preserve, the Lakeland effluent wetlands, and a Polk County Regional Park. The location of these open spaces relative to one another forms a portion of what could become a continuous, unbroken “greenbelt” approximately 33 miles long. The missing links needed to complete the greenbelt are generally of low development potential, being either wetlands or unreclaimed mined land.

There are immediate and long-range benefits to be derived from setting aside a corridor of open space within the urban area of Lakeland, outside the City limits. There are recreational benefits for the public, protection of plant and wildlife habitats, water recharge

and flood control. Natural reserves near urban areas are highly desirable as residential neighbors and increase the value of adjacent properties through the protection offered from encroachment by incompatible land uses as well as the value of an adjacent environmental amenity. As the urban area expands, a greenbelt would serve as an urban buffer zone offering a physical break from the development pattern and a more defined break between the urban and utility service areas of the Lakeland Urban Area and those of Auburndale, Polk City, and Polk County. The City of Lakeland should continue to pursue steps to help implement the greenbelt, including pursuit of formal recognition of the area within the Polk County “Greenways” illustration that is expected to be part of the County’s updated Comprehensive Plan’s map series. While the Tenoroc State Park has been expanded by 242 acres, and a link with Saddle Creek Park located south of Tenoroc has been established, further land purchases, set-asides, and perhaps land trades need to occur to fully form the continuous greenbelt. The “Greenways” illustration is found in the Conservation Element.

## **RECREATION REQUIREMENTS FOR NEW DEVELOPMENTS AND EXISTING NEIGHBORHOODS**

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As a general rule, increases in recreation demand are a direct result of increases in population. Consequently, requiring new developments to respond to the demand they place on the recreation system by the payment of impact fees, or setting aside land for park development, enhances the City's ability to continue to assure that local recreation needs are met.

**Developments:** In 1973, the State of Florida established the Development of Regional Impact (DRI) process. This process targets large-scale developments that have an impact beyond the jurisdiction in which they are located. Within the City of Lakeland, there are DRIs with substantial residential areas: Williams, Oakbridge, and Bridgewater. These residential areas are projected to require significant park and recreational amenities. In addition, a new proposed DRI, Lakeland Central Park, will include several wetlands and has tentatively agreed to establish a natural areas-related unimproved trail system. As part of the DRI review process, regional and local agencies can assess the development's impact on existing recreation facilities and the need for additional facilities. A condition of development approval can include requirements for recreation sites and facilities to support the anticipated development population. All of the developments of regional impact with residential development in the Lakeland Planning Area include provisions for some type of park or recreation space on-site. In the Williams DRI this includes trails that could link to the City's Lake-to-Lake system via the state preserve known as Tenoroc.

In addition to DRIs, other large developments, typically in suburban and master-planned communities, have been required as a condition of zoning to provide on-site active and passive recreation areas, such as tot lots and open play areas, as well as unimproved trails along natural features. Linking trails of natural systems to other such trails is a high priority in building a larger network in the community as suggested in the 2006 PRMP. This type of requirement needs further codification in the *Land Development Regulations*.

**Impact Fees:** In January, 1988 the City of Lakeland adopted an impact fee ordinance which includes, among other things, impact fees for parks and recreation facilities. Park and recreation impact fees help the City in financing recreation improvements necessitated by new development. Park and recreation impact fees are charged to new development for recreation-related costs which the community would bear as a result of that development. These fees must be reviewed every three years, per City Commission direction and adopted ordinances.

In an effort to address growing demands and offset increased costs, the City charges user fees for the use of facilities such as tennis courts and swimming pools. Although user fees have helped to cover some of the operating costs, they have not helped with the increased demand for needed capital improvements generated by new development.

**Existing Development:** Existing developments which form the City's various neighborhoods must also continue to be served with adequate parks and recreational services. Since the 1991 Plan adoption, Lakeland redeveloped Simpson Park and its associated recreational complex. Dobbins Park has been redeveloped and Peterson Park has been renovated/updated, as have Woodlake Park and the Scott Kelly Recreation Complex. In addition, Lake Parker Park has been expanded to the north with an extensive, 3 mile jogging/walking path, a nature path, a rollerblade hockey rink, screened picnic pavilions, playground facilities, and restrooms. Allen Kryger Overlook Park and Barnett Family Park were constructed as part of redevelopment efforts in the Downtown CRA district to complete the Lake Mirror Master Plan. Most recently, Freedom Park was completed in conjunction with redevelopment occurring in the Lake Wire area related to the expansion of Lawton Chiles Middle School Academy and the rerouting of traffic circulation in the neighborhood.

These types of park redevelopments and expansions will continue to play a vital role in the City's effort to revitalize and/or maintain the quality of life in over 100 identified neighborhoods and nine City sectors. Quality recreational facilities available to residents are also a key factor in attracting infill development and redevelopment in neighborhoods. Finally, recreational services can serve to fulfill a social goal in offering neighborhood youth an opportunity to take part in positive physical activities and sports, such as baseball, soccer, basketball, fishing, classes in martial arts, swimming, and many other alternatives to crime, vandalism, or other negative activities. This is in addition to the other functions our parks have added over the years, including serving as a place to display public art and sculptures. Parks and recreational facilities clearly have a direct relationship to the quality of life in our community.

## **FACILITIES AND PROGRAMS TO MEET SPECIAL NEEDS**

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The demand for recreation facilities and programs is influenced by socioeconomic characteristics of the population being served. Of these factors, age structure of the population is the most significant. A relatively high proportion of Lakeland residents are retirees, about 21% per the 2008 American Communities Survey, with a higher degree of

leisure time. Retiree demand is largely met by the City's numerous programs and activities, plus private recreational facilities, such as golf courses and programs geared toward the elderly at private facilities such as the YMCA.

Programs and facilities for area youth are also important to an effective recreation system. Due to the theory that group activities keep young people out of mischief, and applying that theory to neighborhoods with the youth recreation needs, the City then has an opportunity to target those neighborhoods with specific recreation programs. Targeting entails a broad spectrum of services including recruitment, transportation to recreation complexes, development of appropriate group programs and supervision of individuals and activities. The need for youth recreation programs can be identified once redevelopment activities begin in a specific neighborhood. The need will strongly correlate with the observed number of youths idle/loitering in the area and the number of juvenile arrests in the area. An addition to Adair Park is a local skateboard facility where City youth can safely practice skateboarding, including "tricks." A private sector skateboard venue has also located near Lake Mirror. The Parks Department has identified the need for sports fields to play and practice upon as a high priority need for local youth sports leagues – one requiring a community park-sized facility. The 2006 PRMP essentially identifies this as a community or sports play field, essentially an athletic complex to serve the community similar in scale to a typical community park (see Table V-3).

## **LAND RESOURCE AVAILABILITY AND PROTECTION**

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Another significant issue affecting the City's ability to provide adequate recreation opportunities is resource availability. As the City becomes more densely populated, less land will be available for park expansion even though park needs will continue to grow with the City's population, with the exception of annexed areas yet undeveloped. In light of market forces which continue to increase the cost of land and reduce the supply of suitable recreation sites, the City must continue to give consideration to early acquisition of recreation sites. Additionally, acquisition of unique natural areas and access-ways to lakefronts for public use should be given consideration before urban development precludes the possibility of acquisition. In fact, natural resource and wildlife benefits/conservation from lakefront acquisitions, such as Lake Bonny and proposed Lake Bonnet, are very important.

An important long range planning concern which should be considered is the maintenance and enhancement of the area's natural resources. Use and enjoyment of these resources is an integral part of the regional recreation and open space system. If natural resources are allowed to deteriorate, the quality of the entire system is greatly reduced.

With increasing urban development consuming vast amounts of land, acquisition of available land to preserve for open space or future recreation facilities becomes more important. Many communities have been successful in acquiring small tracts of land of little value or utilizing small tracts of City-owned land for development as parks. Although planned recreation improvements might be far from the development stage, reservation of adequate sites should be carried out at an early stage. This long-range approach will result

in appropriate site acquisition and efficient overall system development and design of Lakeland's recreation resources. In fact, this strategy has already been used by Lakeland's Parks Department as noted below.

Conserving and protecting the natural resources and functions of Lakeland's lakes, including lake's shoreline, water quality of the lakes, wetlands, and associated wildlife resources has been a continuing goal of the City's park land acquisition and development plans. This included purchase of the property located on west Lake Bonny for which development plans sought to preserve shoreline wetlands and establish a natural habitat walkway (paved path and boardwalk were both constructed) as well as more traditional recreational amenities further away from the shoreline. An existing park located in west Lakeland, near the Polk County Parkway, has been designated as a conservation area on the Future Land Use Map due to existing wetland features of the site; the site is undeveloped. Another proposed park land acquisition is located on east Lake Bonnet which includes an existing bird rookery, i.e. nesting colony, which has been documented by the Florida Game and Fresh Water Fish Commission in their "Florida Atlas of Breeding Sites of Herons and Their Allies, 1986-89." Thus, the City has a unique opportunity in pursuing park land acquisitions and quality park land development: to conserve local lakes and their associated natural resources, allowing the resources to be protected from urban development, while providing additional passive and active recreational opportunities for City residents.

## **CONTINUED PARK DEVELOPMENT**

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As always, funding the site development of additional parks will be a challenge. The City owns potential future park sites, including in the former Bridgewater DRI area south of SR 33 (future Northeast Complex), the southeast soccer complex and Kells Park in southeast Lakeland. In February of 2009, the Common Ground playground was completed in the Hollingsworth Neighborhood. The approximately one acre site was recognized by Landscape Architect Magazine for the multi-themed play areas designed for children of varying ages and abilities to play side by side.



Common Ground Playground

## **COORDINATION BETWEEN RECREATION PROVIDERS**

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An important issue in recreation planning is cooperation among the entities responsible for the provision and planning of recreation sites and facilities. The City of Lakeland should continue to work closely with the School Board, the County, and private developers to maximize recreation opportunities.

As of 1998, Polk County agreed to establish a countywide library system and, with State grant funds, City libraries were able to offer non-city residents library cards at no

charge. County residents previously had to pay up to \$35.00 per year for a City library card. As a result of this new, networked library service, services demand in terms of new library cards issued has risen sharply at the Lakeland Main Library. The City is also expanding access to library services via “e-libraries” or “storefront libraries” located convenient to suburban areas within shopping centers, near schools or other areas and allowing residents to order books via computer for future pick.

The importance of school recreation facilities in meeting demand is significant. Area schools provide a great number of conventional recreation facilities such as softball/baseball diamonds, tennis and basketball courts, and football/soccer fields. The City parks department uses eight school facilities for summer or weekend activities. If these facilities were not available to serve area recreation needs, both the City and County systems would be overtaxed. Likewise, the School Board uses City facilities for football, swimming and other activities at the two City pool and recreation complexes, Bryant Stadium, Henley Field and several neighborhood parks. The use of formal or informal joint use agreements will help to offset the increased recreation demand of the area's growing population. Because recreation facilities at area schools play an important role in the local open space and recreation system, the Lakeland Parks and Recreation Department works closely with the School Board in utilizing school facilities to provide structured recreation programs for local residents. These efforts should be continued and expanded to assist in meeting future recreation needs.

Cooperation is also needed between the City and County in meeting the recreation needs of area residents. Recreation has traditionally occupied a low position among other priorities in Polk County budgets. As a result, many of the planning area citizens living outside the City limits of Lakeland have relied on City recreation programs and facilities for their recreation needs. However, future conservation-based parks have been purchased by the Polk County Environmental Lands Program to protect natural resources, and, where possible, to allow recreational uses. Also, Polk County enacted a special taxing district for unincorporated areas in 2006 in order to fund parks and this has spurred new county park development.

In the summer of 1998, Polk County and all the incorporated areas, including Lakeland, began working together to develop a single master plan for parks and recreation. A master plan was designed to respond to future recreation needs for the entire county over a ten-year period. This Plan indicated the County was best positioned to provide regional parks. While the County's special tax represents new funding potential for parks and recreation, the recreation needs of the southwest or northwest Lakeland/unincorporated Polk area must financially compete with other needy areas of Polk County such as in Wahneta and the “4 corners” area in northeast Polk.

Availability of parks to City residents is a priority and restricting the customer base may become necessary. To the extent that City facilities serve people in the unincorporated areas, user charges have been used to recoup some of the costs of providing recreation



services above the level needed by City residents. Theoretically, the higher fees are also intended to discourage non-City use to a degree which allows all interested City residents to participate in City programs. This is an issue which the new county master plan and new County park expansions can address.

In addition to public entities, the private sector also plays a key role in the provision of recreation opportunities. Beyond the typical private recreation facilities, i.e. cinemas, theaters, bowling alleys, health spas, etc., private developments can provide valuable passive, open space areas as well as on-site recreation including tot lots. The City works closely with developers to ensure that new residential developments are designed to provide adequate recreation space to support the proposed population.

Quasi-public entities like the YMCA, which offers programs and classes to non-members at a higher rate than members, also assist in serving recreational needs. The central Lakeland YMCA is located near Peterson Park and offers T-ball, soccer, swimming classes, gymnastics, martial arts, and summer youth programs to members and non-members. The North Lakeland YMCA, located on Sleepy Hill Road, opened its doors in 2005, and will include a swimming pool in the future.



Kelly Recreation Complex



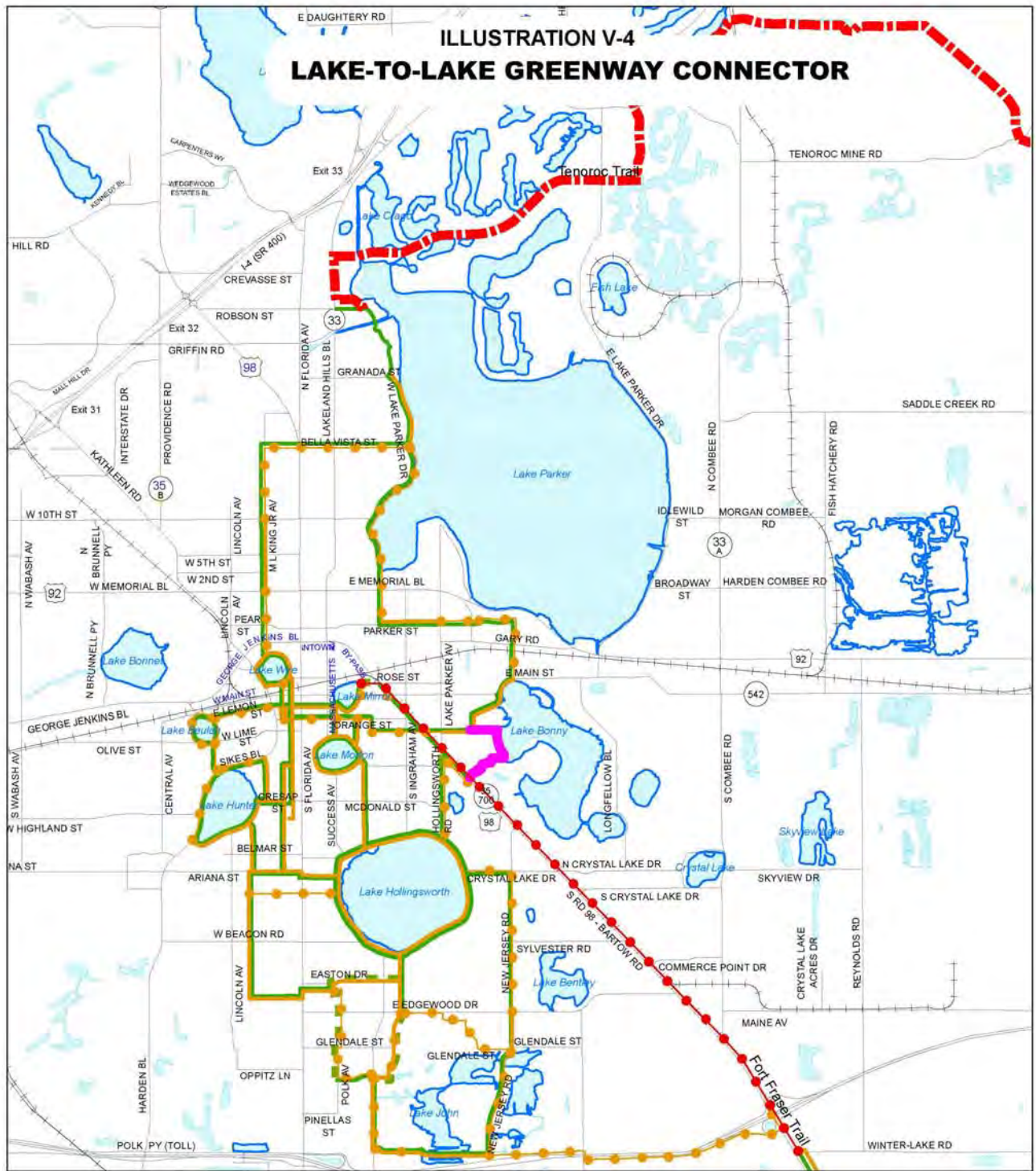
Lake Parker Park



Lake Bonny Park



Dobbins Park



Source: Lakeland Community Development Department, 2012

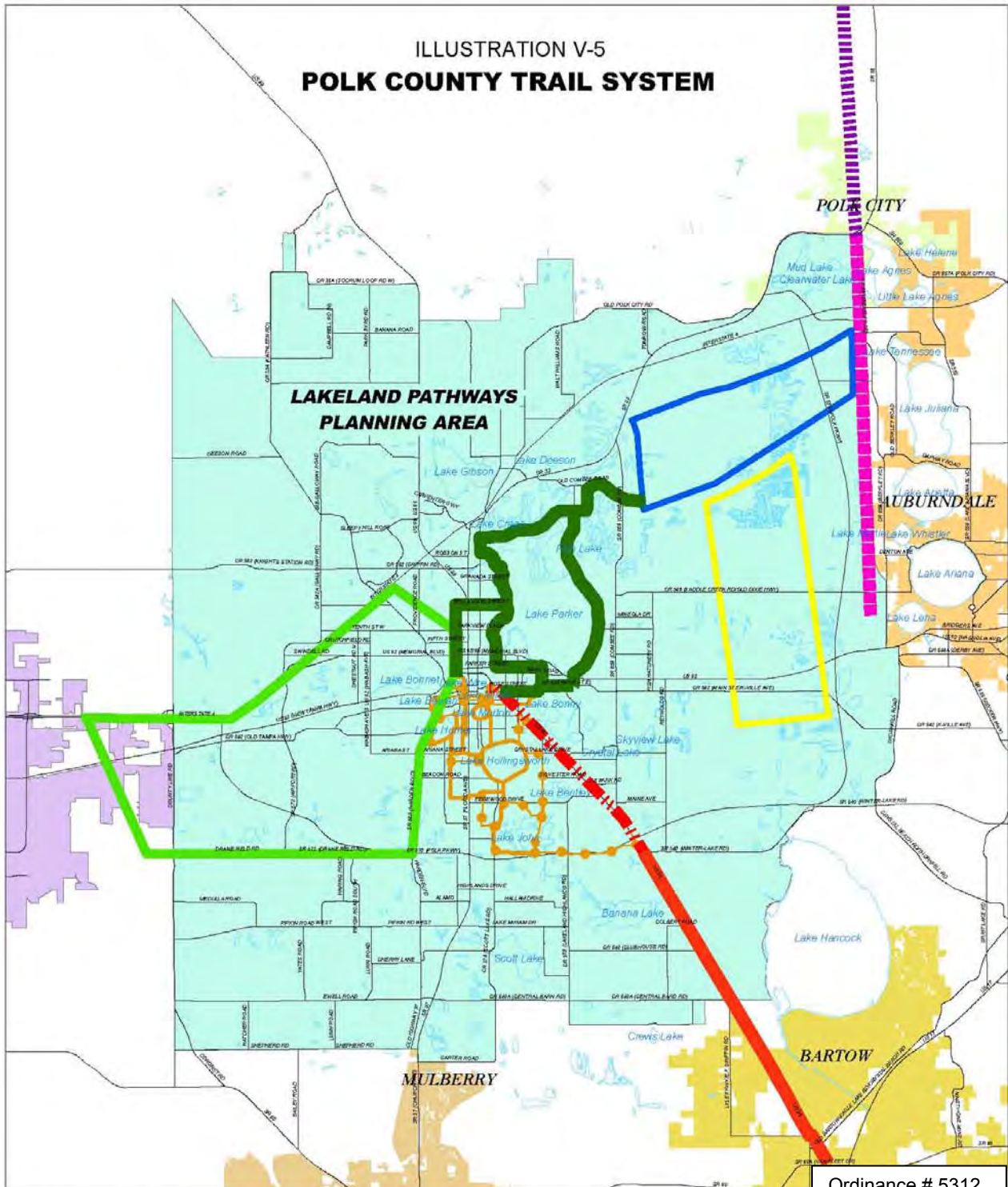
- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| <b>Planned Regional Trails</b>       | <b>Greenway Pedestrian Connector</b>  |
| ■ ■ ■ ■ Tenoroc Trail (proposed)     | — Existing                            |
| ● ● ● ● Fort Fraser Trail (proposed) | ■ ■ ■ ■ Proposed                      |
| — Future Alternate Corridors         | <b>Lake-to-Lake Bicycle Connector</b> |
|                                      | — Existing                            |
|                                      | ● ● ● ● Proposed                      |

Ordinance # 5312  
Adopted 05/21/12



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# ILLUSTRATION V-5 POLK COUNTY TRAIL SYSTEM



Ordinance # 5312  
Adopted 05/21/12

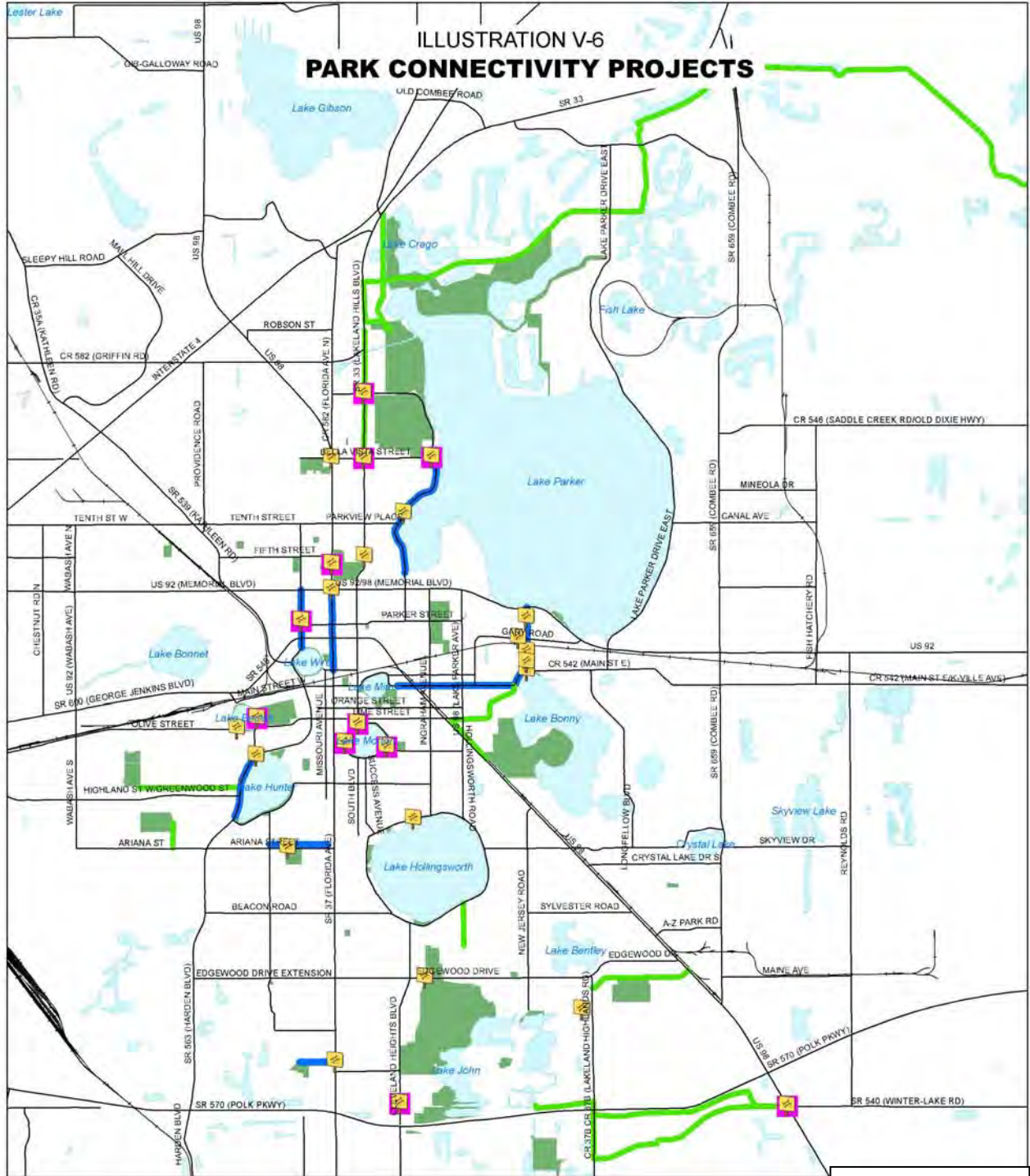
Source: Lakeland Community Development Department, 2010



- █ Lake-to-Lake Greenway Connectors
- █ Tenoroc Trail (Proposed)
- █ Fort Fraser Trail
- ▬▬▬ Fort Fraser Trail (Proposed)
- ▬▬▬ Lakeland to Plant City Connector Corridor (Proposed)
- █ Saddle Creek/Peace River Greenway (Proposed)
- ▬▬▬ Van Fleet Trail (completed 1994)
- ▬▬▬ Van Fleet Trail Southern Extension (completed 2009)
- █ Lake-to-Lake Bicycle Connector
- ▬▬▬ Existing
- ▬▬▬ Proposed






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Source: Lakeland Community Development Department, 2010

Ordinance # 5312  
Adopted 05/21/12



-  Pedestrian Crossing
-  Enhanced Pedestrian Crossing
-  Bicycle Lane
-  Neighborhood Connector
-  Existing Parks



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## GOAL, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to the recreation and open space system. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the attainable and measurable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Recreation and Open Space Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes, and with the goals and policies of the *Central Florida Comprehensive Regional Policy Plan*. This Element has been updated to reflect the inventory and some of the findings of a 2006 City-approved *Parks and Recreation Master Plan*, a locally-initiated plan.

**GOAL:** To ensure adequate recreation and open space opportunities for all sectors of the community and enhance the quality of life Lakeland offers through the development of attractive parks, recreation facilities, and open spaces.

**Objective 1:** Provide a supply and variety of recreation opportunities to meet public need and respond to adopted level of service standards within the planning period.

**Policy 1A:** The City of Lakeland will adhere to minimum level of service standards for the provision of recreation sites and facilities including a minimum 5.98 acres per 1,000 residents, 50% of which shall be in active park space (e.g., scenic, neighborhood, or community)

- one recreation complex per 30,000 persons;
- one community park per 25,000 residents; and
- one neighborhood park per 6,500 residents.

Based on supporting data within the City's 2010 Parks and Recreation Impact Fee Study, the City has established and will maintain an overall estimated asset of \$1,457 per resident (expressed in 2010 dollars) of City-owned parks and recreation land and facilities.

These are minimum standards only. Additional local needs and demands are recognized in the City's long-term Parks and Recreation Master Plan and represent local objectives which are intended to help our community meet its vision as a world-class community. Available funding to implement these objectives will determine the scope and rate of the Master Plan implementation.

**Policy 1B:** The City of Lakeland will schedule identified future recreation facility needs and correction of existing deficiencies in the Capital Improvements Program and will update the program annually to reflect completed projects and newly identified needs.

**Policy 1C:** The City will strive to establish new neighborhood parks as per identified needs in each approved neighborhood and/or sector plan, including the recommended walking distance of approximately one mile, as per the 2006 adopted City Parks and Recreation Master Plan.

**Policy 1D:** The City of Lakeland will ensure that access is provided to all City parks, including lakeshores.

**Policy 1E:** The City of Lakeland will continue to implement the early acquisition and preservation of sites suitable for recreation and open space use with planned acquisitions reflected in the five year capital improvements program. Priority for funding shall be given to sites which meet a recreation need and which protect and/or improve natural resources, including wildlife, wildlife habitat, shorelines, and/or water quality.

**Policy 1F:** Plans for new and/or expanded redeveloped City parks shall consider inclusion of educational exhibits, wildlife observation areas, lakefront or other natural area boardwalk, and nature trails, where appropriate.

**Policy 1G:** The Lakeland adopted land development regulations shall continue to include specific definitions and standards for the incorporation of lands targeted for recreation and open space. New standards for on-site recreation facility provision within suburban residential developments shall be developed by or in 2012.

**Objective 2:** Continue to improve coordination with public agencies and the private sector to encourage the efficient and equitable provision of recreation facilities and opportunities.

**Policy 2A:** The City of Lakeland will coordinate activities with the State of Florida, Division of Parks and Recreation, Polk County School Board and with Polk County to ensure that available recreation program opportunities are maximized. The City will also continue to exercise joint use agreements for the development of neighborhood parks on or adjacent to School Board property, such as the Southwest Middle School site.

**Policy 2B:** The City of Lakeland will continue to pursue funding through recreation grants, loans, and other programs to assist in meeting local recreation needs.

**Policy 2C:** The City will continue to pursue funding partnerships and new revenue options which may allow full implementation of the Lakeland Parks and Recreation Master Plan recommendations, as financially feasible. Co-location of parks, recreation facilities, libraries, and civic spaces shall be a continuing strategy in forging economically effective

partnerships with other agencies in order to achieve Lakeland's community vision and objectives.

**Objective 3:** Continue to provide incentives to encourage the provision of recreation facilities in proposed future developments.

**Policy 3A:** The City of Lakeland will continue to require new residential developments to provide for the recreation demand created by that development through the implementation and updating of recreation impact fees.

**Policy 3B:** The City of Lakeland will continue to require new single family and multi-family developments to include appropriate open space and/or recreation facilities within the development. All residential developments located 1.5 miles or more from an existing public park shall provide a variety of on-site active recreation facilities to serve the expected demographic groups within the project. Open play areas should also be provided in residential developments of at least 25 acres. Unimproved trails providing access to natural site features shall be incorporated where feasible and shall be linked to other pedestrian and bicycle facilities within the development. Trails systems provision will be given highest priority where there are potential linkages to existing or planned systems adjacent to the subject property. Specific implementing requirements to this policy shall be included in the City's land development regulations by 2012.

**Policy 3C:** The City of Lakeland will require Developments of Regional Impact and other large developments to reserve adequate land for parks and recreation facilities with priority placed upon connectivity through and to the City Greenway and other connector systems in place or planned.

**Objective 4:** Improve bicycle and pedestrian access to designated recreation facilities through the ongoing implementation of the Lake-to-Lake Greenway Connector.

**Policy 4A:** The City of Lakeland will provide reasonable accommodations for handicapped and pedestrian access to new recreation sites and facilities to the maximum extent feasible.

**Policy 4B:** The City of Lakeland will continue to utilize the design plan for the Lake-to-Lake Greenway Connector to implement bicycle and pedestrian access improvements to existing recreation sites and facilities and will continue to fund pedestrian and bicycle improvements within subsequent five year capital improvement budgets, connecting residential areas to the urban core and the City's park system.

**Policy 4C:** The City will continue to promote public awareness of and access to the Lake-to-Lake Greenway Connector through signage, maps of the system and other appropriate means.



**Policy 4D:** The City, LEDC and other agencies such as the Chamber of Commerce shall continue to promote an annual or more frequent bike/pedestrian event which would use portions of the Lake-to-Lake Greenway Connector, such as the annual Lakeland Urban Mountain Bike Race event.

**Policy 4E:** Continue to pursue funding and implementation options which achieve the extension of the Ft. Fraser Trail system into downtown Lakeland as well as options for enhancing intermodal connectivity to this trail and the City's larger Greenway trail system. Continue to pursue feasible regional linkages to the Ft. Fraser trail system and the City's Lake-to-Lake Greenway system. In addition to recreational opportunities, explore functional transportation connectivity opportunities for bicycle and trail systems.

**Objective 5:** Through an ongoing assessment and improvement program, identify and improve parks, open space and other recreation assets which, due to age or general deterioration, have declined.

**Policy 5A:** The Parks and Recreation Department will continue to conduct an ongoing maintenance program of all park and recreation facilities. Funding of operations and maintenance needs shall be recognized as critical to retaining a high quality parks system.

**Policy 5B:** The City of Lakeland will monitor all facilities to determine that they meet updated safety standards and the Americans with Disabilities Act.

**Objective 6:** Utilize public investments in right of way beautification, street trees, parks and open spaces to influence existing land use and implement the Future Land Use Element of this comprehensive plan.

**Policy 6A:** The City of Lakeland will continue to develop and implement the City Beautification Program and the Entrance Beautification Program by coordinating their efforts with the Chamber of Commerce, local businesses and the Florida Department of Transportation. This would include, for example, such highway beautification projects as Bartow Highway, Sikes Boulevard, and Kathleen Road.

**Policy 6B:** The City of Lakeland will maintain and expand recreation amenities in the central city as part of an overall strategy to strengthen older neighborhoods. This shall be done in coordination with sector plans and neighborhood plans, specifically coordinating with the areas prioritized for neighborhood redevelopment efforts.

**Policy 6C:** The City will support the implementation of the Lake Mirror Park Plan, which expands and redevelops the historic Lake Mirror Park, with appropriate and compatible adjacent land uses.

# CONSERVATION ELEMENT

## INTRODUCTION

The original purpose of the Conservation Element was to promote the conservation and preservation of natural resources. Traditionally, conservation areas have been defined as lands which (while maintaining their natural functions) can support some extent of development as long as special conditions are made in order to reduce adverse environmental impacts. Preservation areas, on the other hand, are areas vital to the maintenance of environmental quality and are the least tolerant to changes caused by development. Preservation areas include Class I waters (potable public surface water supplies), freshwater swamps and marshes, and public or semi-public areas dedicated to the maintenance of natural systems or habitats. Local examples of these areas include the “North Lakeland Swamp” (located west of Martin Luther King, Jr. Boulevard) and the Saddle Creek Audubon tract, both preservation areas. However, the City’s Future Land Use Map does not equate to these two meanings; the Conservation future land use designation is used for natural areas and systems not publicly owned or which are controlled by an entity other than a local government, whereas the Preservation land use designation is assigned to lands which are publicly owned by the City or a local government entity.

In 2008, the Florida Legislature adopted House Bill 697 to revise Chapter 163 of the Florida Statutes to require that local comprehensive plan conservation elements address the “factors that affect energy conservation”. This broadens the traditional concept of conservation to assess how our development pattern and built environment affect the way we use energy today and consider how we can design them to be more efficient tomorrow.

In February 2009, the Lakeland Vision Update culminated with the identification of 11 strategic community priorities and among them were the City’s environment. The Lakeland Vision Update established the following goals:

1. **CLEAN LAKELAND** - Lakeland is a clean community that seeks to eliminate litter, reduce pollution, and protect the health of its lakes and other natural resources.
2. **GREEN LAKELAND** - A green Lakeland conserves natural resources, preserves green space, provides environmental education programs, promotes alternative energy sources and modes of transportation, and supports a sustainable quality of life.

These goals set forth the principles that this element should validate and support in order to create the community envisioned by the City’s residents and stakeholders.

According to Rule 9J-5, Florida Administrative Code, conservation elements prepared by local governments must address: 1) Soils; 2) Vegetation and wildlife communities; 3) Water needs and resources; 4) Rivers and lakes; 5) Wetlands and floodplains; 6) Air quality; and 7) Minerals. The Florida Department of Community Affairs is currently in the process of amending 9J-5 to include specific standards for addressing energy conservation. This

Conservation Element envisions continued protection of our natural resources and efficient use of our energy resources. Strategies are presented for conserving and managing soil, floodplains, lakes, wildlife and vegetation while at the same time conserving energy pursuant to these objectives.

## SUMMARY OF FINDINGS

An important first step in the preparation of this Conservation Element was an inventory and analysis of existing natural and wildlife resources in the Lakeland Planning Area. The City's original inventory of natural resources was made available in its 1990 report entitled *Lakeland Conservation*. The following summary includes data from that report. TSD VI-One in the *Technical Support Document* also includes an area bird count for 2009.

### SOILS

The local office of the USDA Soil Conservation Service performs soil surveys for Polk County, including the Lakeland area. The survey includes evaluation of soil suitability and limitations for numerous typical urban and rural uses; e.g., shallow excavations, dwellings without basements and septic tank absorption fields. From the information provided by the survey, the suitability of a certain soil for a particular use can be derived and needed conservation measures in regard to soil use can be determined. Illustration VI-1 indicates generalized soil associations. Sixty soil types have been identified, not including all urban land complex soils which are so mixed that they are not rated for most items in the soil survey (such as suitability for development, for use of septic systems, or for various types of agriculture).

The conversion of land to urban uses often requires extensive changes to the land. This reshaping of land affects drainage, stream flow and greatly increases the rate of soil loss or erosion. Much of the erosion occurs during the construction period, but areas downstream from a construction site may erode more after construction is completed because of a more rapid runoff from impervious pavement, parking lots or compacted soil. Adverse effects of erosion include gullied slopes, undercut pavements and pipelines, and clogged storm sewers. The loss of valuable topsoil also adversely affects vegetative communities. Other damages occur to stream channels downstream as sediment increases and reduces the stream's carrying capacity. Once sediment reaches lakes, it is a serious source of pollution, degrading the quality of water and reducing basin storage capacity.

Basic requirements for an effective erosion and sediment control program on building sites include saving vegetation, installing storm drains and basins early in the process, an engineering design to accommodate increased runoff following development, and using best management practices (BMPs) during construction to prevent soil erosion. These BMPs include using hay bales, fabric, wire mesh, or other barriers to keep soils on-site from being washed or pushed off-site during construction.

Unreclaimed mined areas which exist in the urban area present a unique soil type and conservation opportunity. Much of the unreclaimed lands include soils which are mostly clays/slime and overburden from the mining process. The land is often scattered with open pits, some of which are water-filled. Much of the soil is wet and unstable/has poor load-bearing capacity. While the poor soils and rough terrain leave little potential for

development, their acquisition by governmental units or natural preservation groups would provide an opportunity to create a permanent open space area and future habitats for wildlife and plant communities. Some of these areas could also be used for water retention. Many of the lands within the Greater Lakeland Area Proposed Greenbelt (located east of Combee Road, along Saddle Creek and south to the County's Carter Road Regional Park) include previously-mined areas (see the "Greenbelt" illustration in the Issues and Opportunities section).

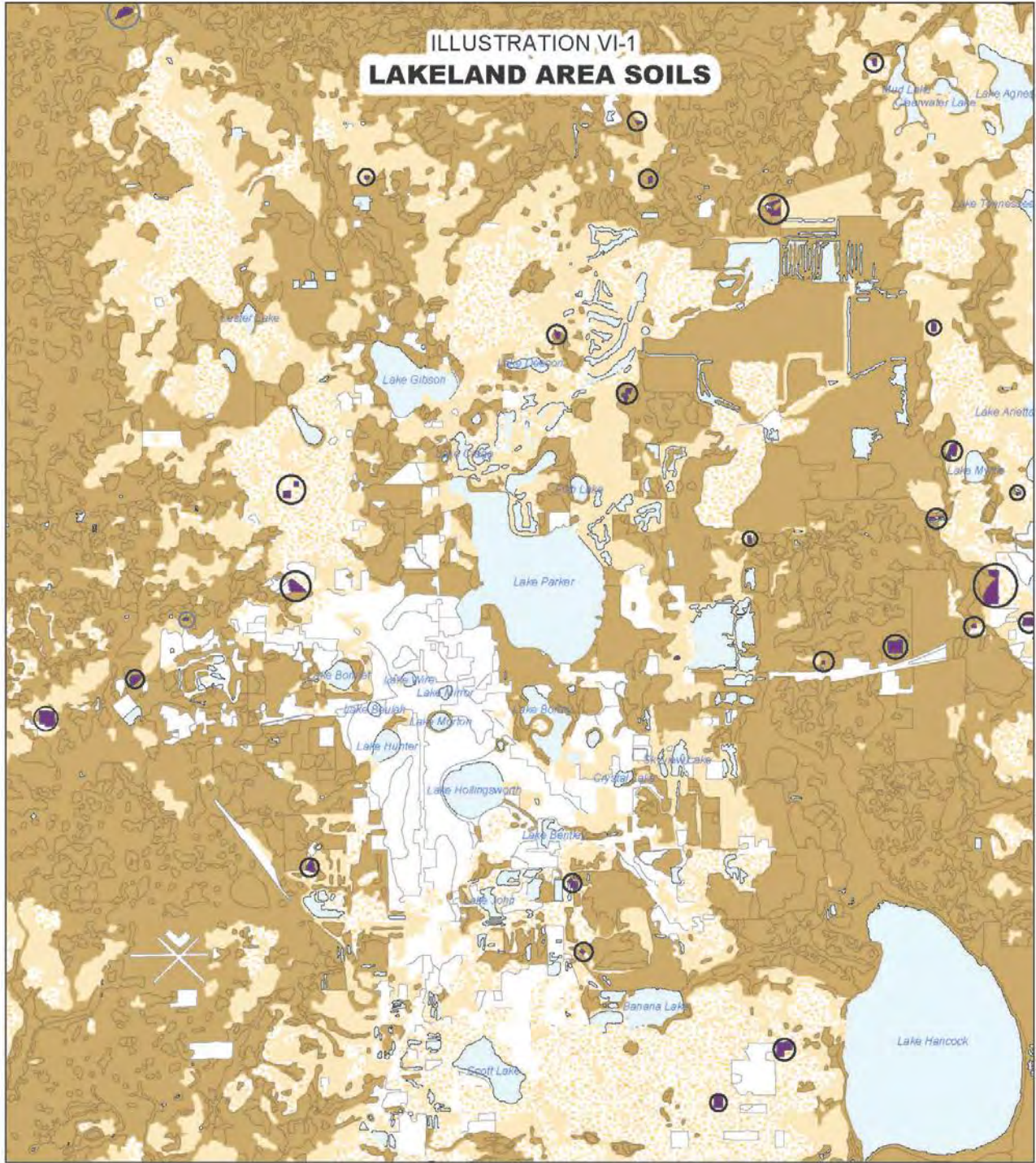
## **VEGETATIVE AND WILDLIFE COMMUNITIES**

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Prior to urbanization, there were three principal vegetative communities in the Lakeland Planning Area: 1) Pine flatwoods to the north and northeast; 2) Mixed pine/oak forests extending from Lake Parker to the Hillsborough County line; and 3) Hardwood forests near lakes and wetlands, and in floodplains. Today, the most extensive vegetative community in the Lakeland Planning Area is categorized as grassland/pasture for agriculture interspersed with hardwood hammocks and swamps, surface waters and wetlands, plus some dry prairie areas. The pine and oak communities are generally grouped as upland flatwoods while much of the hardwood forests are in lowlands and wetlands. These communities can be further subdivided into specific habitats with some of these supporting threatened or endangered plants and animals. An example in the Lakeland area is the Sand Pine Scrub ecosystem located east of Lake Deeson. Illustration VI-2 indicates the generalized location of vegetative communities, excluding the impacts of urbanization. Illustrations VI-3, VI-4, and VI-5 depict areas known to or having the potential of supporting species listed as endangered, threatened, or of special concern. These areas should be subjected to close environmental scrutiny when development is proposed.

Lakeland's *Land Development Regulations*, Article 34 "Natural Resource Protection," requires a biological inventory of a development site be performed in response to a documented presence or sighting of a listed species or where the size and/or ecological diversity of the site warrants such an inventory. All site plans submitted to the City must identify the extent and location of any protected habitat including protected lakeshores, jurisdictional wetlands, listed species, fisheries and areas designated as "Conservation" on the City's Future Land Use Map (per Section 34.04.03.01 of the LDRs.) Failure to indicate these areas on the site plan may result in rejection of the site plan.

# ILLUSTRATION VI-1 LAKELAND AREA SOILS



Source: U.S. Soil Conservation Service Polk County 1990 Soil Survey



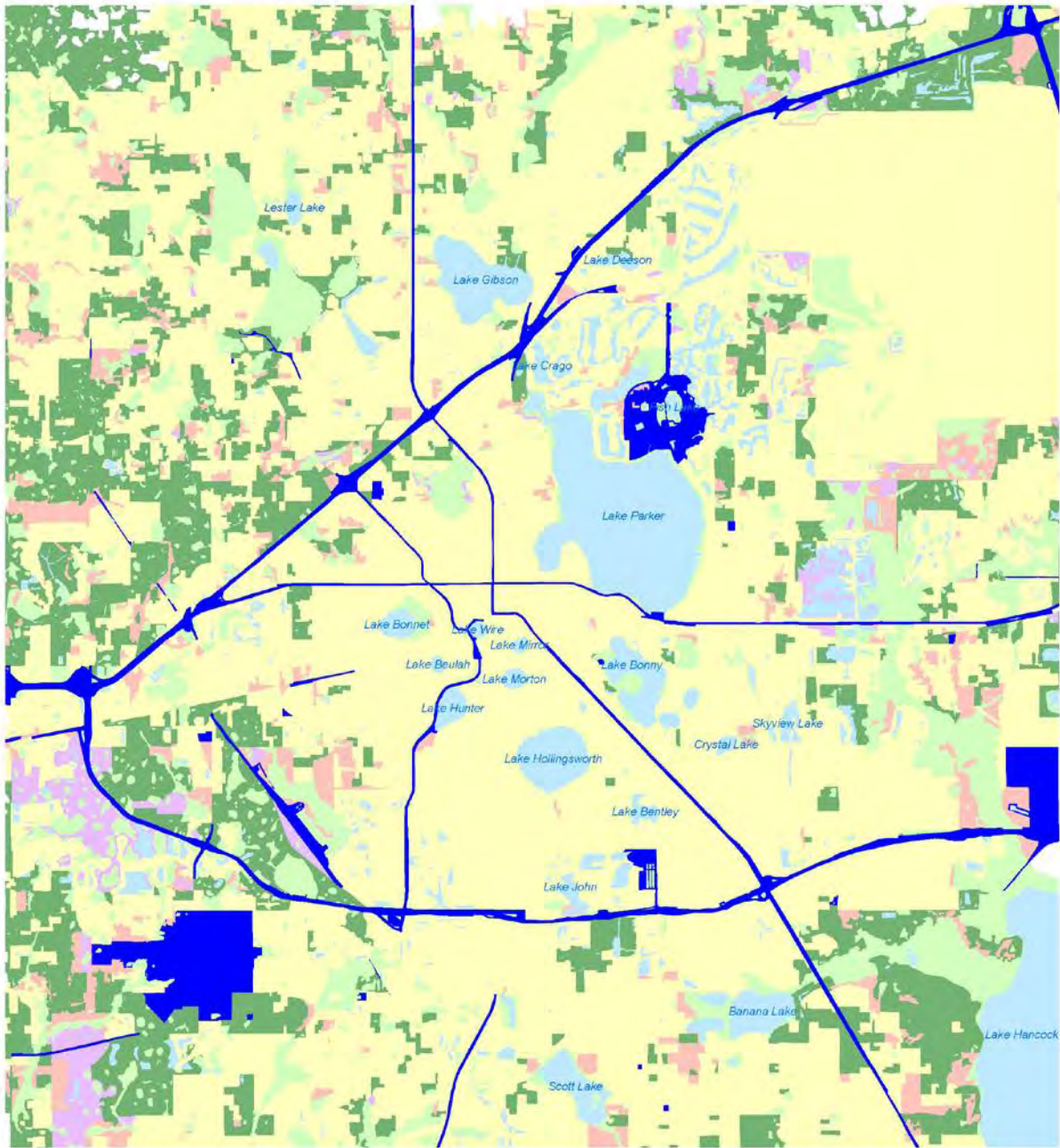
Shade	Rating	General Soil Types
	None	Ridges - Urban Land Complexes
	Well Drained	Upland Soils - Apoka Candler, Ft Meade & 4 Others
	Moderately Drained	Flatwood Uplands - Adamsville, Archbold, Arents, Sparr & 9 others
	Poor to Poorly Drained	Flood Plain/Depressional/ Mucks/Clayey - Basinger, Chobee, Fied Samsula & 32 others
	Excavation Sites	



k:\cd\maps\esri\Comp\_Plan\ConservationSoils.mxd








ILLUSTRATION VI-2

**LAKELAND URBAN LAND COVER**



Source: SWFWMD LANDCOVER, 2007

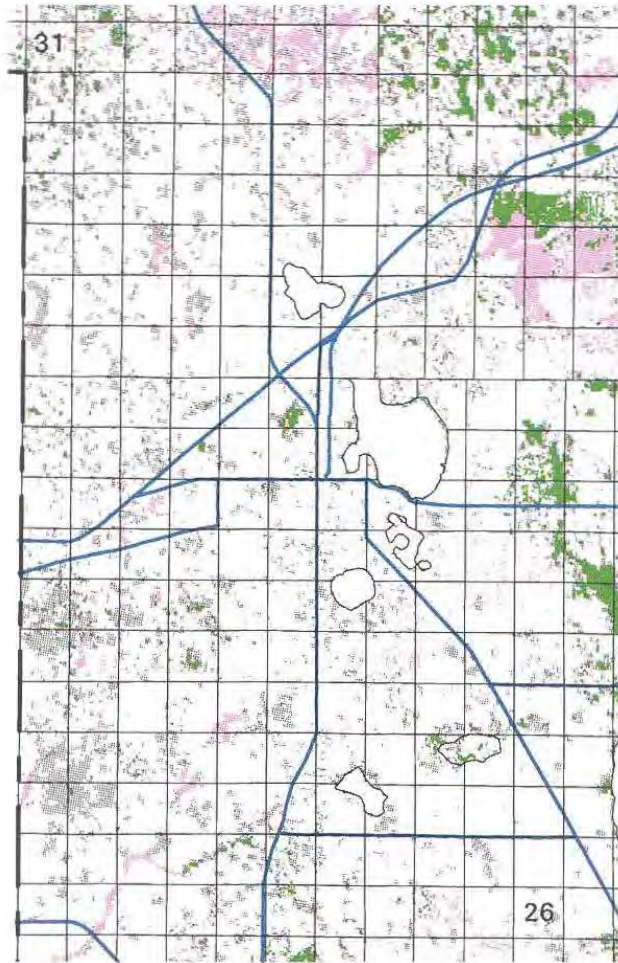
**FLUCC Hierarchical Listing of Levels**

-  AGRICULTURE
-  DISTURBED/DEVELOPED
-  RANGELAND
-  TRANSPORTATION, COMMUNICATION AND UTILITIES
-  UPLAND FORESTS
-  WATER
-  WETLANDS



k:\cd\maps\esri\comp\_plan\conservation\urban land cover.mxd

# Lakeland (urban), Polk County Priority Wetlands for Listed Species







**SPECIES OVERLAP\*\***





**Upland Use Areas\*\*\***

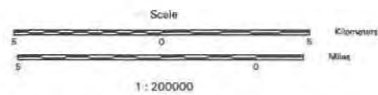
-  1-3
-  4-6

**Wetland Use Areas**

-  1-3
-  4-6
-  7-9
-  10-12

**Other Features**

-  Background
-  Major roads
-  Section lines
-  County boundary



Map prepared by: Sharon B. Arnold  
/data9/requests/govt/city/lakeland/urban-epsa.map

Florida Game & Fresh Water Fish Commission  
Office of Environmental Services  
620 S. Meridian St.  
Tallahassee, FL 32399-1600

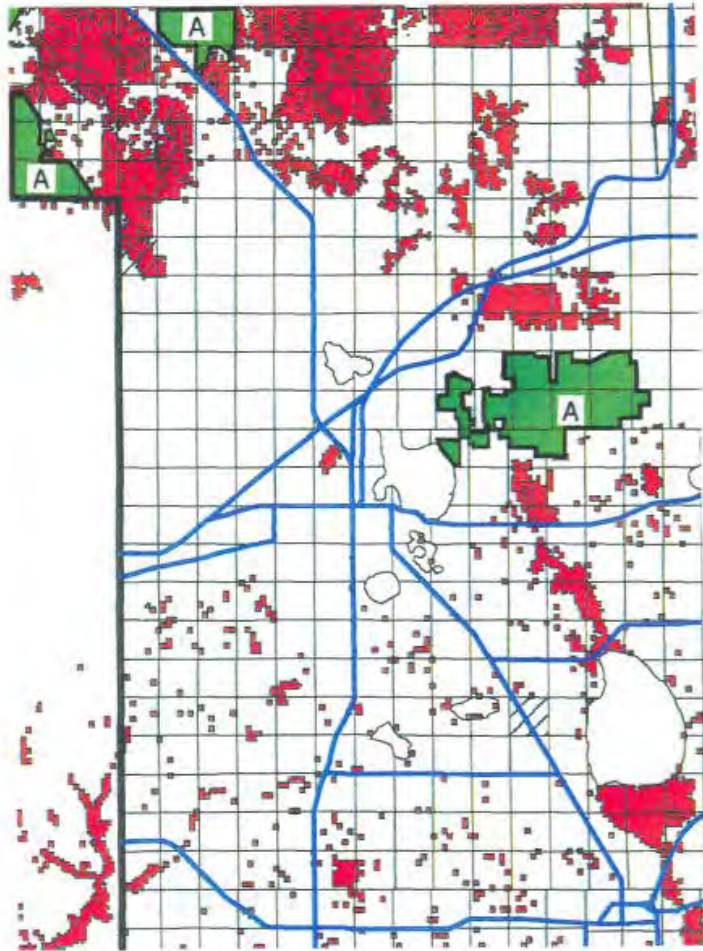
May 22, 1997









ILLUSTRATION VI-4

# Lakeland Area and City of Lakeland, Florida

## Strategic Habitat Conservation Areas

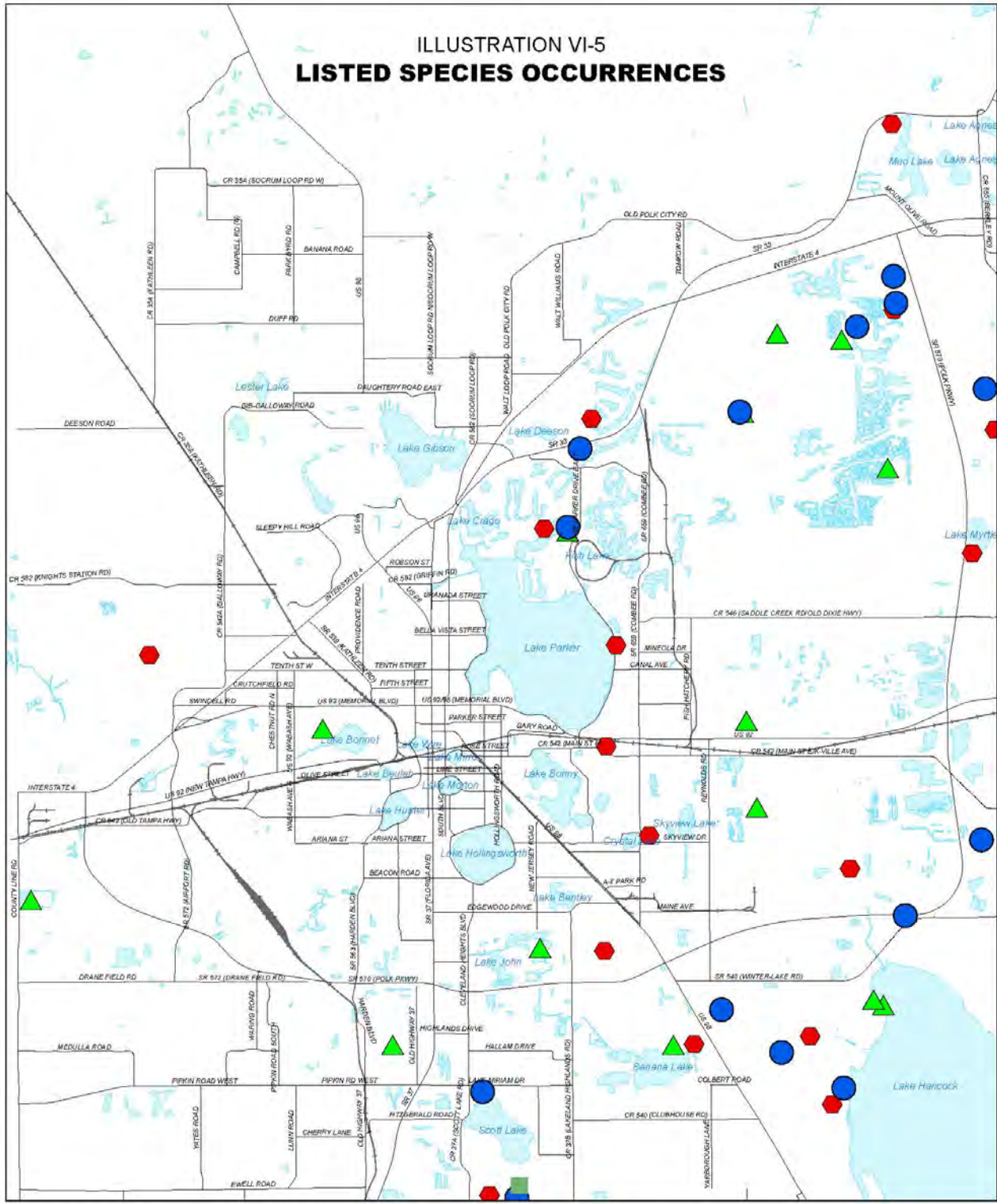


-  Major roads
-  Section lines
-  Lower right & upper left boundaries
-  County boundary
-  Existing public lands
-  SHCA



Source: Florida Game and Fresh Water Fish Commission, 1989  
City of Lakeland, Community Development Department, 1998

## ILLUSTRATION VI-5 LISTED SPECIES OCCURRENCES



Source: Florida Fish and Wildlife Conservation Commission, 2006 and 2007 nesting season



- ⬡ Eagle Nests (last active 2007)
- ▲ Wading Bird Rookery Locations
- FNAI listed animals
- FNAI listed plants



k:\zdm\aps\esh\comp\_plant\Conservation\VI- 5 Listed Species Occurrences.mxd

Table VI-1 lists the endangered or threatened plants and animals found within the Lakeland Planning Area along with the vegetative community where they are most often found.

**TABLE VI-1  
ENDANGERED, THREATENED OR SPECIES OF SPECIAL CONCERN  
IN LAKELAND PLANNING AREA**

SPECIES	VEGETATIVE COMMUNITY	LISTED AS WETLAND DEPENDENT
<b>Mammals</b>		
Florida Mouse	Sand Pine Scrub	
Sherman's Fox Squirrel	Long Leaf Pine/Turkey Oak Hills	
<b>Reptiles</b>		
American Alligator	Swamp Hardwoods/Cypress Swamps	X
Eastern Indigo	Sand Pine Scrub	
Short Tailed Snake	Sand Pine Scrub	
Gopher Tortoise	Turkey Oak Hills	
<b>Birds</b>		
Burrowing Owl	Turkey Oak Hills	X
Wood Stork	Lakes, Swamps & Wetlands	X
Snowy Egret	Lakes, Swamps & Wetlands	X
Little Blue Heron	Lakes, Swamps & Wetlands	X
Tricolored Heron	Lakes, Swamps & Wetlands	X
White Ibis	Lakes, Swamps & Wetlands	X
Bald Eagle	Wetland & Forested Uplands	X
Limpkin	Lakes, Swamps & Wetlands	X
Sandhill Crane	Freshwater Marshes, Wetlands, Dry Prairie/Grasslands	X
<b>Plants</b>		
Blazing Star	Sand Pine Scrub	
St. John's Wort	Sand Pine Scrub	

**Source:** Lakeland Community Development Dept. and Florida Fish and Wildlife Commission, 2010.

## **WATER NEEDS AND RESOURCES**

The City of Lakeland water service area extends well beyond the corporate limits of Lakeland. The raw water supply for this service area is drawn from the Floridan Aquifer through two wellfields. The Northwest Wellfield draws from a network of multiple deep wells and supplies the T. B. Williams Water Treatment Plant. The Northeast Wellfield draws from several deep wells and supplies the C. W. Combee Water Treatment Plant. Illustration VI-5

indicates the Northwest Wellfield and its zones of protection. Illustration VI-6 indicates the Northeast Wellfield and its zones of protection. Individually, the Northwest Wellfield is permitted for 28.03 million gallons per day (MGD) and the Northeast Wellfield is permitted for 4.0 MGD. An additional well at the Combee Water Treatment plant has also been permitted for future withdrawal up to 3 MGD. Collectively, the Water Use Permit value is for 35.03 MGD, with an average peak monthly use of 42.04 MGD. The 20-year Water Use Permit was issued in December of 2008. For the year 2020 the average daily consumption is projected to be approximately 28.5 MGD with an average peak monthly use of about 34.2 MGD. By 2030 the average daily consumption will increase to approximately 31.46 MGD with an average peak monthly use of 37.8 MGD.

To meet future water demands and maintain a protected wellfield, Lakeland established the new Northeast Wellfield in the northeast section of the Planning Area and constructed the C. Wayne Combee Water Treatment Plant. The water treatment plant began operation in October 2005 providing redundancy for the potable water system and to serve water pumped from the NE Wellfield.

Limited options for alternative water supply exist within the Polk County area and Lakeland Planning Area. Desalination of ocean or salt water is not an option due to Lakeland's geographic location. Aquifer storage recovery remains somewhat experimental and is not considered cost feasible. Additionally, Aquifer storage recovery may be subject to some environmental concern in the Green Swamp Area of Critical State Concern given that it is the focal point of the potentiometric high for groundwater and feeds several surface waters that in turn serve other areas with drinking water.

In 2008, shortly after the adoption of the City's Water Supply Plan, the City negotiated an agreement with TECO to divert treated wastewater, which previously flowed into a tributary of the Peace River, to the new Polk Power Station south of Mulberry. Using the treated wastewater averts the need for TECO to pump groundwater in order to cool the plant and meets the conditions of the Central Florida Coordination Area rules. TECO and SWFWMD funded the construction of pipes and pumps that carry the water to the power plant. The wastewater transmission system was completed in 2012 at cost of \$60 million.

Another alternative water source under consideration is the wastewater effluent reuse water from other suppliers. Typically, increased demand for potable water due to population and business growth is followed by an increase in wastewater quantities. These wastewater flows, once treated, may then be available for water re-use once a storage and delivery system is found feasible for implementation. One potential water reuse supply project will provide re-use water to the Williams DRI and/or new FPU campus in northeast Lakeland via an agreement with Auburndale to accept their excess wastewater effluent.

The primary water supply alternative or option for the City of Lakeland is that of additional water conservation measures, rules and programs. The City has had water conservation programs, both supply- and demand-side, since 1987. The City of Lakeland's conservation

program currently consists of the following elements: rates and fees, water audits, co-funding projects, education initiatives, citywide conservation efforts, and enforcement of water restrictions.

Possibly the most important part of Lakeland's conservation program is the utilization of rates and fees effectively beginning in 1998. Then in 2006, the utility restructured the inverted block water rates from 3 to 4 "tiers" to further encourage conservation using a model provided by the Southwest Florida Water Management District (SWFWMD). The lowest tier only received an increase equivalent to current operating cost while the rate on the top tier was set to be punitive to encourage customers to use less through economic disincentive.

Another conservation measure utilized by the City is the adjustment of commercial impact fees to appropriately reflect actual usage. Commercial customers applying for water service pay impact fees based on projected use. Over time, some customers may exceed the capacity that was reserved. To solve this issue, an ordinance was passed in 2005 that allows the utility to bill increased impact fees to customers who exceed the capacity reserved through the original impact fees. The Water Utility Department audits the commercial customer's water use vs. paid impact fees. Over an initial eighteen-month period, the water utility reviewed customer usage and issued advisories. In January of 2007 customers who had not reduced their water usage received a payment request for additional impact fees.

All Lakeland customers are entitled to free water audits from the city. In the past, water audits were mainly conducted when bills were high due to leaks. Water Utility employees and Customer Service representatives are now encouraging customers to request audits whenever a customer asks for more details about water usage. The previously-mentioned impact audit caused several commercial customers to request audits as well. When audits are conducted, the customer is given detailed information on how their water dollars are spent, tips for water conservation and notification of any suspected leaks in the plumbing.

Pursuing co-funding grants offered annually by SWFWMD is an important program that brings the tax dollars paid by Lakeland residents back into the area economy. Applications are submitted in December for the budget year starting in the following October. The following are examples of co-funded programs:

- Ultra Low-Flow Toilet Rebates or Vouchers - Customers with homes built prior to 1995 will be able to receive a rebate or voucher of up to \$100 for replacing an existing toilet using 4 gallons per flush or more, with a maximum of two per household. Multi-family dwellings such as apartment buildings will be offered direct replacement at no cost if the entire facility is completed at one time. This program has a two-year goal of replacing 400 toilets.
- Conservation Kit Distribution – Customers living in homes constructed prior to 1995 will be given retrofit kits free of charge. The kit will contain low-flow aerators for the

kitchen and bath, a shower head, leak detecting dye tablets and an automatic shut off handle for a garden hose. This program has a 10-year goal of distributing 1,000 kits.

- Landscape & Irrigation Evaluations - An Irrigation Professional is contracted to provide evaluations of the customer's irrigation system and landscape and provide a report to the property owner on how to improve efficiency. A free wireless rain sensor is provided if needed. This is planned to be a 10-year program. This program has a 2-year goal of distributing 267 wireless rain sensors.

These three programs alone have the potential of saving 33 million gallons of water each year after completion.

Educating the public is a high priority for the City's water conservation plan. City Water Utilities staff and other contracted professionals make presentations at a number of local venues and to organizations such as schools (Public and Private), neighborhood associations, civic groups, and public events. Furthermore, various other departments within the City have initiated conservation projects that have the same objective. Notably, Lakeland Parks and Recreation Department has initiated three conservation efforts that have aided in Water Utilities' conservation efforts:

1. the irrigation of the public recreation area around Lake Morton, converted from a potable water source to lake water;
2. the use of Florida-Friendly landscaping wherever possible; and,
3. the investigation of shallow aquifer wells as a source of irrigation water for major parks throughout Lakeland.

Additionally, Lakeland Facilities Maintenance Division conducts efficiency audits on all city facilities and plans to implement recommended changes to make the building more resource-efficient.

In order to inform the public of SWFWMD conservation methods or restrictions, the Water Utility Department communicates using a number of different methods such as the media (local newspaper, government sponsored television and radio), mass mailings (bill stuffers), and electronic communication (City of Lakeland's Website and Southwest Florida Water Management District's Website).

As required by SWFWMD, the Water Utilities Department mails compliance letters to violators in response to calls from the public and issues citations to customers who are caught in the act of violation. Since 2007, the Lakeland Water Utilities began proactive enforcement patrols for irrigation violations. A detailed listing of the above mentioned strategies is found in TSD VI-Two in the *Technical Support Document*.

## WELLFIELD PROTECTION

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The City had a consultant study completed in 1992 which indicated the 5- and 10-year travel times surrounding the wells at the two wellfields. A five-year travel time area is an area in which an associated list of chemicals would take approximately five years to travel to the wells. These travel time areas are only informational. In terms of regulatory protection, the City of Lakeland revised its land development regulations in early 1996 to widen the radius of protection around the wells from 300 feet to 500 feet--see Illustrations VI-6 and VI-7 for the Northwest Wellfield and the Northeast Wellfield and Zones of Protection. This radius establishes an area in which certain uses are prohibited and others are allowed only if the user submits a plan for review by the Water Division.

## RIVERS AND LAKES

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The Lakeland Ridge acts as a divide between three major watersheds. Water draining from the ridge area drains toward either Blackwater Creek and the Hillsborough River, Poley Creek and the Alafia River, or Saddle Creek and the Peace River. In addition to the Saddle Creek sub-basin, water flows through the Hollingsworth/Banana Lake sub-basin to the Peace River. (See Illustration VI-8, Natural Drainage and Watershed Boundaries.)

While these creeks and rivers convey water downstream, various lakes, wetlands and floodplains act as retention or detention areas. The numerous natural and manmade lakes in Lakeland are recharged by rainfall with their levels supported by the groundwater level which in turn is recharged by rainfall. Because rainfall flushes debris and contaminants from yards, roads and parking lots, it also contributes to the degradation of surface water quality. Deterioration of water quality is often the result of eutrophication.

Eutrophication is a natural process in which there is accelerated growth of aquatic plants, especially algae. This condition is caused by a number of factors, including nutrient concentrations, climate, lake age, etc. In addition, "cultural" eutrophication is accelerated growth due to man-made factors such as stormwater run-off that contains not only pollutants such as oil and grease, but also fertilizers with nutrients which, in heavy doses, can lead to overgrowth of the plants/algae. As the plants and algae take over, they use up oxygen normally available for fish and other water species, resulting in a decline in those species.

The Division of Lakes and Stormwater monitors water quality in 17 of Lakeland's 38 named lakes. Water quality samples are collected on a quarterly basis and analyzed for 35 field and laboratory parameters. This data is used to identify pollution problems and determine water quality trends over time. Eight of the monitored lakes have been designated as impaired for at least one pollutant; however, data suggests that all 17 fail to meet state water quality standards for nutrients.

Water quality trends over time are analyzed using a lake’s Trophic State Index (TSI). The TSI is a classification system used to describe a lake’s biological productivity based on nitrogen, phosphorus, and chlorophyll levels in addition to water clarity. Based on TSI trends over the past ten years, the water quality in one of Lakeland’s lakes has improved, three have declined and the other thirteen show no significant trend.

Table VI-2 shows the average TSI for lakes in the Lakeland Planning Area. Eutrophication values may vary with conditions such as morphometry, mean depth and climatic zone. The City of Lakeland tests the TSI of lakes four times a year. By averaging the tests, it is possible to account for the effects that changes in seasons and temperature may have on the TSI of lakes in this area. The list starts with the lake in the least deteriorated condition (i.e. in the best condition) and proceeds to the lake in the worst condition. The ranking is based on total phosphorus, nitrogen and chlorophyll, and secchi disk results.

**TABLE VI-2  
TROPIC STATE INDEX OF LAKES IN LAKELAND PLANNING AREA**

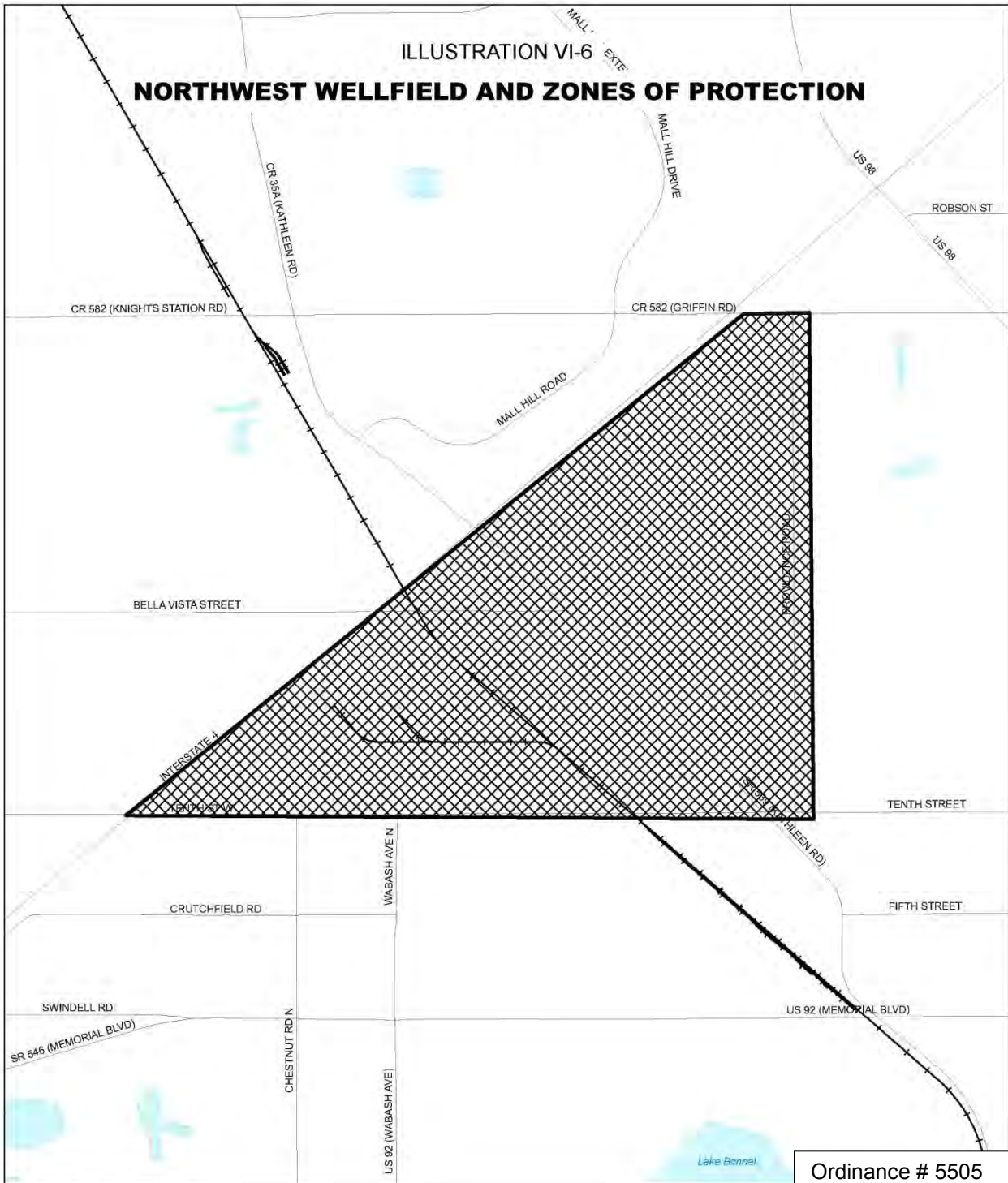
LAKE	MEAN TSI	RANKING
Wire	38.92	1
Holloway	58.95	2
Beulah	60.18	3
Gibson	61.58	4
Morton	63.00	5
Horney	66.89	6
Meadowview	67.59	7
Mirror	68.91	8
Hollingsworth	69.64	9
Hunter	72.95	10
Parker	74.07	11
John	74.90	12
Crago	75.52	13
Somerset	77.08	14
Bentley	77.26	15
Bonnet	86.55	16
Bonny	87.49	17

Source: City of Lakeland, 2009, Lakes Management Division.

The City continues to implement its 20 year Lakes Management Program. That program calls for research and continued data collection on lake water quality and implementation




activities and strategies. These strategies address directly improving lake water quality and stormwater management practices throughout Lakeland that impact our lakes. The City began implementation of the Lakes Management Program through the dredging, wetland filtration and stormwater pollutant control devices also known as baffle boxes as activities designed to improve the water quality in Lake Hollingsworth. Improvements to the shoreline of Lake Morton were made in 2006 to help reduce erosion into the Lake and an on-going aquatic plant establishment program will continue until 2011. Currently, improvements to the Lake Gibson southwest stormwater basin are underway, consisting of constructing settling ponds and filtration through existing and new wetland systems. Future lake improvements include the multiple phases of the Lake Parker Basin regional stormwater treatment improvements beginning in Spring 2010 and scheduled for completion in 2012. These projects are made possible financially through two main sources: matching fund grants from the Water Management District and City stormwater utility revenues dedicated to lake and stormwater improvement projects.



Source: City of Lakeland Water Department, 2014

**Ordinance # 5505  
Adopted 05/18/15**



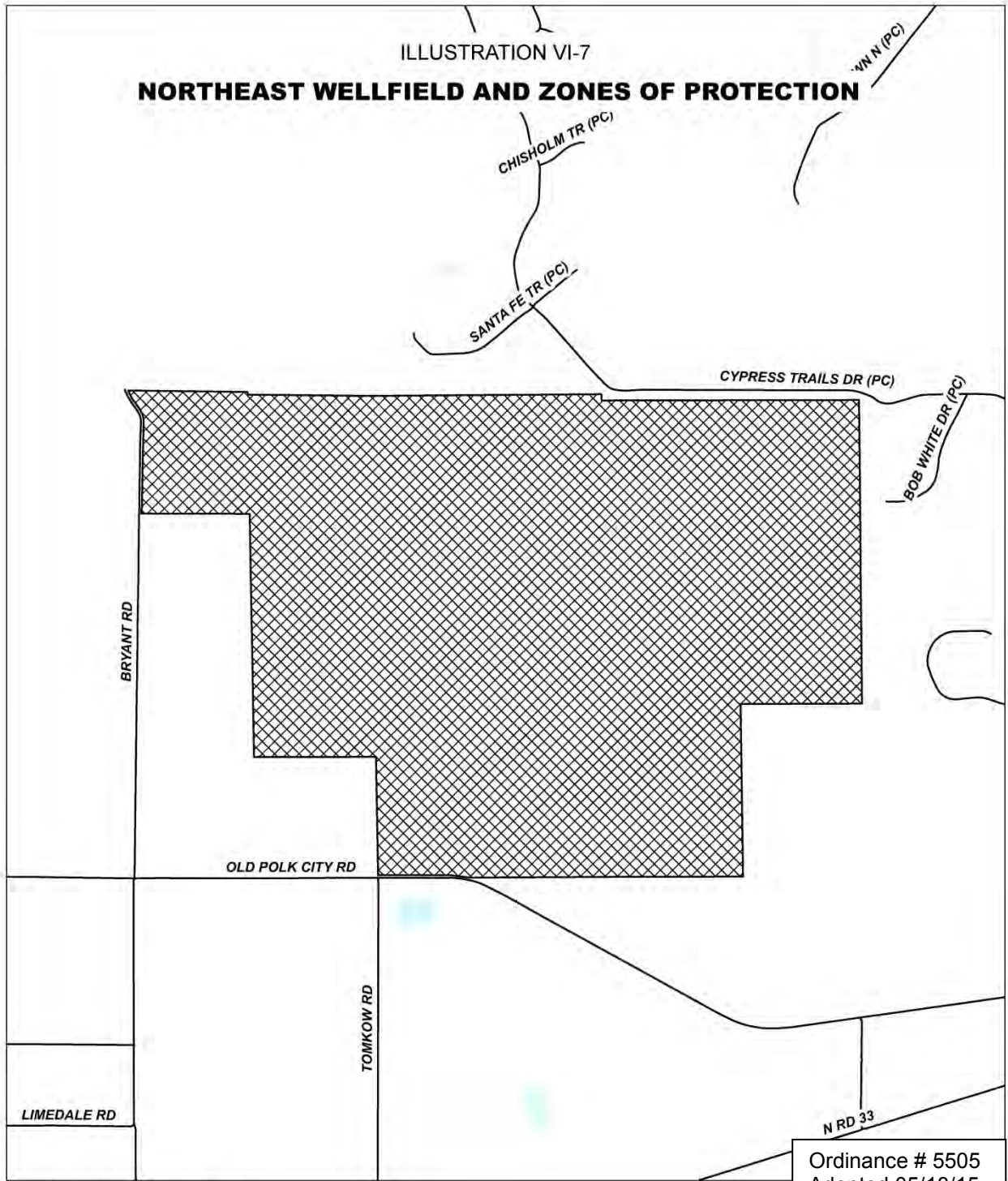
 NW Wellfield (general location)  
ZOP=500 radial feet



k:\cd\maps\sr\comp\_plan\Conservation\VI\_6 NW Wellfield.mxd

ILLUSTRATION VI-7

**NORTHEAST WELLFIELD AND ZONES OF PROTECTION**



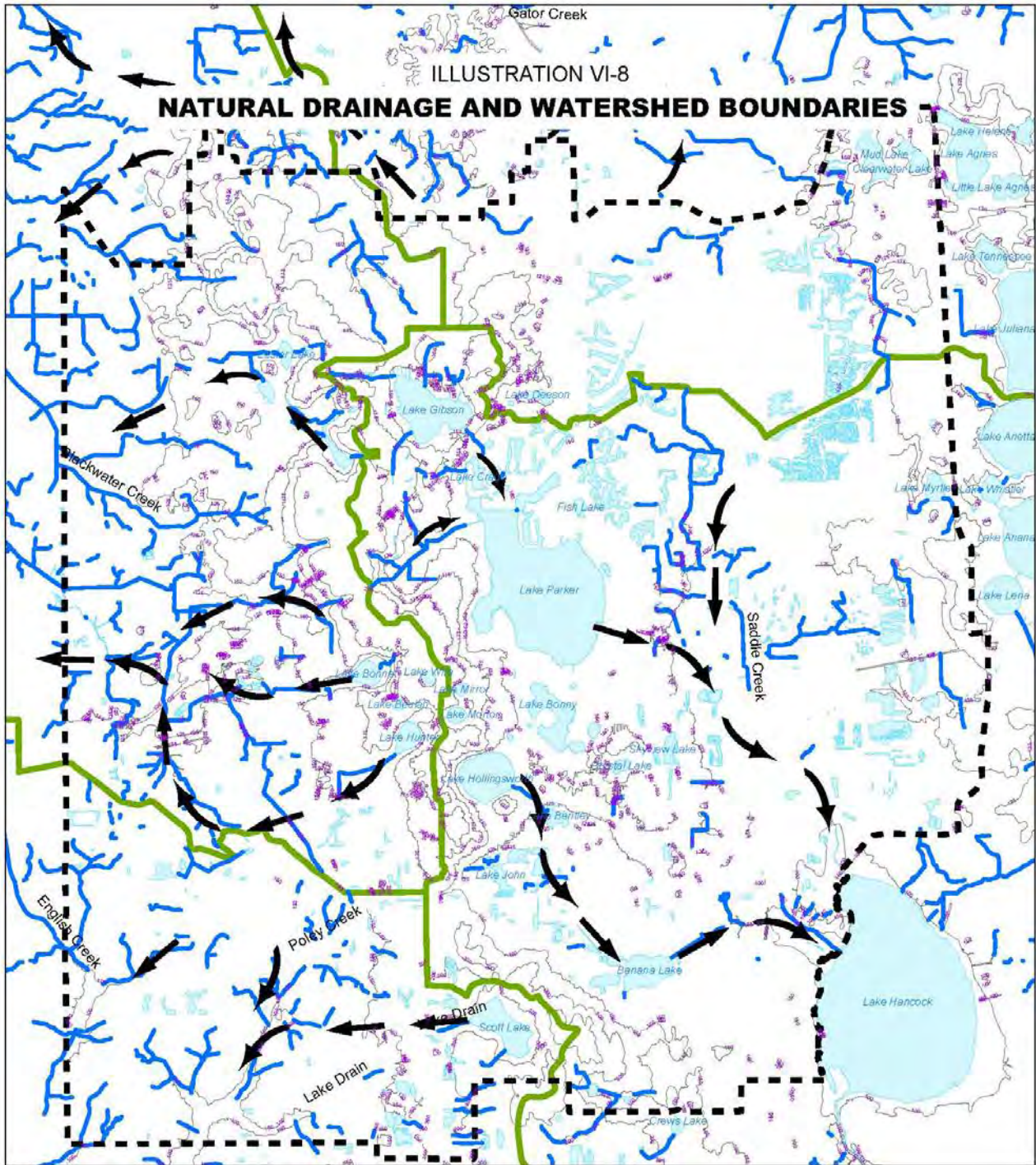
Source: City of Lakeland Water Department, 2014



NE Wellfield (general location)  
ZOP=500 radial feet







k:\cd\mapstiesri\comp\_plan\Conservation\VI- 7 NE Wellfield.mxd



Source: Florida Department of Environmental Protection, 2010



-  Elevations
-  Principal Drainage Features
-  Lakeland Planning Area
-  Watershed Boundaries



k:\ofm\ap\stsf\comp\_plant\conservation\vi-8 natural drainage and watershed.mxd

## WETLANDS

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Wetlands are unique habitats which perform valuable water cleansing and filtering functions. They also slow the flow of fast moving water and store it for slow release during periods of drought. Wetlands are environmentally important for their water function, vegetation and animal habitats and air quality roles. Illustration VI-9, Lakeland Planning Area existing Wetlands, includes the generalized location of wetlands within the planning area. In addition, the Community Development Department requires developers to identify wetlands when site plans are submitted. The Public Works Department reviews identified wetlands information as part of the overall drainage plan review. The Public Works Department also requires the developer to provide a copy of their application to the Southwest Florida Water Management District along with the site plan. This assures that the drainage and wetlands plan submitted to SWFWMD is the same as the one submitted to the City. The City's current land development regulations do not allow any commercial, industrial, or residential structures within the boundaries of a wetland deemed jurisdictional by either the FDEP, SWFWMD and/or the Army Corps of Engineers.

In the Lakeland Planning Area, wetlands tend to fall into four categories:

1. Wetlands associated with and located within a natural floodplain and riverine system; this includes the wetlands to the east along Saddle Creek southeast to Lake Hancock; wetlands in the southwest, south of the Lakeland Linder Regional Airport, associated with Poley and English Creeks; and wetlands located in the west associated with the Itchepackesassa River.
2. Wetlands associated with the Green Swamp Area of Critical State Concern to the north.
3. Wetlands surrounding surface waters/lakes, chiefly still remaining on the shores of Lake Bonnet, Lake Bonny, and Banana Lake.
4. Wetlands associated with mined lands either reclaimed or unreclaimed, including those north of Lakeland's airport and those near and north of the Tenoroc State Park area. Many isolated or "spot" wetlands are included in this category and may be considered "altered" from their natural state and function.

The City of Lakeland does not employ a wetlands specialist capable of delineating wetlands and determining their function. The City relies upon the SWFWMD and FDEP specialists to enforce State wetland regulations, including mitigation requirements. The City can generally identify if a wetland appears to be on or near a proposed development site by using the National Wetlands Inventory Map. However, it is the landowner's responsibility to obtain a site-specific survey which indicates the quality and function of a wetland and whether it is a jurisdictional wetland. As the City's land development regulations (LDRs) state, failure to identify a protected natural resource, per Article 34 of the LDRs, may result in rejection of the site plan. Land development generally shall need to cluster away from identified wetlands and flood zones. No residential, commercial, or industrial buildings are allowed in a jurisdictional wetland unless this prohibits all practical use of the property. The

City's LDRs do require a 15' buffer or setback from wetlands for new development and a 50' setback from listed, protected lakeshores.

## **FLOODPLAINS**

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When stormwater runoff exceeds the handling capacity of lakes, streams and wetlands, water then overflows onto floodplains. These floodplains are large flat areas where natural watercourses fan out to store water until rivers and streams can absorb the excess. The preservation of floodplains prevents flood damage in developed areas. Lakeland's floodplain management ordinance sets standards to minimize potential flood damage to structures, mobile homes, or septic tanks and is utilized for all construction in flood prone areas. These provisions are essential to sound land use practices that support mitigation of flood hazards as emphasized in the Local Hazard Mitigation Strategy adopted by Polk County. The City regularly reviews its various rules that apply to floodplain education, notification and management as part of its objective to improve the City's standing as relates to FEMA's flood insurance program and independent audits related to the program.

The FEMA maps were used to create Illustration VI-10, which depicts the adopted flood hazard zones. Despite more recent drainage basin data from the Water Management District, the floodplain maps cannot be changed until the official maps from FEMA are updated by the federal government. While the City of Lakeland has historically allowed some impact to floodplains due to development, such impact was to be made in accordance with regulations of the SWFWMD and/or the Florida Department of Environmental Protection as well as the City's requirement to ensure a pre-post match and no off-site impacts. In addition, the City prohibits most types of development within jurisdictional wetlands and within sites totally within a 100-year floodplain. Those prohibitions, except where they may result in a taking of private property, are retained in this Plan.

## **NATURAL GROUNDWATER AQUIFER**

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### **AQUIFER CONTAMINATION**

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Both the surficial aquifer and the deeper Floridan aquifer are used extensively for potable and irrigation water supplies. There are instances where groundwater in Florida has been contaminated by hazardous chemicals or landfill leachate. The surficial aquifer recharges the intermediate and Floridan aquifers, so there is concern that contaminated surface water could ultimately affect the Floridan aquifer which is the source of public water supplies. On a regional basis, the Floridan aquifer is also threatened by certain practices such as the procedure of recharging the Floridan aquifer with injection of sewage effluent and industrial wastes into zones below the drinking water aquifers. The opportunity exists to protect water resources through tracking contamination sources, monitoring water sources and providing protection to wellfields and well areas.

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## **POTENTIOMETRIC LEVEL**

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The potentiometric surface level of an aquifer is how high the water level rises under unconfined conditions. Surficial groundwater in Lakeland has no confining layers and is free to rise or fall with rainfall or drought conditions. The deeper Floridan aquifer, however, is subject to subsurface strata which confine the water and cause it to be under pressure. In certain areas of central Florida where the confining stratum is fractured, the aquifer rises to the potentiometric level creating a free flowing spring or artesian well. As the potentiometric level drops, these flows slow or even dry up.

The Southwest Florida Water Management District (SWFWMD) monitors potentiometric levels of the Floridan aquifer in the Lakeland area through a series of monitoring wells. Annual dry and wet season potentiometric levels vary by approximately 8 feet in the vicinity of Polk City and by 28 feet southwest of Lakeland near Medulla. As these levels fall, the Water Management District declares water restrictions in order to conserve water for future supplies, maintain hydrologic pressure against saltwater intrusion, and maintain some minimal water level in area lakes. Water conservation techniques and wastewater reuse will help mitigate the requirement for even more stringent water restrictions. Maintaining the potentiometric level will be one of several issues the City must face when and if it seeks to operate and maintain the Northeast Wellfield.

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## **OPEN SPACE**

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Illustration VI-11, Open Space, depicts areas of surface waters (named lakes) and preservation and conservation lands as designated on the City's future land use map and which are typically set aside to protect wetland, floodplain or other natural features.

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## **HAZARDOUS WASTES**

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According to estimates by Polk County Hazardous Waste Compliance Division based on 2010 data, there are 432 facilities in the Lakeland Planning Area that are classified as small quantity hazardous waste generators. A generator is classified as a small waste generator if he/she generates less than 2,200 lbs. of hazardous waste in a calendar month. Additionally, there are another 696 that may generate a waste that is regulated under the program, such as used oil, batteries, antifreeze, used oil filters, etc., but these are not considered hazardous waste when recycled. Large hazardous waste generators are subject to regulation by the FDEP, while the small waste generators are monitored on the county level.

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## **AIR QUALITY**

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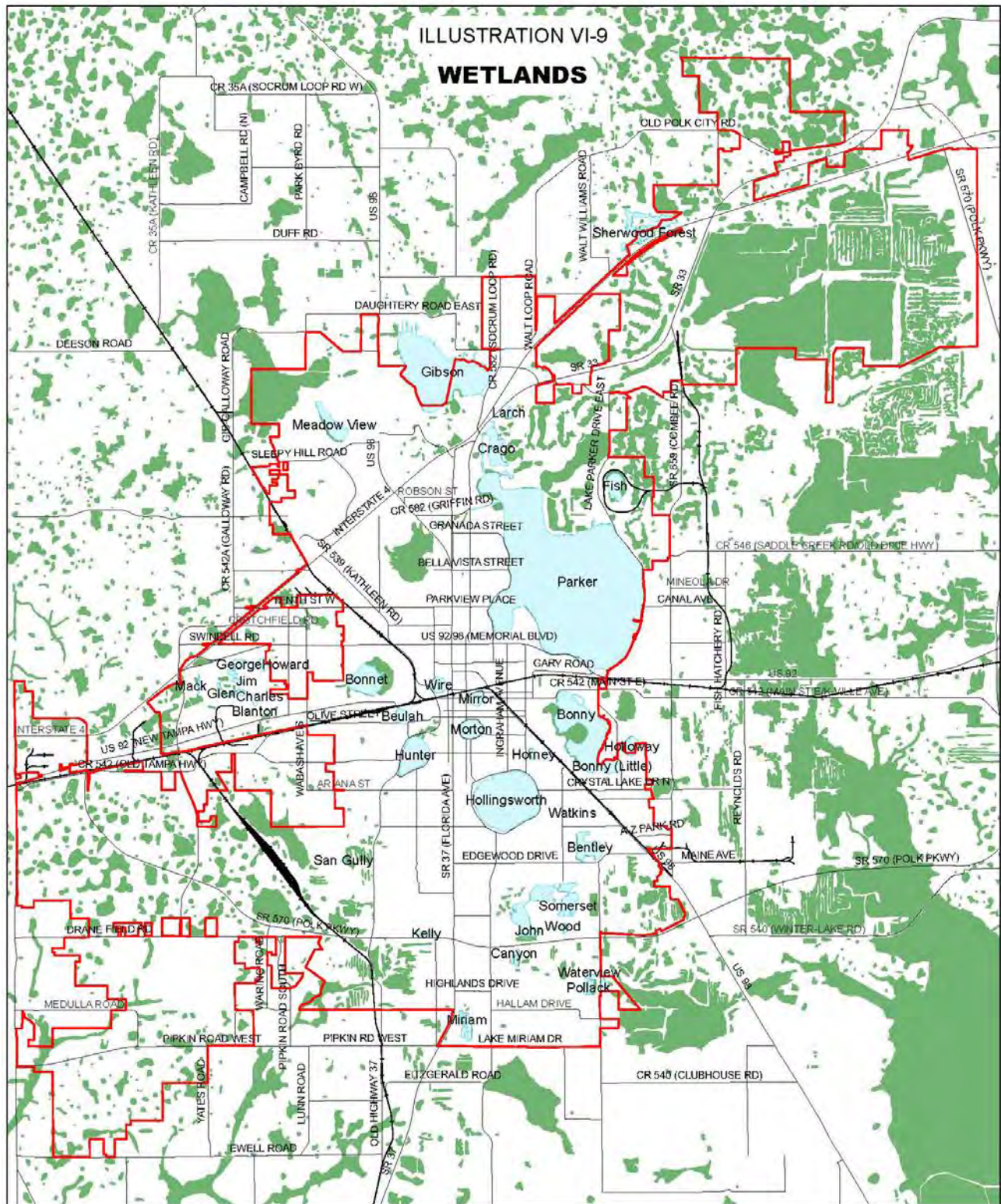
Air quality monitoring and enforcement is administered by the United States Environmental Protection Agency (EPA) under the Clean Air Act. The State of Florida lists Polk County as an air stagnation area. This indicates a potential for future pollution problems due to growth in traffic volumes and a decrease in levels of service on existing roadways.

There are two ozone and particulate (PM2.5 and PM10) monitoring stations in the Lakeland Planning Area (LPA). One is located at the Baptist Children's Home on Sikes Boulevard and the second is at Sikes Elementary School on Shepherd Road, south of Lakeland. Neither station has detected any violation of the National Ambient Air Quality standards for ozone or particulate matter. A third station located south of the LPA monitors large particulates (PM10) and sulfur dioxide. According to the Central Florida Regional Planning Council, no air quality studies have been conducted in Polk County since the 1990s.

The Lakeland Fire Department controls outdoor burning for both safety and air hazard reasons. Permits for outdoor burning are issued on a case-by-case basis. Permits are denied during air inversions and some items, such as tires and roofing materials, cannot be burned. An air inversion is generally a condition in which air temperature increases with altitude, holding surface air and pollutants down.

In the Future Land Use Element and the Transportation Element of this plan a general policy direction of focusing compact, transit-oriented and walkable development into the Central City Area is intended to inhibit urban sprawl into the rural and suburban areas. This strategy can help reduce air pollution in those areas surrounding the City's urban center. However, at the same time the City will require a continued commitment to provide ample open space and green space both in the Central City Area and out in the surrounding metro area to allow for the dissipation air pollutants related to urban activities. The continued support for the Green Belt designated along the northeast and east of the LPA is a key component of the City and County's "green infrastructure."





Source: U.S. Fish and Wildlife Service, Publication Date: January 22, 2010



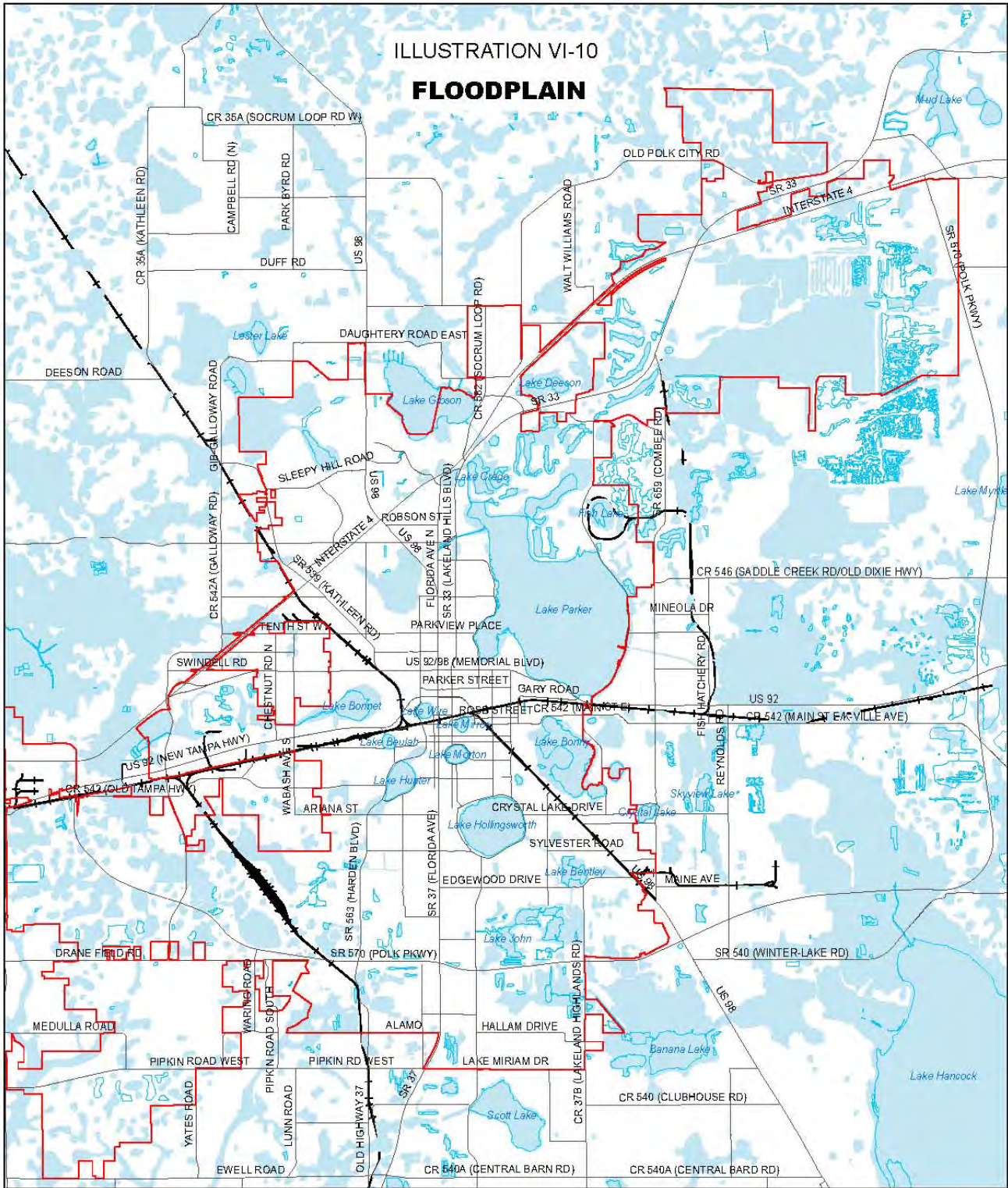
Wetlands  
 Lakeland Area Lakes



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ILLUSTRATION VI-10

**FLOODPLAIN**



Source: Adopted Flood Insurance Rate Map Information Per the Federal Emergency Management Agency (FEMA), Dec., 2000

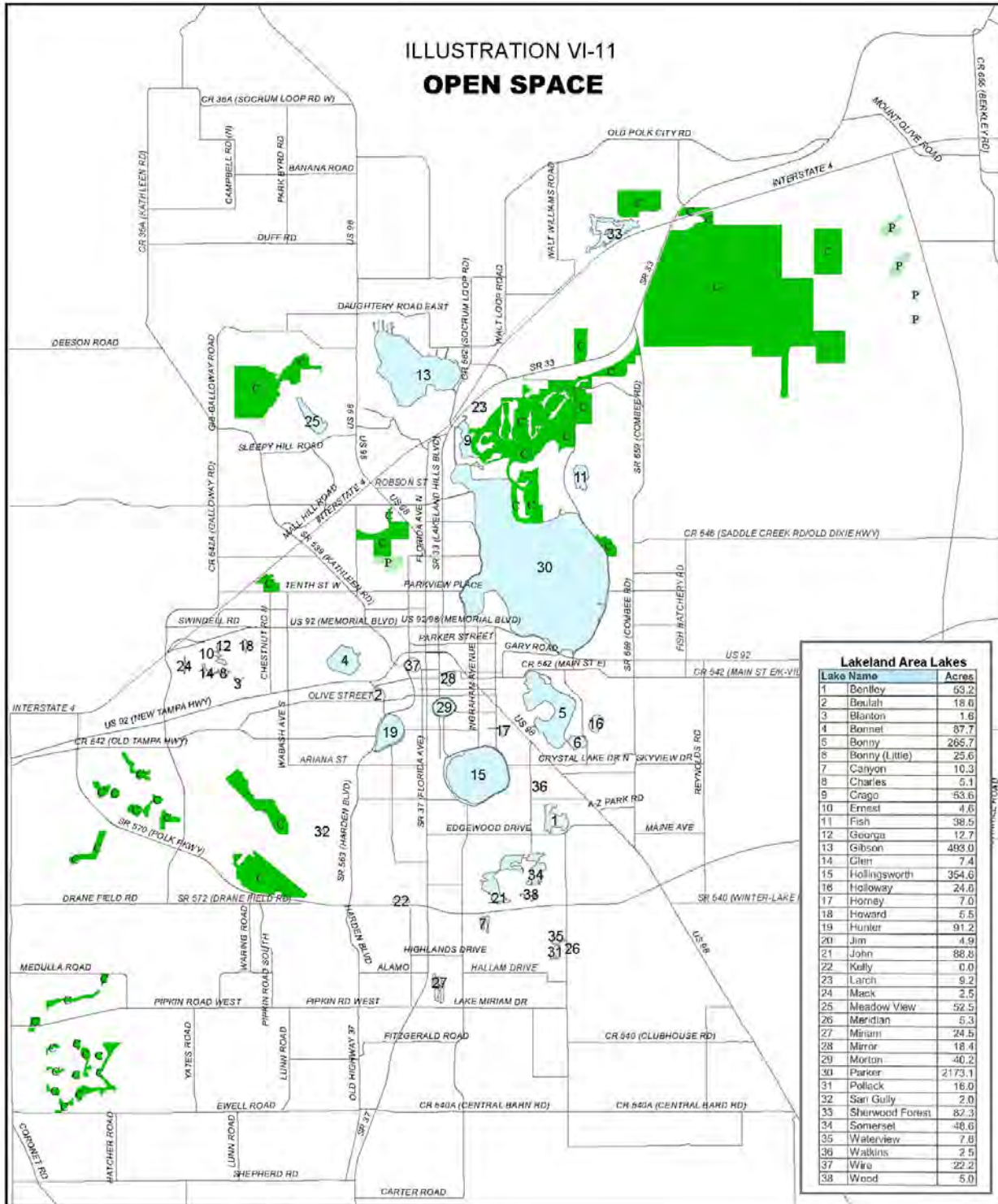


- Lakeshore/Edge
- 100-Year Floodplain



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# ILLUSTRATION VI-11 OPEN SPACE



Source: Lakeland Community Development Department, 2010



■ Conservation  
■ Preservation



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## MINERALS

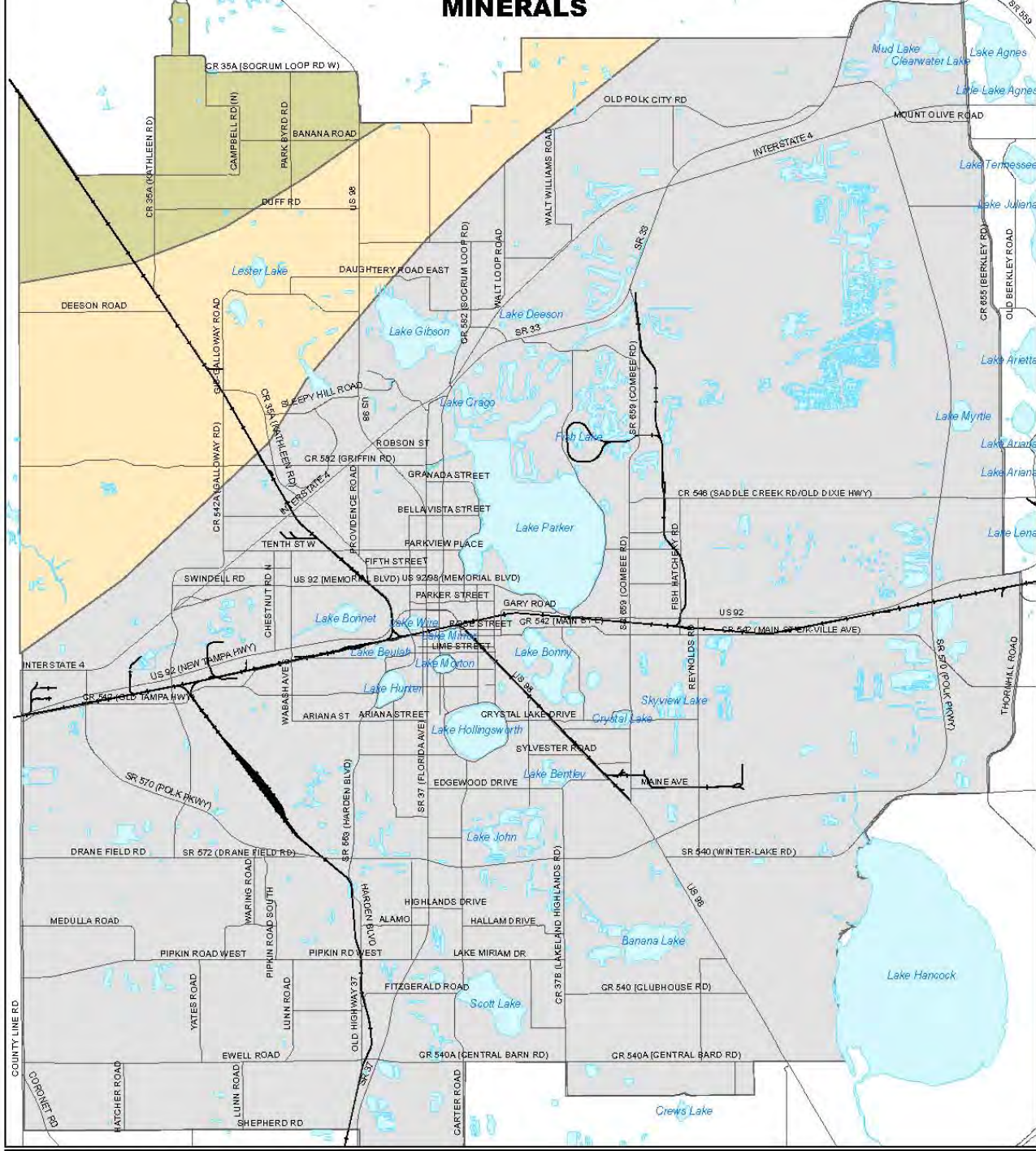
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Phosphate has historically been the only significant commercially valuable mineral in the Lakeland Planning Area. Sand, clay and limestone deposits are found in various areas of the planning area but mining has been limited. Illustration VI-12 indicates local mineral deposits.

Phosphate was discovered in central Florida in the 1920's near Fort Meade. Earliest mining was by hydraulic dredging in river channels, but today's activity concentrates on land pebble deposits. There are no active mines in the Lakeland area but hydraulic dredging has been the main means of lake restoration for removing muck and sediment build-up on lake bottoms; such a technique was used for Lake Hollingsworth.

Historically, mining has played an important role in Lakeland's and Polk County's growth. Phosphate mining no longer occurs in Lakeland or in most of Polk County north of S.R. 60. However, phosphate mining and the operation of related chemical plants produces numerous waste products, and radioactive and highly acidic soils are also present. Any uranium remaining in the overburden results in the release of radon gas. When development occurs on mined land, this gas must be taken into account and mitigation techniques applied to construction methods. The potential for radon gas on all lands, mined and unmined, has become a health concern due to test studies that indicate that radon levels in some areas may exceed prescribed limits. Education of the general public and use of relatively inexpensive mitigation measures have proven effective in addressing this problem.

# ILLUSTRATION VI-12 MINERALS



Source: Florida Geological Survey, Mineral Resources and Industries, 1970



- Limestone
- Sand, Clay and Limestone
- Phosphate



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## ENERGY CONSERVATION

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Energy is undeniably a crucial resource in terms of its availability, use and cost. House Bill 697, passed by the State legislature in 2008, requires that local government comprehensive plans consider and address energy conservation. Energy conservation involves not only the methods and technology used to generate and distribute energy, but also the way development is constructed and designed to function. It is a common thread woven throughout the comprehensive plan Future Land Use, Transportation, Infrastructure and Conservation Elements.

**Energy Production:** The City of Lakeland has been the proprietor of its own power utility company, Lakeland Electric, since 1904. Lakeland Electric is the third largest public power utility company in the state of Florida serving more than 100,000 customers. The utility serves approximately 246 square miles of which approximately 175 square miles is outside of Lakeland's city limits. Power generation consists of two main power plants, the 941-megawatt McIntosh Power Plant and the 176-megawatt Larsen Power Plant. Support facilities include multiple energy-efficient generating units capable of providing up to 50-megawatts of additional electricity when other units are out of service or during peak demand. The transmission and distribution system consists of approximately 117 miles of 69 kV transmission and 28 miles of 230 kV transmission lines in service along with six 150 MVA 2310/69 kV autotransformers.

According to the Lakeland Electric 10-Year Supply Plan, the utility served 102,568 households representing an estimated population of 252,731 residents in the Lakeland Electric service area in fiscal year 2007/08. In the same year approximately 239 million megawatts of energy was consumed by the utility's clients. It is estimated that the average household consumed 14,018 kilowatts per year. The Lakeland Electric Engineering Department estimates a total system energy loss of 4.3% based on a 4-year average. Lakeland Electric's primary fuel sources were produced from coal (52%) and natural gas (30%). The remaining energy came from diversified fuels including oil derivatives and waste heat. The 10-year supply plan projects the peak winter and summer demand to grow annually by 1.36% and 1.27%, respectively, through 2018.

Lakeland Electric actively promotes voluntary energy efficiency programs for its clients, pursues new efficient technologies and energy alternatives. Voluntary energy efficient programs are products and services available to both residents and businesses. Energy efficient services include energy audits, rebate programs for efficient commercial lighting, vending machines, residential annual HVAC maintenance, and attic insulation upgrades. Energy saving kits containing compact florescent light bulbs, weather stripping, outlet gaskets and low-flow shower heads are also distributed to residential customers who request an energy audit. To promote solar energy, the City initiated the solar hot water heating program for residential customers in 1997. The solar water heating program allows customers to benefit from solar water heating without having to purchase and maintain expensive solar equipment themselves. Lakeland Electric installs the solar paneling and

heating at no charge so long as the resident agrees to pay a fixed rate each month equal to the current cost of heating water.

Most recently, Lakeland Electric has announced that it will begin developing a smart grid in 2010 by installing meters that will allow customers to monitor and control their electrical consumption. This will allow customers to manage their usage and the rates that they pay. The smart grid's 120,000 meters are scheduled to be installed in three years and will be funded by a \$20 million Smart Grid Investment Grant awarded by the Federal Government. Further efforts to increase the use of solar power involve the negotiation of an agreement with Sun Edison of Maryland to install 24 megawatts of solar power on government and customer property over the next decade. Lakeland Electric will then buy all the power produced by those panels. The solar panels will offset an estimated 4 percent of the utility's peak summer demand.

**Energy Efficient Construction:** In addition to the new comprehensive plan requirements, a principal purpose of House Bill 697 was to require energy-efficient construction practices statewide. The legislation mandates Florida builders to cut the energy consumption of new houses by 20 percent in 2010 and by 50 percent in 2019. The law also directs the Florida Building Commission to include provisions in the 2010 edition of the Florida Energy Efficiency Code for Building Construction necessary to increase the energy performance of new buildings by at least 20 percent; this is compared to the energy efficiency provisions of the 2007 Florida Building Code adopted October 31, 2007. The 2007 Florida Building Code currently includes specific provisions for energy conservation, including minimum standards for thermal resistance (R) ratings for windows, ceilings, walls, floors and ductwork.

Coincidentally, Lakeland was acknowledged in 2009 for its energy savings by the U.S. Environmental Protection Agency (EPA) as a result of having the seventh most Energy Star labeled commercial buildings in the country. With 120 buildings certified by the EPA as being built to use approximately one-third less energy than conventionally constructed buildings, Lakeland was ranked higher than many major U.S. cities such as Atlanta, New York and Portland, Oregon and was the only city in Florida within the top ten.

As of 2010, energy use in commercial buildings accounts for 17 percent of U.S. greenhouse gas emissions at a cost of more than \$100 billion per year. According to the EPA, commercial buildings include schools, hospitals, office buildings, retail stores and supermarkets. The EPA estimates that Lakeland's Energy Star-labeled commercial buildings cumulatively accounted for 11.5 million square feet of commercial construction and prevented emissions of 6,300 metric tons of green house gas per year while saving \$8.3 million annually in lower energy bills.

**Energy Efficient Development:** While carefully planned growth may result in many benefits to a community, uncontrolled expansion into suburban and rural areas often leads to a development pattern that increases energy usage and housing costs, forces a greater

reliance on the automobile, weakens the community identity, diminishes farmland and open space, and adds burdensome infrastructure costs.

Sustainable development practices are the most feasible method for achieving long-term energy conservation. To achieve sustainability, a community must plan for the future while responding to the present. The relationship between energy conservation and land use makes careful consideration of energy-related issues a key component of the comprehensive plan. Like the “chicken and egg” analogy they are mutually dependent on one another. While the accessibility and cost of energy has a significant impact on development, local land use patterns and growth trends also significantly impact energy usage.

## **ENERGY CONSERVATION AREAS**

House Bill 697 requires local governments to map “energy conservation areas” in the Conservation Element. While this new term remains somewhat vague it is generally understood to be an area determined by the local government to need retrofitting or redevelopment of existing land use patterns and transportation systems to increase energy conservation through energy efficient land use patterns.

Planning Division staff conducted a assessment of both the City’s existing and planned development and transportation network in terms of professional planning best practices to determine where the highest potential for energy conservation is in the City. The assessment utilized the following criteria:

### **1. Mixed Used Development**

The location of offices, residences, stores, restaurants, schools, parks and jobs within close proximity reduces reliance on the automobile and promotes alternative modes of travel. Such mixed use development allows for greater mobility by non-drivers, such as the young and the elderly and greater accessibility to support bus transit and other forms of mass transit. Mixed-use development can also provide a variety of housing choices for a range of age groups, family types and income levels that make up diverse and vibrant communities. Examples of mixed use development are the Downtown Munn Park District, Lakeside Village, the future Williams DRI and FPU campus.



Lakeside Village – Mixed Use

### **2. Infill and Redevelopment**

Revitalizing and invigorating the central city is one of the most sensible growth strategies that can be implemented. A successful downtown should offer an attractive pedestrian environment, including a mix of uses that is mutually beneficial and generates activity throughout the day and into the evening. To some extent, the central city faces competition with the suburban area for office and retail space, housing,



entertainment and recreation. Revitalization efforts seek to maximize the use of available properties in the urban area, resulting in more productive use of strategically located centers and corridors to reduce the need to convert vacant lands into suburbs. However, a healthy center city and suburbs should not be mutually exclusive. In fact, a strong central city should have a positive effect on the whole region. By combining a mixture of uses, higher densities, efficient use of existing infrastructure, and multimodal transportation opportunities, the central city will play an important role in reducing per capita energy consumption.

### 3. Compact Development and Clustering

Compact development and clustering in a community can significantly impact energy usage. While the fundamental concepts of compact development and clustering are similar, they are not interchangeable. Clustering is the grouping together of structures and infrastructures on a portion of a development site to set aside land to be used for recreation, common open space, or preserve historic or environmentally sensitive features. A compact development is one that is built at the optimal density and does not necessarily include the provision of open space. The definition of compact development is context dependent. In rural areas, achieving higher density may mean shrinking large lots slightly to accommodate more housing. In suburban areas seeking to maximize land use through small-lot single-family homes, higher density housing could range from 6 to 10 units per acre. In urban infill areas, higher density may mean developing in a manner that reflects the same or slightly higher density of surrounding development. Compact development concepts may be implemented in cluster projects to maximize buildable area and ensure the adequate provision of open space. The Oakbridge DRI, Williams DRI and FPU campus have significant elements of both compact development and cluster in their designs.

### 4. Maximum Utilization of Infrastructure

An energy efficient community is one that maximizes the use of public and private infrastructure. Every new building in a community carries an associated cost for supporting public infrastructure – roads and sidewalks for access, water and sewer lines, solid waste disposal, mass transit, fire protection and emergency medical services. Sensible development practices encourage people to live where these public services already exist or where extensions have been planned and budgeted, rather than extending beyond the edge of an established area and creating inefficiencies and/or new demand. Because development that occurs beyond existing service areas requires considerable energy use in the form of construction and extension of infrastructure, provision of emergency services in outlying areas, and increased trip distances for new residents, the potential energy savings associated with encouraging growth in already developed areas can be substantial.

### 5. Connectivity

Shortening the length of vehicle trips will reduce gas consumption. The energy required for travel between two points is largely dependent upon the length of the route and the mode chosen to travel. Providing a network of fully connected streets allows the use of

shorter and more direct routes. Whenever possible, designs for new developments should include multi-modal connections and facilities (i.e., streets, bikeways, transit and sidewalks) to allow for mode choice. Connections should be added between existing developments. When compared to a conventional suburban network of cul-de-sacs and collector streets that force all traffic to arterials, a grid street pattern can reduce vehicle miles traveled (VMT). As shown in the above diagram, travel in a development with poor connectivity requires the use of a collector street, causing traffic congestion and discouraging pedestrians and cyclists, while travel in a development with an interconnected street system allows a variety of transportation options and can result in shorter trips. Even in a design that includes a combination of cul-de-sacs and through streets, vehicle trips are still more direct than in developments with single access points. The Central City Area, Oakbridge DRI, Williams DRI, and FPU campus all have relatively high levels of connectivity.



Connected vs. disconnected road networks

## 6. Multi-modalism

In recent years multi-modal transportation has been reintroduced in communities across the country. Realizing that designing only for automobile travel at the expense of other transportation modes is costly in numerous ways – excess energy consumption, pollution, immobilizing persons who cannot drive and loss of a sense of community – the City has encouraged new development to include safe pedestrian and bicycle travel in their plans with amenities such as bike racks required through the City’s LDRs. In some cases developers are encouraged or required to include transit-oriented development in appropriate areas as well. The Central City Area, Oakbridge DRI, Williams DRI, and FPU campus have existing or planned alternative modes of transportation incorporated into their development pattern.

## 7. Green Infrastructure

According to the U.S. Environmental Protection Agency, green infrastructure is “an adaptable term used to describe an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services.”

In context of Lakeland, there are significant urban tree canopies and urban open spaces to be considered. Trees and other vegetation block solar radiation, provide shade and help reduce ambient air temperatures through evapotranspiration – the process that occurs when water absorbed by vegetation



Downtown Munn Park

evaporates from leaves and surrounding soil and naturally cools the surrounding air. Trees are a “low tech” solution to energy conservation and can save energy by:

- Reducing the need for air conditioning through shade;
- Breaking the force of winter winds and lowering heat costs;
- Serving as a renewable source of fuel;
- Reducing air temperatures through evapotranspiration;
- Sequestering, or “locking up” carbon, an element that is a key factor in atmospheric pollution and the threat of global warming; and
- Landscaping with trees to decrease lawn space and reduce areas that need to be mowed using power mowers.

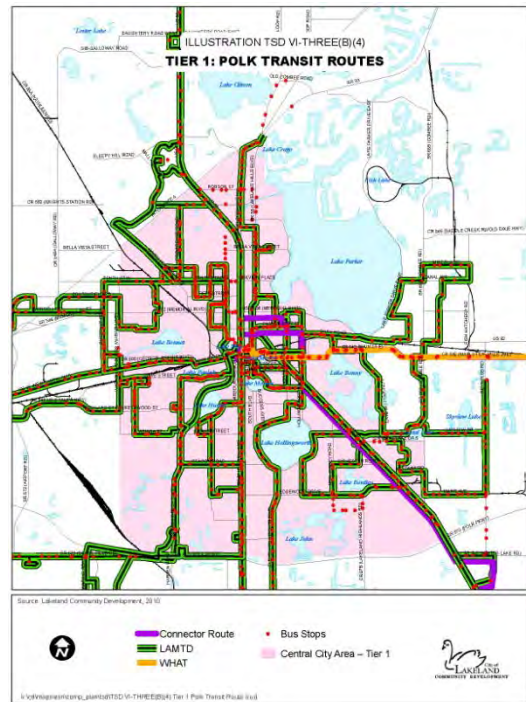
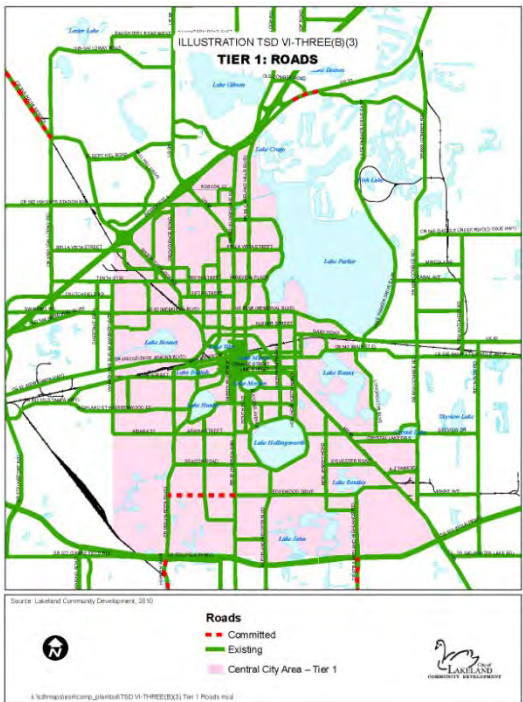
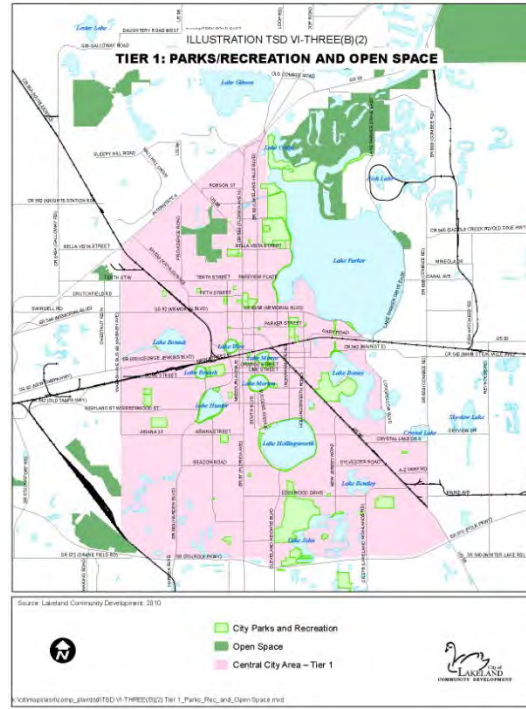
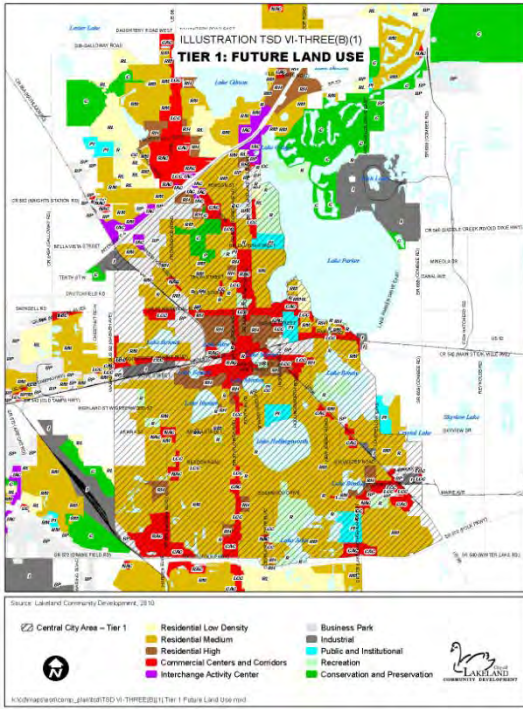
While individual building sites often include landscaping, open spaces are unimproved parcels or areas of land or water that are set aside, dedicated, designated, or reserved for various reasons. Those reasons may include resource protection, public or private use as active or passive recreation areas that offer opportunities for preserving existing vegetation and introducing additional trees into an area, and/or creating a green urban gathering space. Open spaces may also include greenways that link a number of destinations in a continuous corridor. A greenway can be a simple path surrounded by just enough natural vegetation to mask the sights and sounds of the city, or it can include a multi-use path to connect to larger open spaces such as a park or lake. The Central City Area, Oakbridge DRI, Williams DRI, and FPU campus have significant existing and planned green infrastructure and the City has a designated Bicycle/Greenway Network.

While characteristics of all 7 criteria can be found throughout the City, the assessment concluded with the identification of a primary (Tier One) and secondary energy conservation area (Tier Two) as depicted in Illustration VI-13. The Central City has been designated as the primary energy conservation area as result of all seven criteria being found within it. The Central City includes Downtown, Midtown, the historic districts, the master planned Lakeside Village, as well as the greater Oakbridge DRI area, and the surrounding urban neighborhoods. The secondary energy conservation area consists of the approved Williams DRI, and FPU campus. While this area is not yet developed, the Williams DRI development order and the FPU campus agreement both incorporate master plans that include varying degrees of each of the seven criteria within the developments themselves. Illustrations

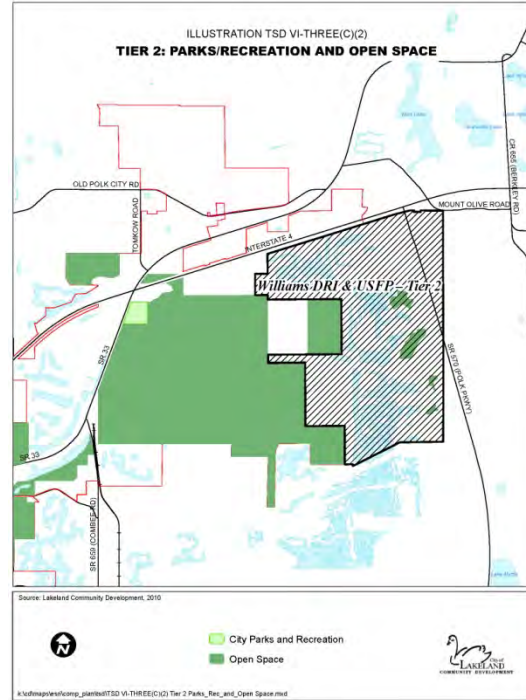
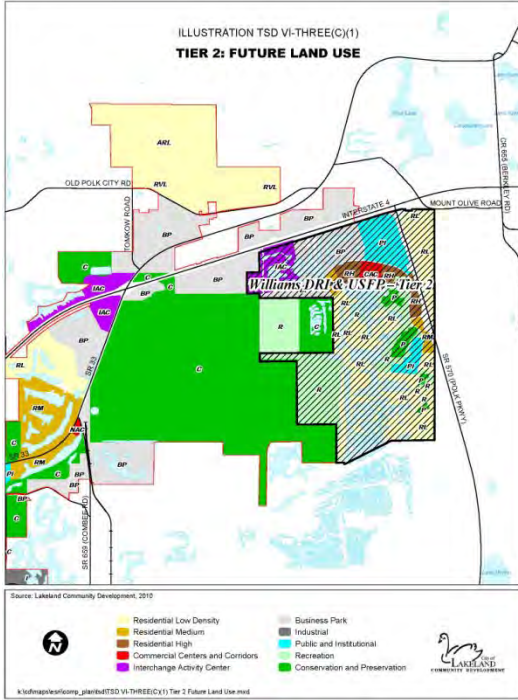
VI-14(A) and VI-14(B) include small representations of Energy Conservation Area Analysis maps for Tier 1 and Tier 2; full page versions of these maps may be found in the Conservation Element section of the *Technical Support Document*.



# ILLUSTRATION VI-14A ENERGY CONSERVATION AREA ANALYSIS TIER 1



# ILLUSTRATION VI-14B ENERGY CONSERVATION AREA ANALYSIS TIER 2



## ISSUES AND OPPORTUNITIES

There are several issues which must be considered in ensuring the conservation, protection, management and restoration of natural resources. Among the key issues to be considered are:

1. Declining natural resource availability due to land consumption;
2. Coordination between public and private entities to maintain, enhance, and conserve the area's natural resources;
3. Development of a "conservation greenbelt" to serve as a conservation and preservation corridor;
4. Site location for disposal of future potential lake dredge; and
5. The identification of energy conservation areas to promote an efficient and sustainable development pattern.

## RESOURCE AVAILABILITY AND PROTECTION

A major issue to be addressed when outlining the City's conservation efforts is declining natural resources due to land consumption. As the City consumes more land for development, natural amenities decrease. Habitat crucial to the survival of many native plant and animal species becomes scarce, often forcing relocation or extinction. With increasing development activity consuming vast amounts of land, acquisition of available land to set aside for conservation purposes becomes increasingly important. In addition, acquisition of unique natural areas should be given consideration before development precludes the possibility of acquisition. The data presented in this element, i.e. illustrations of wetland, floodplain, vegetation and soil resources, and species occurrences, are generalized. These do not substitute for site-specific surveys to identify plant and animal species when the size, diversity, and/or past siting on the property warrant such a survey.

Maintenance, preservation and enhancement of the area's natural resources is an important long range planning concern. Use and enjoyment of these resources is an integral part of the regional system. If local natural resources are allowed to deteriorate, the quality of the entire regional system is reduced. Management and enhancement of the City's lakes must continue as per the City's 20-year *Lakes Management Plan*. The *Lakes Management Plan* can offer guidelines when lake-associated proposals are forthcoming such as personal watercraft or other boating activities, swimming areas, wildlife protection areas, etc.

Conserving and protecting the natural resources and functions of Lakeland's lakes, including lake shorelines, water quality of the lakes, wetlands, and associated wildlife resources has been a continuing goal of the City's park land acquisition and development plans. This includes purchase of the property located on the west side of Lake Bonny for preservation of shoreline wetlands and a natural habitat walkway as well as more active recreational amenities further away from the shoreline. Another site located in west Lakeland near the Polk County Parkway has been designated as a conservation area on the Future Land Use Map due to existing wetland features of the site; the site is

undeveloped but targeted for future passive and possibly active recreational purposes. Additionally, a potential acquisition site is located east of Lake Bonnet. A portion of the property includes an existing bird rookery, i.e. nesting colony, which has been documented by the Fish and Wildlife Conservation Commission. Thus, opportunities exist for pursuing park land acquisitions or designating conservation lands to preserve local lakes and their associated natural resources, allowing both resource protection and recreational opportunities for City residents.

## **COORDINATION BETWEEN PUBLIC AND PRIVATE AGENCIES**

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Since ecosystems do not stop at jurisdictional boundaries there is a need to coordinate with other entities to protect regional resources. For example, the City can and does coordinate with the Polk County Environmental Lands Program and the Fish and Wildlife Conservation Commission regarding potential land acquisitions. A continued coordinated effort between public and private agencies will help ensure the appropriate use, conservation and protection of the area's natural resources. Education in the importance of protecting natural resources and natural systems is also crucial to an effective conservation program. Every effort should be made to ensure that people no longer view conservation measures as an inconvenience, but look at these measures as a way to provide a high quality, livable environment for generations to come. In fact, the most recent land development and land planning trend, known as New Urbanism, promotes a “traditional town” of mixed uses and open spaces, and emphasizes the natural environment as an amenity which, if properly conserved, can enhance the value and attraction of a property.

## **DEVELOPMENT OF A CONSERVATION GREENBELT**

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Lakeland's coordination for land acquisitions has focused upon preserving the greenbelt proposed in the Lakeland Recreation and Open Space Element (shown in Illustration VI-15), located east of Lakeland's historical city limits. A key purpose of the proposed Greenbelt is to preserve large, contiguous tracts of land with natural resources important to wildlife. These tracts, if linked, can provide a corridor of streams, forests, floodplains and wetlands that link to the Green Swamp through Saddle Creek and Lake Hancock to the Peace River to the south. Another area of public landownership is located adjacent to the Alafia River and could link to a County greenway system further south, in the phosphate mined/power plant area. Several tracts of publicly owned land within the proposed greenbelt corridor are managed to meet specific needs of the land owners. The Fish and Wildlife Conservation Commission manages the Tenoroc Reserve and Cyanamid/Saddle Creek tracts for recreation purposes and to allow experimentation with different public fishing strategies. Polk County manages Saddle Creek and Carter Regional Parks as regional recreation facilities, while the City of Lakeland manages the Northeast Wellfield as a public raw water source (although a large portion of the wellfield may be purchased by the State and/or County for preservation).

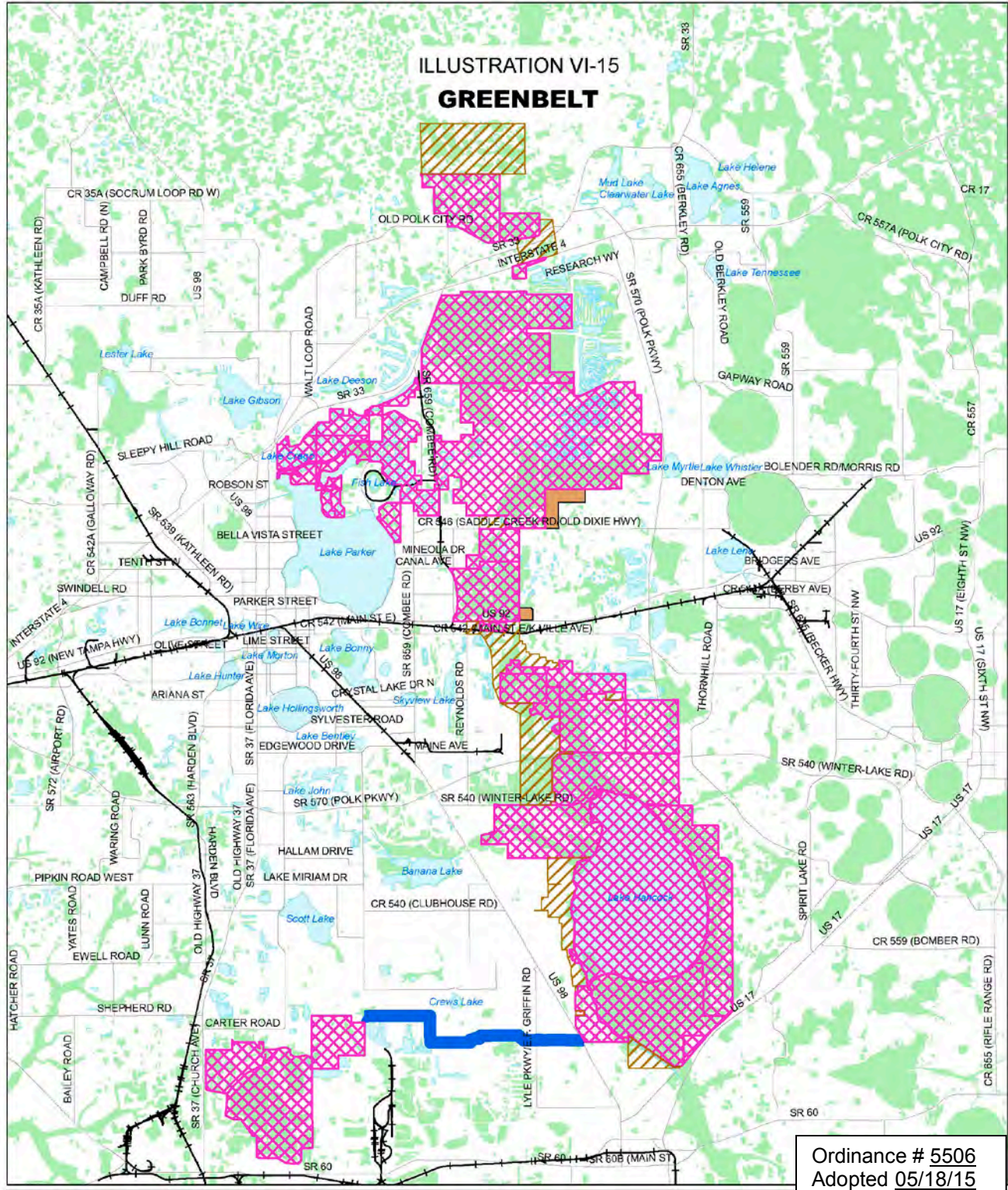
Of a potential 31,000 acres of greenbelt, 26,378 acres (85%) are already in public ownership. Much of the privately held lands have severe development limitations such as



State jurisdictional wetlands or unreclaimed mined lands. It's been estimated that 70% of the greenbelt lands are unavailable for development. Under these circumstances, it would be beneficial for Polk County, the State of Florida, and the City of Lakeland to continue to pursue a comprehensive greenbelt land acquisition and management plan.

The areas where development threatens to sever this corridor include those located near I-4 and those located near U.S. 92 East and U.S. 98 South. Future open space, conservation or preservation efforts should concentrate on these areas specifically and the greenbelt corridor generally in order to establish the benefits to be derived from a continuous greenbelt. These benefits include water conveyance, storage, recharge and purification, vegetation and wildlife habitats, air quality and cooling benefits and varied recreational opportunities. Another benefit of a greenbelt is the positive influence on land values resulting from the proximity of an open space amenity.

# ILLUSTRATION VI-15 GREENBELT



Ordinance # 5506  
Adopted 05/18/15

Source: Lakeland Community Development Department, 2014



-  Existing
-  Proposed Acquisition
-  Proposed County
-  Wetlands
-  Proposed Lakeland Highlands Trail Corridor



k:\cd\maps\sri\comp\_plan\Conservation\VI-15 Greenbelt.mxd

## DREDGE DISPOSAL

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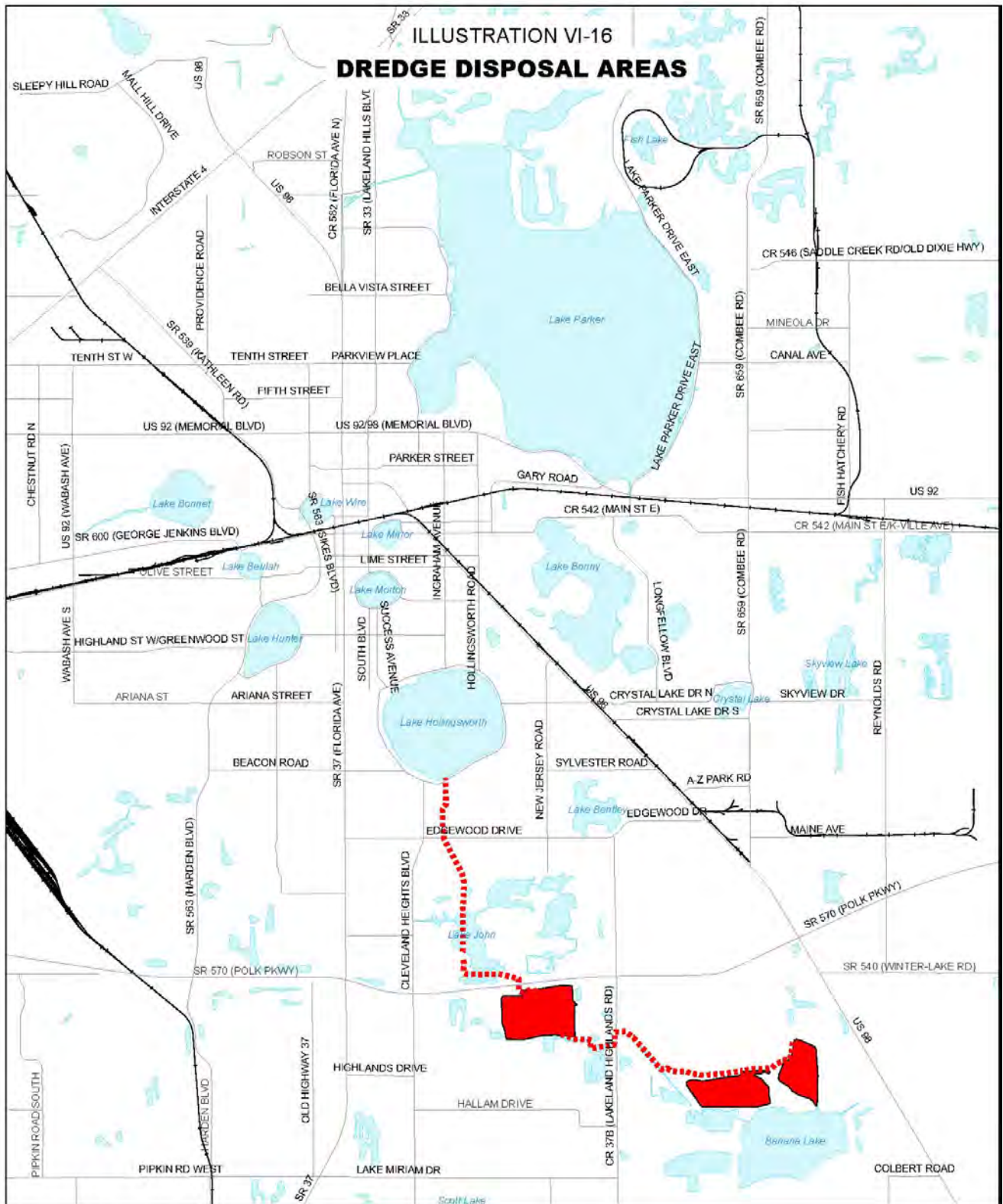
When Lakeland initiated the dredging of Lake Hollingsworth, a dredge disposal site was necessary to dispose of the muck pumped from the lake. The initial dredge disposal site was located east of Cleveland Heights Boulevard, near Peterson Park. The City extended a line to a secondary site located outside City limits to dispose of additional muck from the lake when the site inside the City could no longer accommodate the volume of material pumped. The secondary City site is located east of Lakeland Highlands Road, as shown in illustration VI-16.

Two potential future dredge sites focus on dredging/lake clean-up of:

- Lake Parker and an associated canal from Lake Parker into Lake Crago and possibly into Lake Bonny; and
- Lake Bonnet and/or downtown lakes such as Lake Morton, Lake Wire and Lake Mirror, all of which are surrounded by urban development.

For the Lake Parker area dredging, the Lakes Management staff identified a potential dredge disposal site, approximately 100 acres, located along the north shore of Lake Parker. For dredging of Lake Bonnet and/or downtown lakes, a potential dredge disposal site is located east of Lake Bonnet on property formerly sought for what had been known as the “Central City” Park. These sites will need to be reevaluated as projects are developed as they no longer may be available or determined to be the highest and best use of the property.

The availability of funding sources for future dredging will be the primary determinant of whether or not dredging is possible. The dredging project for Lake Hollingsworth involved an expenditure of millions of dollars. In addition, timing and coordination between the lakes management program and the landowners and/or future users of disposal sites will be crucial to the feasibility of using these sites for dredge disposal. Feasibility for dredge disposal on a given site depends in part upon the time it takes for the muck to dry versus when the site is scheduled to be developed (as a park or other land use). Whether or not the dried muck surface is an appropriate soil surface to develop over in an economical manner is another issue. These issues would need to be resolved prior to final determination of whether lake dredge materials could be deposited upon a given site. Costs for disposal, including the cost of transporting or pumping the muck to a site, is a significant consideration for site selection. In addition, future site selection should be liberal in terms of estimated land area needed for the volume of muck material to be dried at the disposal site. Finally, selection of disposal sites must consider protection of natural resources including the issue of water quality of run-off from the site.



Source: Lakeland Community Development, 2010



Sites formerly used for Dredge Disposal



Pipeline Route



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## ENERGY CONSERVATION AREAS

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As a result of the passing of House Bill 697 in 2008, local governments are required by law to consider and address how their comprehensive plans affect energy conservation. This includes both the methods and technology used to generate and distribute energy (i.e.: conventional electric power generation vs. innovative renewable energy) and the way new development is designed to function and be physically constructed. Related issues are discussed to certain extent in the Future Land Use Element, Transportation Element, and Housing Element as well pursuant to Chapter 163 of the Florida Statutes.

Of primary concern to the energy conservation legislation is the identification of energy efficient land use patterns within a local government's jurisdiction, also referred to as Energy Conservation Areas. The Florida Department of Community Affairs (DCA) is currently in the process of rulemaking for the implementation of this legislation and does not anticipate adopting any rules until late 2010 or early 2011. Despite the lack of official implementation procedures, the Florida DCA is encouraging local governments to initiate energy conservation policy. To determine what is "efficient" and where such areas exist in Lakeland, the Community Development Long Range Planning staff conducted an analysis based on the limited guidance that has thus far been provided by the Florida DCA as well as planning best practices implement by other local governments. The findings of the analysis and the Energy Conservation Areas boundary map (Illustration VI-13) can be found in the Summary of Findings of this Element.

## GOAL, OBJECTIVES & POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to conservation issues. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the measurable and attainable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Conservation Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this plan and with the goals and policies of the *Central Florida Comprehensive Regional Policy Plan*.

**GOAL:**       **Conserve, restore and manage natural resources in order to preserve and enhance their quality for future use.**

**Objective 1:**    Ensure the conservation and appropriate use of minerals, soils and native vegetative communities through the continued enforcement of City land development regulations and development (site) plan reviews.

**Policy.1A:**     Mineral extraction within the City of Lakeland will be allowed only as a means to improve a natural resource.

**Policy.1B:**     The City of Lakeland will continue to protect soil disturbed during the development process through regulations of the Water Management District and the Department of Environmental Protection. Best management practices for limiting soil erosion shall be required for new development or redevelopment. (As per LDRs, Article 34 "Soil Erosion Control.")

**Policy.1C:**     The City of Lakeland will continue to enforce, as established within City land development regulations, those specific standards, procedures and criteria necessary for the conservation, appropriate use and preservation of identified vegetative communities.

**Policy.1D:**     The City of Lakeland will continue to coordinate with the local schools for the development of demonstration areas to be used in the instruction of conservation of water, soil, and vegetative resources.

**Policy.1E:**     Lakeland will support continued shared use of facilities between the City and the School Board, where such may assist public education regarding the environment.

**Policy 1E:** The City of Lakeland will continue to require site plan submittals to include vegetative surveys for proposed development sites upon the request of the City.

**Policy 1G:** Land development regulations have been adopted by the City of Lakeland which include specific land use controls for protected habitat areas. Protection of habitat which supports listed species shall utilize management programs including buffer zones, setbacks, conservation easements, set aside areas, and physical protection devices to prevent disturbance of the listed species.

**Policy 1H:** If development is proposed in an area where municipal wastewater is not available a permit for a septic tank must be obtained from the Polk County Health Department. Soil suitability, including sufficient permeability to accommodate a septic system, and adequate depth to the seasonal high water table shall be verified prior to issuance of any permit for a septic tank system, per requirements of Chapter 64E-6, F.A.C.

**Objective 2:** Continue to conserve and protect the quality and quantity of water resources, including area lakes. Support the Local Hazard Mitigation Strategy of Polk County by minimizing or mitigating flood hazard in future development proposals.

**Policy 2A:** The City of Lakeland will continue to support ongoing programs for the conservation and protection of water resources, including use of the inverted rate structure, xeriscaping at all City buildings and parks, the leak detection program, effluent reuse, and water conservation education efforts.

**Policy 2B:** Water conservation measures have been implemented to reduce domestic per capita water consumption to a target of 120 gpd by 2015 and 110 gpd by 2020 utilizing “SWUCA” methodology for calculating the per capita figure.

**Policy 2C:** The City of Lakeland will continue to implement a program to conserve water through the re-use of wastewater effluent as cool down water for the McIntosh power plant complex.

**Policy 2D:** The City shall adopt Florida-friendly landscape regulations that at minimum are consistent with Polk County standards; the city shall consider including a maximum of allowable site area for the planting of species that are less water efficient.

**Policy 2E:** The City of Lakeland land development regulations will continue to protect wellfields and aquifer recharge areas from potential contamination by development. The land development regulations will continue to prohibit within the designated zones of protection the location of landfills, wastewater facilities, and facilities for the storage, handling, or processing of petroleum products, agricultural chemicals, hazardous waste, toxic waste, medical waste, or other uses which could contaminate wellfields or aquifer recharge areas.

**Policy 2F:** The City of Lakeland's lakes management program will pursue water quality goals for area lakes in accordance with the 20-year Comprehensive Lakes Management Plan.

**Policy 2G:** The City of Lakeland's management plan for area lakes will include support of water quality goals and programs for all lakes within the Lakeland Planning Area.

**Policy 2H:** By 2015, the City of Lakeland will consider adoption of low impact development standards and/or incentives in its LDRs in order to emphasize conservation and use of natural features of a site to maximize stormwater filtration. These standards may include, but are not limited to, reduction of impervious areas, use of permeable surface treatments, use of bioswales, rainwater harvesting via rain barrels and cisterns, and “green” or vegetated roofs.

**Policy 2I:** City of Lakeland land development regulations will continue to include specific standards, criteria and land use controls necessary for the protection and conservation of the natural function of floodplains. These regulations will continue to require development in the FEMA 100-year flood hazard zone to be constructed so that the lowest floor elevation is at least one foot above the base flood elevation as established by the FEMA Flood Insurance Rate Maps.

**Policy 2J:** (a) Dredging and filling of lands within floodplains will be restricted so as to preserve the natural function of the 100-year floodplain. All proposed development or redevelopment shall be located primarily on the non-floodplain portion of the site and the City shall use gross density provisions given in the Future Land Use Element to encourage development or redevelopment to be clustered on the upland portion(s) of the property. The developer shall provide the City a copy of proposed and final amendments to the FEMA designated floodplain areas (i.e., Letters of Map Amendment or Letters of Map Revision).

- a. For proposed development or redevelopment areas that lie within the 100-year floodplain, residential structures shall be required to be elevated and non-residential structures shall be required to be either elevated or flood proofed. Elevations shall be at least 1 foot above the BFE.
- b. Floodplain dredge and fill activity shall require adequate compensation for stormwater management in accordance with City engineering standards and applicable standards of the Southwest Florida Water Management District and the Florida Department of Environmental Protection.
- c. No development activity shall be allowed that will raise the 100-year base flood elevation.
- d. No hazardous materials or waste shall be stored within the 100-year floodplain.
- e. Development of property that is entirely within the 100-year floodplain shall be prohibited except where such would result in a “taking” of private property or where such has been permitted by the SWFWMD or FDEP.



- f. Within the Green Swamp Area of Critical State Concern, no new lots shall be created which are entirely within a 100-year floodplain area unless such would result in a taking of private property. In the remainder of the City, lots within the 100 year floodplain shall be discouraged through provisions which allow clustering of lots on the upland portion of a site and reduced lot sizes.

**Policy.2K:** City of Lakeland land development regulations will continue to include strict performance standards, criteria, mitigation procedures and land use controls necessary to protect and conserve area wetlands. These regulations shall require the following:

1. Site plans for new or re-development will, at a minimum, identify the location, condition, extent and function of impacted wetlands on the property, including any jurisdictional wetlands;
2. Site plans will provide measures to ensure that normal flows and quality of water as well as the natural hydroperiod will be protected to maintain wetlands after development occurs; and,
3. New development shall be generally clustered away from wetland areas. No commercial, industrial, or residential buildings are allowed within the boundaries of a jurisdictional wetland. However, where alteration of wetlands is necessary as a last resort to prevent an unconstitutional taking of private property, either the restoration of disturbed wetlands will be provided or additional wetlands will be created to ensure no net loss of wetlands.

**Policy.2L:** City of Lakeland land development regulations will include specific standards, criteria, procedures and land use controls necessary to protect and conserve area lakefronts while allowing reasonable access to the water and recreational opportunities. Land development regulations shall continue to require a 50-foot setback from the protected lakefront to the start of any construction.

**Policy.2M:** The City of Lakeland will require all developments to undertake measures necessary to ensure that water quantity and quality resulting from the development will not adversely affect nearby wetlands. Specific measures necessary for implementation of this policy are detailed in the City's Natural Resource Protection Regulations.

**Policy.2N:** The natural functions of wetlands include water storage/flood control, water filtration, groundwater recharge, and habitat for plants and animals, in particular waterfowl. These natural functions shall be protected to the maximum extent possible, in particular where the wetland(s) in question link to larger riverine and/or surface waters.

**Policy.2O:** City land use compatibility policies and development regulations regarding the location, density, intensity, extent, and type of land uses allowed shall consider the location, size, condition, type, and function of on-site or adjacent wetlands.

**Policy 2P:** As the City continues to acquire lakefront, wetland, and other natural areas for future recreation and open space uses, preservation and conservation of lakefront and wetlands shall be included in all park development plans.

**Policy 2Q:** The City will support efforts to enhance public awareness of the location of various collection points available for the safe disposal and recycling of used motor oil.

**Objective 3:** Continue to implement measures to protect and improve the ambient air quality to preserve Lakeland and Polk County's status as an air quality attainment area as designated by the Florida Department of Environmental Protection.

**Policy 3A:** The City of Lakeland will consider air quality in prioritizing capital facility and transportation improvement programming.

**Policy 3B:** Developments of Regional Impact (DRIs) will mitigate adverse impacts on air quality which they create. DRIs will also be required to be part of the available public transit district to reduce vehicular trips from the development.

**Policy 3C:** The City of Lakeland will continue to control open burning of land clearing debris.

**Policy 3D:** The Lakeland Fire Department will continue to prohibit outdoor burning of petroleum-based products and trash within the City.

**Policy 3E:** The City of Lakeland will continue to promote expansion and increased ridership of the public transit system, efficient delivery of service, and increased bicycle and pedestrian routes.

**Policy 3F:** The City will continue to implement a curbside recycling program for solid wastes in order to reduce the need for disposal through incineration and landfills.

**Objective 4:** Continue to work with state government, county government, adjacent local governments and involved land owners in order to establish greenbelts which conserve natural resources and/or habitats and which provide open space relief from development.

**Policy 4A:** The City of Lakeland will continue to identify riverine corridors and other water resource lands, and recommend their preservation through State purchase or other means.

**Policy 4B:** The City of Lakeland will share information with other local governments in order to direct passive land-intensive uses to locate within identified greenbelt corridors, including bicycle/pedestrian trails.

**Policy 4C:** The City of Lakeland will lobby State agencies and private conservation groups to purchase major land preservation areas within identified greenbelt corridors.

**Objective 5:** Continue the development of programs to conserve, appropriately use and protect fisheries, wildlife and wildlife habitats.

**Policy 5A:** The City of Lakeland will continue to implement its 20-year lakes management plan to ensure public and conservation uses of city lakes as well as measures for the protection of fish and wildlife habitats.

**Policy 5B:** In assessing its stormwater utility rate structure, the City shall consider available methods of ensuring a dedicated funding source to improve surface water quality, maintain or enhance flood control, protect lake-dependent plant and animal species, and meet federal and state water quality mandates.

**Policy 5C:** The City of Lakeland will require all new developments within areas identified as known or potential habitats for endangered or threatened species to provide an inventory of all listed species prior to receiving development approval. If listed species are found on the site or would be affected by the development, a specific management plan must be prepared by the developer, including necessary modifications to the proposed development, to ensure the preservation of the listed species and their habitat.

**Policy 5D:** The City of Lakeland's land development regulations will continue to offer zoning strategies to encourage protection of natural habitats.

**Policy 5E:** The City of Lakeland Parks and Recreation Department will continue to consider the protection of existing natural habitats as one factor in the prioritization of future park land acquisitions.

**Objective 6:** Continue to take action to protect the environment from hazardous wastes.

**Policy 6A:** The City of Lakeland will coordinate with Polk County on an annual basis to establish an "amnesty days" program for household hazardous wastes.

**Policy 6B:** The City of Lakeland will continue to require that disposal practices of all City hazardous waste contractors are in compliance with all applicable State and federal regulations as part of all applicable written contracts.

**Objective 7:** Continue to seek to improve energy conservation citywide and, in designated Energy Conservation Areas, use a more focused application of appropriate land use and transportation strategies to promote a pattern of compact and complimentary mixed

land uses that, when combined with urban design techniques and standards, produces a safe, walkable environment served by a well connected multi-modal transportation system.

**Policy 7A:** The City shall continue to support incentives for new and re-development within its traditional Community Redevelopment Areas of Downtown, Mid-Town and Dixieland as well as infill and transit oriented developments within the Central City Transit Supportive Area and increased residential densities within the TOC Overlay. *Land Development Regulations* shall include open space and landscaping standards for new development that provide relief from the built environment, provide street shade for the pedestrian and support energy efficiency for the built environment.

**Policy 7B:** The City will continue to employ access management and site circulation standards, maximum parking standards and multi-modal connectivity through its land development regulations which address and support the linkage to bus, bike and pedestrian systems and amenities. Vehicle mile trip and associated greenhouse gas reduction will be pursued through the implementation of the components of the city's land use strategies and the connectivity plan outlined in the Transportation Element including but not limited to enhancement of the transit services, prioritization of funding for pathways (bicycle and sidewalk) facilities, and demand management strategies, where applicable.

**Policy 7C:** The City will continue to pursue energy efficiency programs within its management of the Lakeland Electric utility including smart grid technology, solar water heating, solar energy, energy efficient construction standards consistent with the Florida Building Code, and *Land Development Regulations* incorporated incentives for pursuit of green building certifications.

**Policy 7D:** The City shall consider adopting *Land Development Regulations* that encourage and incentivize green building practices such as Leadership in Energy and Environmental Design (LEED) and/or Florida Green Building Coalition certified design by 2014. Weatherization and energy efficient site design shall be provided for public housing and city assisted housing where feasible under federal and state funded housing programs.

**Policy 7E:** The City shall consider recognition and other programs to encourage residential development that meets or exceeds the performance of U.S. EPA Energy Star-labeled homes.

**Policy 7F:** The City shall not prohibit the appropriate placement of photovoltaic (solar) panels or comparable technology. The City shall formulate and adopt standards and criteria for the appropriate placement of photovoltaic (solar) panels by 2014.

# HOUSING ELEMENT

## INTRODUCTION

Affordable housing becomes increasingly scarce in an urban city while the existing housing inventory continues to age. The safety and marketability of much of the older housing also becomes an issue as the physical structures age and as buyers' expectations change. However, some of the older housing stock provides a source of affordable units. In Lakeland, the older housing stock is primarily found in the "central city" neighborhoods. (See Illustration VII-1 Neighborhood Boundaries.) Since property values and upkeep have a great influence on neighborhood stability, the City has given priority to the conservation of neighborhoods through rehabilitating and preserving existing housing stock and through pursuit of neighborhood improvement programs to address wider neighborhood quality of life issues.

While the City will continue to pursue partnerships which increase opportunities for affordable housing for Lakeland's growing population, as in most cities, the private market will continue to be the prime determinant in the provision of housing. The City's programs for existing housing are administered through Neighborhood Services Division (formerly the Code Enforcement and Housing Divisions, which combined in 2008) of the Community Development Department. Much of the funding has historically been provided by federal Community Development Block Grant (CDBG) funds. These programs involve rehabilitation of substandard units, emergency repairs, environmental and structural inspections and code enforcement. The Building Division administers permitting and inspection of new housing. In the 1990s, the federal Home Investment Partnership Program (HOME) and State Housing Initiatives Partnership program (SHIP) made funding available for home purchase assistance. Applicants for home purchase assistance are screened for credit and other eligibility through Keystone Challenge Fund, Inc., a local Community Housing Development Organization (CHDO).

Since the 1990s, an increased emphasis has been placed upon forming and sustaining private/public partnerships that leverage private dollars primarily due to the fluctuation of federal funding available for housing programs. The Neighborhood Services Division partners with local non-profit agencies such as Lakeland Habitat for Humanity, Lakeland Housing Authority (HOPE VI) and Keystone Challenge Fund to provide homeownership opportunities for extremely low and low income households.

The City continues to work with the private market on initiatives to add to and preserve the supply of single and multi-family housing including the model block program initiated in the Mid-Town CRA. In 2009, the City adopted revised *Land Development Regulations* to expand the use of accessory dwelling units (ADUs) throughout the Central City Area with the intent of offering more diversity in housing options. Additionally, the City worked with Polk County to determine the ability to impose lower impact fee charges for ADUs.

However, Lakeland housing officials and government leaders must further explore innovative ways to encourage the private sector to provide an even greater diversity of housing types including housing which is affordable to very low, low and moderate income households.

## SUMMARY OF FINDINGS

In 2004, the Community Development Department completed a housing report, entitled 2004 Metro-Lakeland Community Housing Strategy Report, which detailed facts and features about housing in the City of Lakeland and the surrounding planning area. Additional data has been collected from the Shimberg Center for Affordable Housing, the US Census Bureau 2000 Decennial Census and the American Communities Survey. A portion of the data is included in this Summary, and the remainder may be found in TSD VII-One (Housing Inventories & Data) in the *Technical Support Document*.

The terms very low, low and moderate income are used throughout this element. “Very low income” households are normally those with an income of 30% to 50% of the median income of an area whereas “low income” is defined as 51% to 80% of median income, and “moderate income” is 81% to 120% of the median income. Housing programs, however, will typically use a sliding scale type of definition of very low, low and moderate income based upon number of persons in the household, i.e. household size. For example, if the 2009 median income is \$52,200, (the median income for an area changes annually), a household of four would qualify as “low” earning \$41,750 or less a year; whereas a household of two could only earn \$33,400 or less a year to qualify as “low” income.

### INVENTORY AND CONDITION OF HOUSING

The 2008 American Communities Survey gives us an idea of the housing conditions from survey data they collected regarding interior deficiencies in space (square footage per occupant), heating and/or completeness of kitchens and bathrooms.

**TABLE VII-1  
SUBSTANDARD HOUSING CONDITIONS  
CITY OF LAKELAND AND POLK COUNTY**

1990 Census Area	# Units Without Heat	# Units Without Plumbing	# Units With Incomplete Kitchens	Total Substandard and as a % of All Units	# Units, 1.01+ Persons Per Room	Total Substandard or Overcrowded Units	Total Occupied Housing Units
Polk County	1,802	703	1,035	3,540 1.6%	11,664	15,204 6.9% of All Units	223,931
Lakeland	294	308	415	1,017 2.5%	2,224	3,241 7.9% of All Units	40,528

**Source:** American Communities Survey, 2008.

As can be seen in Table VII-1, there was not a great difference between the City and the County regarding housing conditions in terms of Census measures.

In conjunction with the 2004 Housing Report, an extensive building by building survey of housing conditions in the Lakeland Planning Area, conducted by City staff, indicated that of the 83,464 structures surveyed, 6% were identified as substandard and 1% as dilapidated. (See Table VII-2, below) Poor building conditions, however, are greatly pronounced in specific neighborhoods where substandard structures exceeded 20% of the housing stock. [See Table-VII-One(T) in the *Technical Support Document* for a complete listing of dilapidated and substandard units surveyed by census tract in 2004.]

**TABLE VII-2  
2004 PLANNING AREA HOUSING CONDITIONS**

# OF UNITS SURVEYED	UNITS IDENTIFIED AS SUBSTANDARD	UNITS IDENTIFIED AS DILAPIDATED	# OF CODE VIOLATIONS (CITYWIDE)
83,464	5,008 (6%)	835 (1%)	7,982

**Source:** Metro-Lakeland Community Housing Strategy Report, 2004.

## **EXISTING PROGRAMS**

The City of Lakeland greatly values its existing housing stock and has initiated several programs to preserve housing units, especially in the context of the larger neighborhood unit. Substandard and deteriorating housing conditions require code enforcement and rehabilitation programs. Lakeland's housing stock is relatively old by Florida standards and the potential for deterioration is more significant than in younger cities. The City of Lakeland Code Enforcement Board is one tool used in correcting substandard housing conditions and hears numerous cases each month. Through the imposition of fines, the Code Enforcement Board is generally successful in causing violations to be corrected or the very worst units to be demolished. Approximately 2 percent of the units which incurred a code violation between 2005 and 2008 were demolished.

The Housing Division currently rehabilitates an average of 16 substandard homes each year. In previous years the City was capable of rehabilitating as many as 35 homes annually. However, successive years of decreased funding for CDBG allocation and the loss of SHIP funds for housing rehabilitation activities in 2009 have limited the City's ability to respond to this need. Most housing rehabilitation activity, about 75%, occurs in the CDBG Target Area located in the northwest area of the City where a substantial amount of blight and slum conditions have existed (see Illustration VII-2, CDBG Target Area). The other 25% occur throughout the City for qualified households. There is a waiting list for the limited supply of housing rehabilitation deferred loans and it is estimated that more than double the units could be rehabilitated per year if adequate funding/staff and local rehab contractors were available.

Additional rehabilitation efforts include the hurricane housing recovery program that resulted from the declared natural disaster in 2004 when 3 hurricanes hit Polk County. The City received 2.8 million dollars in funding for rehabilitation, new housing construction, home



purchase assistance and other disaster relief. From 2004 to 2008 the City rehabilitated 18 homes, built 3 new homes and assisted 49 households with home purchase assistance for persons affected by the hurricanes.

Other related activities include coordinated code enforcement, historic preservation design review and enhanced public improvement programs, such as street lighting, paving, and parks, in each area plus enhanced neighborhood law enforcement (COPs substations and/or bicycle policing). In South and East Lake Morton, Dixieland, Lake Hunter Terrace, Beacon Hill, Biltmore-Cumberland neighborhoods and the Historic Munn Park district these efforts include review of housing rehabilitation activity under special design guidelines for contributing historic housing stock. Lakeland has seven historic districts as shown in Illustration VII-3.

### **HOUSING TYPE AND MIX**

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A review of City residential building permits from 1990 to 2009 in Table VII-3 reveals basic changes which have occurred over time as the market cycle affects the tenure and type of housing being built. From 1990-1999, on average, about 58% of new units permitted were single-family (including mobile homes) and 42% were multi-family. Multi-family permits surged in the last three years of the 1990's and peaked in 2000 at 84%. Multi-family permits exceeded single family permits from 2000 to 2010. Multi-family accounted for 51% and single family accounted for 44% of all new construction permitted. Mobile home permitting has trended downward over the last decade with no permits issued in 2000 and 2001 and has not exceeded more than 14% since 1996. These changes are tied to demographic and urban economic shifts in the City area. Family size has continued to decrease in recent years, resulting in a greater demand for smaller homes and more multi-family housing. Also, the population's average age has risen as retirees move into the area, many of them choosing to live in mobile homes and multi-family housing for seniors on a full-time or seasonal basis. Finally, as land costs and housing costs rise, urban housing becomes more expensive. The City's permit distribution will continue to be influenced by the housing market cycles and may continue to fluctuate significantly until current economic conditions stabilizes.

Detailed lists of group homes are found in TSD VII-One in the *Technical Support Document*.

**TABLE VII-3  
RESIDENTIAL UNITS PERMITTED BY TYPE  
CITY OF LAKELAND 1990-2009**

LAKELAND RESIDENTIAL PERMIT DATA, 1990-1999							
YEAR	SINGLE FAMILY		MULTIPLE FAMILY		MOBILE HOME		TOTAL
	# OF UNITS	% OF YRLY TOTAL	# OF UNITS	% OF YRLY TOTAL	# OF UNITS	% OF YRLY TOTAL	
1990	175	69%	22	9%	57	22%	254
1991	200	58%	74	22%	70	20%	344
1992	195	61%	39	12%	85	27%	319
1993	205	66%	32	10%	75	24%	312
1994	217	48%	143	31%	95	21%	455
1995	135	62%	45	21%	39	18%	219
1996	144	56%	42	16%	73	28%	259
1997	162	26%	377	61%	80	13%	619
1998	204	34%	328	54%	76	13%	608
1999	231	21%	772	72%	76	7%	1,079
<b>TOTAL</b>	1,868	42%	1,874	42%	726	16%	4,468

On average, single-family was about 42% of total and multi-family was 42%, from 1990 to 2000.

LAKELAND RESIDENTIAL PERMIT DATA, 2000-2009							
YEAR	SINGLE FAMILY		MULTIPLE FAMILY		MOBILE HOME		TOTAL
	# OF UNITS	% OF YRLY TOTAL	# OF UNITS	% OF YRLY TOTAL	# OF UNITS	% OF YRLY TOTAL	
2000	167	16%	862	84%	0	-	1,029
2001	183	27%	482	70%	24	3%	689
2002	220	84%	16	6%	26	10%	262
2003	257	64%	100	25%	47	12%	404
2004	380	83%	41	9%	35	8%	456
2005	544	43%	645	51%	84	7%	1,273
2006	544	31%	1,159	65%	70	4%	1,773
2007	458	88%	12	2%	49	9%	519
2008	252	40%	354	57%	19	3%	625
2009	144	84%	4	2%	24	14%	172
<b>TOTAL</b>	3,149	44%	3,675	51%	378	5%	7,202

Source: City of Lakeland, Community Development Department, 2009

A look at the City's existing housing stocks demonstrates a stable mix of housing types. Between 1990 and 2009 total housing units have increased by 10,915 units, from a total of 36,498 to 47,347 when also accounting for units gained and lost through annexation and demolition. During this time, single-family (including mobile homes) and multi-family units have maintained almost the same percentage of the housing stock with 71% and 29%, respectively. However, the percentage of multi-family housing is anticipated to increase in future years due to the fact that multi-family permitting has exceeded single family permitting in recent years. Since 1990, the percentage of mobile homes has remained relatively constant at about 18% of the overall housing stock as indicated in Table VII-4.

**TABLE VII-4  
CITY HOUSING STOCK, BY TYPE, 1990-2009**

	1990		1995		2000		2005		2009	
	# OF UNITS	%	# OF UNITS	%	# OF UNITS	%	# OF UNITS	%	# OF UNITS	%
Single Family	18,355	53%	19,482	53%	20,829	53%	24,358	54%	25,760	53%
Multi-family	10,464	30%	10,819	29%	11,147	29%	12,466	27%	13,995	29%
Mobile Homes	6,114	18%	6,535	18%	7,088	18%	8,728	19%	8,890	18%
TOTAL:	34,933	100%	36,836	100%	39,064	100%	45,552	100%	48,645	100%
* Total plus Annexations & minus Demolitions:			36,498		39,064		44,659		47,347	

**Source:** City of Lakeland, Community Development Department, 2009.

The total numbers of new multi-family unit construction has continued to increase over the previous two decades. While it is often assumed that those who cannot afford to own a home will rent, the affordability of rental units is not assured. The market for higher rent units may be serving households that prefer to rent versus own due to advantages of less maintenance responsibilities and other reasons independent of the affordability of the unit.

The American Communities Survey estimated the 2008 Lakeland gross rental costs distribution as shown in Table VII-5. The median monthly rental cost was \$862. Housing cost is considered a burden or excessive when it exceeds 30% of household income. In 2008, the average median value of a home in Lakeland was \$158,200. The information in Table VII-6 indicates about 22 % of City households are expected to be paying a monthly mortgage that is over 30% of their income towards housing costs over the next decade. Households that rent are projected to be significantly more burdened than households that own over the same period of time. About 33% of future households will pay 30% or more of their income for rental costs.

Lakeland has a variety of specialized housing types serving those with special needs; a detailed inventory is found in TSD VII-One in the *Technical Support Document*. In 2009, Lakeland had about 2,245 combined affordable and public housing units for low income

residents, plus federally subsidized housing units for families and elderly, and several group homes:

- group homes for children
- group homes for developmentally disabled
- nursing homes and
- various assisted-living facilities

**TABLE VII-5  
MONTHLY GROSS RENT OF OCCUPIED UNITS, 2008**

RENT	# OF RENTER OCCUPIED UNITS	% OF ALL RENTER-OCCUPIED UNITS
Less than \$200	102	0.6%
\$200 to \$299	416	2.4%
\$300 to \$499	957	5.4%
\$500 to \$749	4,128	23.4%
\$750 to \$999	6,509	36.8%
\$1,000 to \$1,499	3,882	22.0%
\$1,500 or more	874	4.9%
No rent paid	801	4.5%
Total	17,669	100.0%
Median (dollars)	\$862	

Source: American Communities Survey, 2008

**TABLE VII-6  
LAKELAND HOUSING COST BURDEN**

COST BURDEN	OWNER HOUSEHOLDS					RENTER HOUSEHOLDS				
	2007	2010	2015	2020	PER-CENT	2007	2010	2015	2020	PER-CENT
0-30%	18,614	19,257	20,972	22,753	78%	10,205	10,497	11,245	11,863	63%
30.1-50%	3,176	3,287	3,579	3,885	13%	3,079	3,171	3,420	3,652	20%
50+%	2,096	2,173	2,361	2,561	9%	2,683	2,760	2,981	3,180	17%
Total	23,886	24,717	26,912	29,199	100%	15,967	16,428	17,646	18,695	100%

Source: Shimberg Center for Affordable Housing, 2007

## FUTURE HOUSING NEEDS

Consistent with national trends, decreases in average household size throughout the Lakeland Planning Area (an area inclusive of the City and a large area surrounding and outside City limits) are expected to continue through 2020. The continued decline is expected as a result of (1) the general social trend toward smaller families and non-family households, and (2) the changes in local housing mix toward a greater proportion of multi-family dwellings, especially for the ever increasing elderly permanent and seasonal populations in the Lakeland Planning area. Expectations with regard to household size (persons per household) are depicted in Table VII-7. Projection of other household data such as by income and tenure, number of persons in the household and age group are given at the end of TSD VII-One, Tables VII-One(Q-S), found in the *Technical Support Document*.

**TABLE VII-7  
PROJECTED AVERAGE HOUSEHOLD SIZE**

	1990	2000	2010	2015	2020
City of Lakeland	2.29	2.24	2.19	2.17	2.15
Lakeland Planning Area	2.56	2.49	2.45	2.43	2.41

**Source:** US Census Bureau and Lakeland Community Development Dept, 2009.

Tables VII-8 and VII-9 estimate the number of housing units that will be required to support the City and the Lakeland Planning Area given projections for population, households and/or average household size.

**TABLE VII-8  
HOUSING UNITS NEEDED TO SUPPORT THE PROJECTED POPULATION  
CITY OF LAKELAND**

YEAR	POPULATION	AVERAGE HOUSEHOLD SIZE	# OF HOUSEHOLDS	TOTAL HOUSING UNITS
1990	70,576	2.29	29,791	34,933
2000	78,452	2.24	33,509	38,980
2010	95,472	2.19	43,595	50,692
2015	101,439	2.17	46,746	54,356
2020	110,315	2.15	51,309	59,662

**Source:** US Census, 1990 and 2000; Lakeland Community Development Department, 2009.

**TABLE VII-9  
HOUSING UNITS NEEDED TO SUPPORT THE PROJECTED POPULATION  
LAKELAND PLANNING AREA**

YEAR	POPULATION	AVERAGE HOUSEHOLD SIZE	TOTAL HOUSING UNITS
1990	180,994	2.56	81,947
2000	228,329	2.49	91,698
2010	247,025	2.45	100,827
2015	270,805	2.43	111,442
2020	292,699	2.41	121,452

**Source:** City of Lakeland, Community Development Department. 2009.

The total residential acreage was projected based on past existing land use trends and the City's population projections. The categories of residential densities needed to support the projected 2020 City of Lakeland population were then separated into very low density (1%), low-density (27%), medium-density (65%) and high-density (7%) based on the proportional share allotted for each category. Table VII-10 outlines the acreage needed to accommodate residential uses within the City and Planning Area through 2020. The numbers in the table are related to Tables II-8 and II-9 in the Future Land Use Element. Table VII-10 indicates that Lakeland will require about 1,940 additional acres of residential medium density lands by 2010, for 14,416 total acres.

**TABLE VII-10  
PROJECTED RESIDENTIAL ACREAGE REQUIRED: 2010-2020**

YEAR	CITY OF LAKELAND				LAKELAND PLANNING AREA			
	RH	RM	RL	RVL	RH	RM	RL	RVL
2010	1,372	12,476	5,297	124	1,758	17,939	25,182	124
2015	1,458	13,256	5,628	131	1,889	19,361	27,850	131
2020	1,586	14,416	6,120	143	2,050	20,990	30,051	143

RH = High Density Residential; 12.01 to 75 DU/Acre  
 RM = Medium Density Residential; 5.01 to 12.0 DU/Acre  
 RL = Low Density Residential; 0 to 5.0 DU/Acre  
 RVL = Very Low Residential; 0 to 3.0 DU/Acre

**Source:** City of Lakeland, Community Development Department, 2009.

## ISSUES AND OPPORTUNITIES

The ability of a local government to ensure an adequate supply of quality housing is one of the key factors in protecting the health, safety, and welfare of its citizens. For many years, the City of Lakeland has actively worked to address the housing needs of its citizens. The City, through the comprehensive planning process, has identified the following issues and opportunities in order to ensure the provision of affordable housing for existing and anticipated residents:

1. The improvement and rehabilitation of the existing housing stock to sustain existing stock while eliminating substandard housing conditions;
2. The provision of adequate infrastructure for new development and adequate sites to accommodate future housing needs of all Lakeland residents;
3. Assistance in the provision of housing for very low, low and moderate income families, including assistance through the private sector market;
4. Administration and implementation of existing and new programs to enhance the supply of affordable housing and to improve the neighborhoods in which the housing stock is located; and
5. Assistance for the homeless population.

## HOUSING CONSERVATION, REHABILITATION AND DEMOLITION

Housing conservation areas are those housing areas where structural deficiencies are minimal. These areas should be protected from blight and maintained at least at their present standard of development. Strict enforcement of the minimum housing code and the building and zoning standards given in the *Land Development Regulations* will continue to be needed while at the same time encouraging appropriate infill development and redevelopment. City Code enforcement must continue to address exterior property conditions such as overgrown lawns, junk cars, etc.

Rehabilitation efforts usually are made where structural deterioration is noted but restoration may occur within realistic economic limits. Demolition is reserved for those areas where blight has advanced to such a degree that no other approach is practical in economic terms. Typically, the existing structures are cleared creating vacant space for new development.

Numerous structures within the Lakeland Planning Area have been designated as historically significant. In addition, there may be other historic structures that have not yet been identified. When local renovations or demolitions are proposed, structures may need to be evaluated to determine their historical significance prior to work beginning. As shown in Illustration VII-1, the City has six residential historic districts and the downtown Munn Park Historic District.

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## **CODE ENFORCEMENT**

Frequently cited at public meetings concerning housing and neighborhoods is the need to support and maintain on-going code enforcement efforts. An active code enforcement program to rectify code violations is one of the most cost-effective tools in maintaining and improving City neighborhoods. The City has several code enforcement officers each of whom are assigned to a given area comprised of various census tracts, by which they compile code violation data. The City also uses a Code Enforcement Board, which meets monthly, to enforce codes and impose fines against properties, where necessary.

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## **ADEQUATE SITES WITH SUPPORTING INFRASTRUCTURE**

Existing residential areas within the City of Lakeland are, for the most part, provided with potable water and sewage disposal by treatment plants operated by the City. There are some on-site wastewater plants that operate in the City as a result of annexation, serving areas where septic tanks could not provide sufficient treatment capacity. There are also numerous, adequately functioning septic tanks in residential areas throughout the City; most of these septic systems existed prior to sewer availability or annexation.

The City of Lakeland is also served by an urban multi-modal transportation system. In addition to its local streets, collector system, arterial and expressway roads, the planning area is served with Amtrak passenger rail service (and will be served with High Speed Rail per a 2010 announcement of federal funding for a Tampa to Orlando HSR system,) a regional general aviation airport, mass transit/bus service and a system of bike/pedestrian facilities. As the City continues to develop and urbanize mass transit will become a more important means to provide additional mobility for all demographic groups from the transit dependent to the choice rider. New residential development will require greater coordination with local bus service and other forms of mass transit. As such, the City's Future Land Use Element establishes a Transit Oriented Corridor (TOC) overlay in which residential densities may be increased within a 1/8 mile and ¼ mile buffer area of the TOC, without a formal land use amendment. The TOC overlay is intended to facilitate the higher densities needed to support transit use, documented in national studies as being at least 7 dwelling units or more an acre. Thus, in the TOC overlay, a minimum density of 7du/ac will be required for new residential development.

Under the concurrency requirement of this Comprehensive Plan, any proposed residential development must be analyzed to assure the availability of necessary services and facilities at acceptable levels of service. In addition, public facilities and services required to support future growth and development are addressed in the Infrastructure Element and the Capital Improvements Element of this Plan.

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## **ADEQUATE SITES FOR GROUP HOMES AND FOSTER CARE FACILITIES**

The City of Lakeland currently has several group homes and foster care facilities with a total housing capacity for more than 2,308 persons. This housing type is permitted within residential areas under the City's current *Land Development Regulations*. Facilities housing



six or less persons are permitted in all single family zoning categories while facilities with more than six persons are restricted to multi-family zoning categories.

## **ADEQUATE SITES FOR MOBILE HOMES**

The City of Lakeland permits mobile homes within mobile home parks and mobile home subdivisions. According to data by Community Development Department staff, mobile homes represented approximately 18% of the total housing stock in 2008. Since 1990, the percentage of mobile homes as part of the overall housing stock has remained relatively constant.

The City of Lakeland continues to ensure the availability of adequate sites within the City for the placement of mobile homes. While the City does not permit mobile homes on scattered lots, it does allow them in approved mobile home parks and subdivisions. As part of this ongoing effort, an analysis was done between the number of mobile homes placed and the number of sites available; this analysis is found in the *Technical Support Document*.

## **AFFORDABLE HOUSING**

As with any developing area, the City of Lakeland's primary housing issue is the ability to provide acceptable and affordable housing to very low, low and moderate income households. Local programs are directed toward ensuring that housing opportunities exist for those whose incomes qualify them as such households. Lakeland has also continued to initiate and implement comprehensive neighborhood improvement plans to maintain and stabilize desirable residential characteristics.

According to the 2008 American Communities Survey, 11% of all families and 13.3% of all persons (12,437 persons) were below the poverty level, i.e., having incomes of less than \$10,400 for individuals and \$21,200 for a family of four. Additionally, an approximately 55.2%, or 22,290 total households, earned below the median income for a family of four (\$52,200). Using the "affordable housing" definition, families should spend no more than 30% of the total household income on housing. Cost burden issues are of particular concern for households who rent with a projection of up to 47% of these households paying more than 30% of their income for housing costs (per information in Table VII-6.) Some of these households may require some form of public assistance in meeting their housing needs, but clearly more rental housing at affordable rents will be needed.

Lakeland's primary response to the housing affordability problem has been ongoing efforts to preserve older housing stock and maintain the desirability of all neighborhoods, in particular, neighborhoods in the central City which are closest to all urban services and which tend to contain the oldest housing stock. Secondly, the City continues to work with the private market on separate initiatives to create a greater supply of new affordable owner-occupied housing



Accessory dwelling unit in Lake Morton.

and affordable apartment or rental housing. Attempts to help stabilize declining neighborhoods also include introducing moderate priced units to help rebalance or mix home ownership trends such as through the model block program in the Mid-Town CRA. In addition, the City adopted an ordinance in late 2008 to expand the use of accessory dwelling units to primarily provide opportunities for families to accommodate elderly parents or adult children that choose to stay at home longer while attending college or preparing to become independent.

## **AFFORDABLE HOUSING EFFORTS**

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The following is a summary of major programs to address affordable housing needs:

- Lakeland is an entitlement community receiving Community Development Block Grant funds on an annual basis. Lakeland's CDBG funds provide a variety of infrastructure and public services including but not limited to housing rehabilitation, clearance, sidewalks, public facility improvements and code enforcement. Illustration VII-2 identifies the CDBG target area in Lakeland.
- A portion of the CDBG allocation is awarded to non-profit agencies for public services with such programs as Boys & Girls Clubs, Salvation Army, Volunteer in Service to the Elderly, and Parks and Recreation Programs. Up to 15% of the CDBG annual budget is allowed for public services. In the program year for the 2010-2011 budget this translated to approximately \$116,640.
- The City participates in and is a recipient of funds from the Home Investment Partnership Program (HOME) and the State Housing Initiatives Partnership program (SHIP). HOME funds provide housing rehabilitation and home purchase assistance for very low and low income clients. SHIP funds provide housing rehabilitation and home purchase assistance for very low, low, and moderate income clients. The home purchase assistance program has assisted buyers on vacant lots dispersed throughout the City. HOME funding assisted 227 persons and SHIP funding assisted 318 persons from 2000 to 2009.
- The City provides down-payment and closing cost assistance in partnership with a private lender initiative in the Parker Street Area intended to construct new, single-family, affordable homes in an architectural style similar to that which exists in the neighborhood. This will allow the units to blend into the neighborhood and minimize gentrification around the location of the new homes. This is also known as the Model Block Program for the Mid-Town CRA.
- The City has several housing incentives available to qualified home builders in order to meet SHIP requirements. The most popular are the impact fee reimbursement and the impact fee waiver. Normally builders will pay the impact fees upfront and later are reimbursed a percentage of the fees paid based upon the income level of the home buyer, and where the home is located within the City (although the location qualifier may be discontinued). Large multiple unit housing projects usually take

advantage of the impact fee waivers available for units for moderate or less income households. However, the City must absorb the actual cost of the waived fees.

- The Keystone Challenge Fund, Inc. is a non-profit organization dedicated to assisting low to moderate income families with obtaining financing through a consortium of local lenders (banks) for purchasing a home, new home construction, or rehabilitation of an existing home for purchase. Keystone is designated as a Community Housing Development Organization (CHDO) in Lakeland and in Polk County. On an annual basis, Keystone receives a percentage of the City's HOME funds for housing development and activity delivery. Keystone also provides homebuyer counseling and home maintenance classes. Clients are assisted with all phases of home purchase including clearing credit problems. Keystone is linked to a consumer credit counseling program for applicants who do not yet qualify for loans due to poor credit history and poor budgeting skills. The program assisted 182 persons from 2004 to 2009.
- In conjunction with the Lakeland Housing Authority, Community Development staff conducted a survey to identify vacant lots located in the Diggs and Parker Street neighborhoods, two of the City's poorest areas. These neighborhoods are targeted for efforts to assemble and/or sell lots for redevelopment. Identified vacant lots in the Paul A. Diggs neighborhood will be assembled together to form a "model block" that will serve as a prototype for redevelopment of other, scattered vacant lots in the neighborhood.
- The Lakeland Housing Authority received approximately \$21,843,000 in HOPE VI funds for demolition of outdated housing complexes, reconfiguring the campuses of two large complexes, construction of single family housing units, and construction for economic development on site. This effort was accompanied by job training and counseling to assist clients.
- The Urban Homesteading Program is a strategy to promote infill housing development in some of Lakeland's most distressed neighborhoods. The City maintains a list of City-owned vacant lots suitable for single family construction where the property has marketable title and all back taxes have been paid in full. These lots shall be available for sale for \$1,000 to households that will construct single family housing and maintain same as their principal residence. Purchasers can be of any income range to create a better mix of incomes in inner-city neighborhoods where most vacant lots are located.
- The City of Lakeland was awarded \$2,005,781 in Neighborhood Stabilization funds from the Housing and Economic Recovery Act of 2008. Its goal is to purchase foreclosed homes for renovation and resale to clients at 120% and below of the Area Median Income (AMI). The program will concentrate its efforts on the neighborhoods



Affordable Housing funded by HOPEVI

with the highest rate of foreclosed homes, highest percentage of homes financed by subprime mortgage loans, and areas most likely to face a significant rise in the rate of home foreclosed homes. Twenty five percent of the allocation will be used to assist households or persons at 50% and below of the AMI. As of January 2010, seven units have been purchased with the goal of acquiring as many as 20 total units.

- In 2009, the Lakeland Housing Authority (LHA) administered 1,445 vouchers under the Section 8 rent subsidy program. Funding and, subsequently, the number of vouchers administered various from year to year.
- The Code Enforcement Division helps neighborhoods maintain or improve their property values by enforcing minimum housing codes, zoning codes and provisions related to lot clean-up. Due to improved use of technology, code violations are found and cited more quickly, potentially resulting in quicker resolution of the problem. From fiscal year 2005 to 2009, the number of cases resolved annually increased from 82% to 86% and the average number of days it takes to bring a violation into compliance has decreased from 69 to 41 days.

A detailed description of the many efforts and programs to address affordable housing can be found in the Housing Division's most recent Consolidated Plan.

Overall, the City of Lakeland remains very committed to assisting neighborhoods and improving and sustaining the housing stock within the neighborhoods that comprise Lakeland.

## **PRIVATE SECTOR HOUSING DELIVERY PROCESS**

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Traditionally, the private housing market has met the housing needs of moderate and higher income households. The existing and older housing stock in Lakeland is somewhat more affordable and therefore also offers some units to lower income households to own or rent. This is one reason conservation and rehabilitation of the housing in Lakeland's historic districts is important. These older units often are smaller square footage units on smaller lots, and therefore the prices are often lower than newly constructed housing in the City.

A successful housing delivery system requires the coordination of a number of professionals, firms, businesses, and industries. However, these players cannot function without the support and assistance of numerous other participants including land owners, real estate brokers, title companies, architects, engineers, surveyors, lawyers, lending institutions, etc. These, and more, make up the housing delivery system. The four following factors play a large role in a successful housing delivery system:

- 1. Land:** There is adequate land available within the City of Lakeland and the Lakeland Planning Area for housing construction through the planning period. However, the efficient use of land is an important consideration with regard to delivering affordable and moderately priced housing. Typically, higher residential

densities allow developers to maximize the site and in turn reduce per capita costs that are otherwise passed along to the home buyer.

2. **Services:** The availability of services associated with the construction of housing is a concern. The permitting and installation of necessary infrastructure for new residential subdivisions can often be a tremendous financial burden to local governments. This fact emphasizes the advantage of new construction on infill lots where infrastructure already exists.

The City administers a concurrency management program that requires adequate services to be in place at the time needed. A certificate of concurrency must be issued prior to final development approval.

3. **Financing:** Historically, four major financing mechanisms have been provided by the private sector.
  - Conventional Mortgages
  - Home Improvement Loans
  - Secondary Mortgage Loans
  - Rent Restructuring

The chief private sector participants in lending authorization are financial institutions such as banks, credit unions, savings and loans, and mortgage companies, as well as developers. However, few developers can complete a project using only their own money. Most of them look to mortgage lenders and to equity investors for a major share of project financing. The availability of mortgages and home improvement loans depends on overall money market conditions. When credit gets tight, mortgage and home improvement loans may be difficult to obtain or are prohibitively expensive. This can slow down the real estate market and lower values.

The private sector financing mechanisms typically meet the needs of the middle and upper income housing market in the Lakeland area. However, the housing needs of the lower income housing market often are the focus of special attention, usually in the form of public assistance as discussed in this element.

4. **Government regulations:** The regulatory and administrative roles of government agencies need to be periodically evaluated to identify problems and opportunities affecting the capacity of the private sector housing delivery system. Lakeland has a relatively expedient permitting system, newly computerized, to serve local builders and developers. The City's *Land Development Regulations* (LDRs) which govern land development and include zoning restrictions and setbacks, are at least annually reviewed to refine, streamline or clarify regulations. Given projected needs, the City should consider regulations that will help incentivize or require the preservation of some of its existing affordable rental housing stock; for example, a program to preserve some percentage of units as affordable when older existing rental units are upgraded and/or planned for conversion to ownership units such as townhomes.

## **NEIGHBORHOOD IMPROVEMENT PROGRAM**

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In 1988 the City initiated a program within the Community Development Department to study Lakeland's neighborhoods and implement a Neighborhood Improvement Program. The neighborhood improvement program was envisioned to address traditional problems of code enforcement and housing decline as well as to operate in an interventionist mode to correct problems (traffic, zoning) that diminish the strength of an otherwise viable neighborhood. The prototype for the program was the South Lake Morton Improvement Program. Since inception, Lakeland has worked with several other neighborhoods including: Dixieland, Lake Hunter Terrace (both historic districts), Diggs, Webster, Westlake, Parker Street and Lake Wire.

The neighborhood improvement strategy primarily involved documenting neighborhood needs through surveys, interviews, and neighborhood meetings and using local resident desires as a guide in pursuing the most needed changes. With any program designed to improve neighborhoods, a number of components are necessary to be successful. The first of these is resident participation. Thus, one of the City's first objectives for working in a neighborhood is to identify and nurture any neighborhood leadership as well as to encourage formation of neighborhood associations and perhaps other property-owner groups.

The second component is local government support. This is usually in the form of project administration for public facility type improvements and code enforcement. It also may involve seed money to initiate particular changes through a loan or grant program or in the form of public improvements.

The third element of neighborhood improvement is private reinvestment. Local governments can reinvest in neighborhoods by increasing code enforcement activities and police presence; improving utilities, parks, streets, sidewalks and lighting; and providing housing improvement incentives or grants. Ultimately, however, an increased amount of private reinvestment must occur for a neighborhood to maintain an improved condition.

While the City has remained committed to maintaining the viability of older residential neighborhoods and implemented new neighborhood plans as recently as 2003, significant attention to larger geographic areas that incorporate the rapidly developing urban fringe has been necessary for efficient and coherent planning of the City. Due to the number of neighborhoods (more 100) and limited staff resources, a shift from attempting to address individual neighborhood level planning to "sectors" in which groupings of several neighborhoods would be addressed has occurred. This sector planning effort, as described in the Future Land Use Element, will result in mid-range plans for all nine sectors of the City.

However, an ongoing effort is maintained by designated staff members to work with neighborhood residents to analyze and identify specific neighborhood problems and implement improvement strategies which can eliminate potential problems and help to

preserve and strengthen the viability, attractiveness and character of Lakeland's existing neighborhoods. Illustration VII-3 delineates the neighborhoods identified by the Community Development Department.

## **SPECIAL HOUSING NEEDS AND THE HOMELESS**

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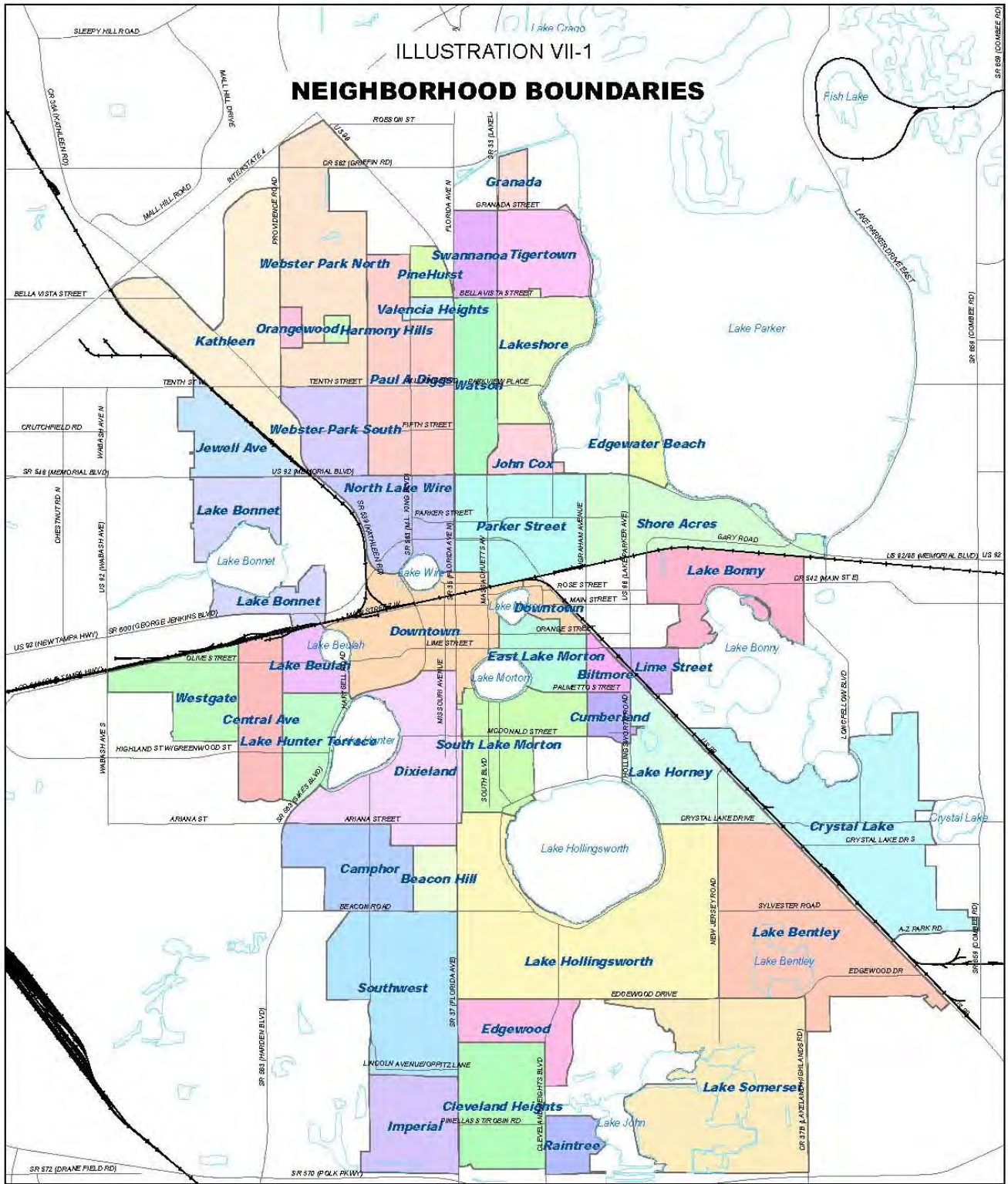
Special housing needs of the elderly and disabled are mostly to be met through conventional single-family homes, apartments, mobile homes, and group homes. While there should be an adequate supply to meet the needs, some persons may need to utilize available subsidized units (see TSD VII-One in the *Technical Support Document*.)

According to the Department of Children and Families, 57,687 persons were homeless in the state of Florida in 2009. In the Lakeland area the estimated number of homeless on a given day varies. A January 2009 point in time homeless survey conducted by the Polk Homeless Coalition counted 675 homeless persons in the Lakeland area. A distinction should be made between the resident homeless and transients. Local residents who lose their homes and are not accommodated by friends or relatives invariably become clients of local service agencies. The Salvation Army has such a program for homeless families where they are sheltered and helped to resume living in a home on their own. There are also several local area ministries that administer programs for homeless and transient persons offering shelter, meals, work, counseling and medical assistance.

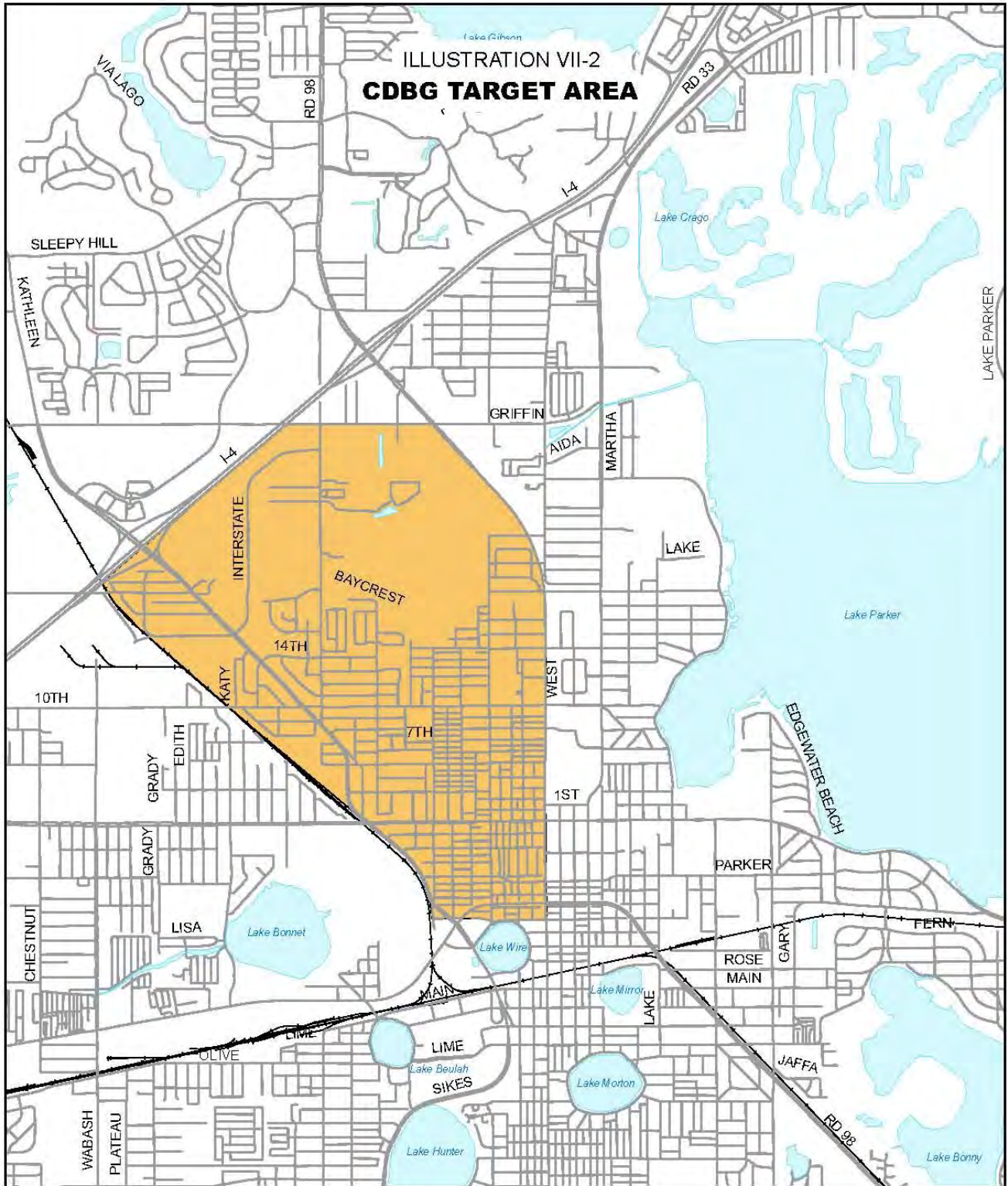
There are ongoing efforts by the local providers to improve coordination and planning among the various service agencies. The City of Lakeland is a member of a local coalition for the homeless, formed to assess the extent of homelessness and to coordinate actions and services to assist in meeting the needs of homeless persons.

The coalition is not currently a direct provider of housing. In 2009 the Homeless Coalition reported approximately \$1.2 million dollars of funding dedicated to Polk County for the Continuum of Care Programs.

In 2009 Polk County was allocated an additional \$1,222,000 from HUD in Homelessness Prevention and Rapid Re-housing Program to assist households and individuals to remain in their homes. Homeless Coalition of Polk County has noticed a significant increase in family homelessness and hundreds of calls are being received indicating the imminent risk of homelessness affects many families in our community. See details in TSD VII-One, Table VII-One(P) in the *Technical Support Document*.








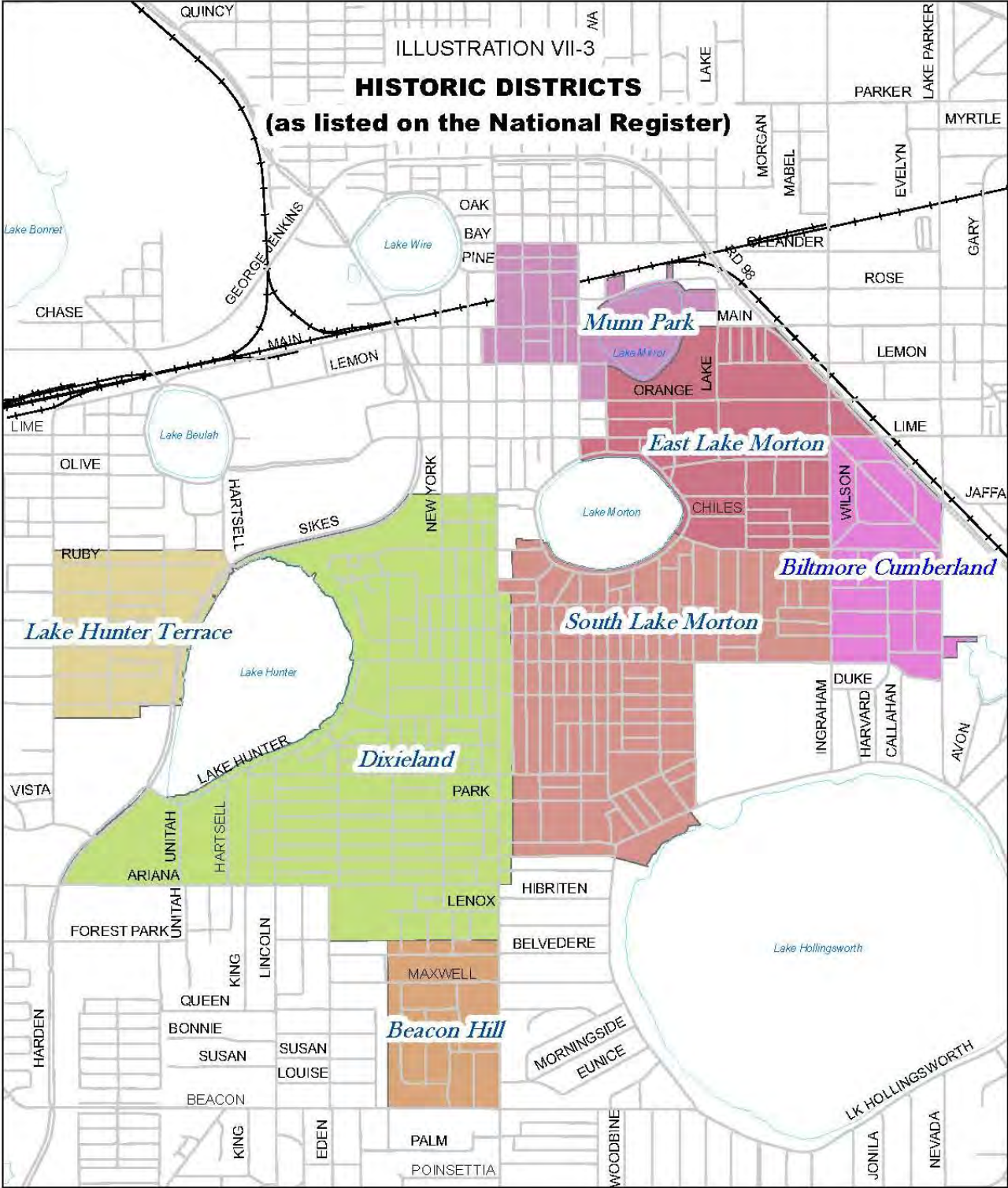
Source: Lakeland Community Development Department, 2010



 Target Area



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Source: Lakeland Community Development Department, 2010



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## GOAL, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to housing issues. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the measurable and attainable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Housing Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and with the other elements of this Comprehensive Plan and with the goals and policies of the *Central Florida Comprehensive Regional Policy Plan*.

**GOAL:**       **Promote the provision of adequate, safe and affordable housing for existing and future populations including those with special housing needs.**

**Objective 1:** Assist the private sector in providing new housing units over the planning period to ensure provision of housing of various types, sizes, and costs that meet the shelter needs of existing and projected populations, including the needs of very low, low and moderate income households and persons with special housing needs. Provide downpayment assistance to approximately 150 qualified persons by 2015, and another 150 by 2020.

**Policy 1A:** The City of Lakeland will continue to designate or reserve sufficient amounts of suitable land to accommodate the anticipated needs of residential growth. Estimates of acreages needed for residential growth are given in this Element.

**Policy 1B:** Residential sites mapped on the Future Land Use Map will permit a diversity of housing types, including conventional homes, mobile homes, manufactured housing, multi-family units, group homes and foster care facilities. Criteria concerning location is addressed in Lakeland's Land Development including location of group homes. In Transit Oriented Corridors, the City will allow higher densities to promote a mix of housing types and incomes near fixed transit services and hubs and within mixed-use activity centers.

**Policy 1C:** The City of Lakeland will continue to include in its land development regulations allowances for special housing facilities (i.e., group homes, foster homes) within residential areas. As per state law, group facilities of six or fewer persons shall be allowed in single-family zoning districts while larger facilities shall be allowed in multi-family districts.

**Policy 1D:** As an incentive to participate in the provision of affordable housing, Lakeland will offer surplus City property, including potential “infill lots” at a discounted cost, to developers or individuals who agree to build housing targeted for very low, low and/or moderate income households or for special needs or elder housing. This incentive will be available for households above moderate income if located in target neighborhoods with very low income levels.

**Policy 1E:** The City of Lakeland will continue to work with the local coalition for the homeless as well as qualified non-profit and private sector groups to promote adequate shelter and transitional housing for the local homeless population.

**Policy 1F:** The City of Lakeland will continue to assist eligible persons displaced by public projects.

**Policy 1G:** The City of Lakeland will continue to evaluate the building permitting process to ensure a highly efficient review procedure for residential construction and elimination of any outdated or unnecessary requirements in building codes. The Community Development Department shall complete a brief evaluation report at least every five years regarding the efficiency of the existing permitting system. The report may include results of an informal sample survey of local builders and contractors to determine if there are any procedures that they perceive as inefficient or overly burdensome.

**Policy 1H:** The City of Lakeland may increase the availability of low-income housing by awarding 15% of its HOME entitlement to a Community Housing Development Organization for acquisition of sites for the construction of housing units affordable to very low and/or low income households.

**Policy 1I:** The City of Lakeland will provide for the placement of mobile homes and manufactured housing consistent with Section 320.8285 and Section 553.38(2), Florida Statutes.

**Policy 1J:** Lakeland will continue to offer financial incentives in order to assist in the provision of adequate housing affordable to very low, low, and moderate income households. These incentives include allowing clustering of lots and zero lot-line development; allowing “accessory” housing; waiving application fees, processing fees and/or reimbursing impact fees for qualified affordable housing projects, and allowing smaller units on smaller lots as consistent with City *Land Development Regulations*.

**Policy 1K:** Lakeland will continue to offer downpayment and closing cost assistance to qualified applicants of very low, low, and moderate incomes using federal and state grant programs.

**Policy 1L:** Analysis of impediments to fair housing choices will be reviewed every five years in conjunction with the update of the City’s Consolidated Plan and Strategy for

expenditure of federal funding. Plans will be developed and implemented on an on-going basis to remove identified impediments to fair housing choice to the extent possible.

**Objective 2:** Eliminate substandard housing conditions through rehabilitation or demolition. Rehabilitate or replace at least 25 substandard housing units per year.

**Policy 2A:** The City of Lakeland will continue to utilize Community Development Block Grant funding as well as other Federal, State, and local subsidy programs to implement the Housing Rehabilitation program. This shall include, where funded, the energy weatherization of homes and any additional energy efficiencies achieved through implementation of the Florida Building Code requirements, as well as consideration of landscaping, and site layout issues as relate to maximizing energy efficiency.

**Policy 2B:** All new City redevelopment districts shall include a component to address housing rehabilitation needs in the district, where applicable.

**Policy 2C:** The Minimum Housing Code will continue to be enforced for all residential units, including conventional homes, manufactured homes, mobile homes, group homes, and foster care facilities, throughout the City of Lakeland.

**Objective 3:** Strengthen neighborhoods by continuing to implement the City's Neighborhood Improvement Program for older and/or declining neighborhoods to promote stability and revitalization of the City's existing neighborhoods.

**Policy 3A:** Residential neighborhoods will be protected through implementation of neighborhood improvement plans and sector plans which address, but will not be limited to, stability, safety, traffic, aesthetics and character, including historic resources.

**Policy 3B:** The City of Lakeland will continue to promote the conservation and restoration of historically significant housing through the work and role of the City's Historic Preservation Board and Design Review Committee, the maintenance of the City's historic structures database, and technical support for designated historic districts.

**Policy 3C:** *City Land Development Regulations* will continue to include buffering and other provisions which protect residential neighborhoods from potentially incompatible land uses.

**Policy 3D:** The City of Lakeland will develop ordinances as necessary to combat neighborhood and housing deterioration and will adequately fund the code enforcement function to uphold standards in all neighborhoods. The City will also continue to integrate the community oriented policing program philosophy of citizen support and input into all relevant police programs in order to improve neighborhood resident safety.

**Policy 3E:** The City will implement local sector plans to help make land use decisions, identify capital improvement needs, formulate redevelopment strategies, and identify the need for additional studies and plans to address issues within each of the nine designated sectors. Sector plans shall consider neighborhood level issues where appropriate.

**Objective 4:** Support efforts of public and private organizations to develop and implement innovative housing programs which increase housing availability to very low, low and moderate income households; in particular, programs which locate such housing within mixed income, stable neighborhoods.

**Policy 4A:** The City of Lakeland will continue to be a partner with the Keystone Challenge Fund which qualifies potential homeowners for federal and State assistance and mortgage loan processing. The City will provide financial support to the Keystone program to the extent allowed and will work with Keystone and other local non-profit organizations as part of Lakeland's neighborhood revitalization program.

**Policy 4B:** The City of Lakeland will coordinate the development of any applicable affordable rental and owner occupied housing programs with the Lakeland Housing Authority, Polk County, the Polk County Builders Association, lending institutions, and other public and private agencies.

**Policy 4C:** The City of Lakeland will provide technical assistance to neighborhood associations and other non-profit groups to foster neighborhood improvement, innovative housing solutions, and preservation and restoration of historic or affordable housing. The City will examine land development regulations and housing programs for improving the ability to preserve existing affordable rental and owner occupied housing, including the potential to incentivize preservation of affordable units within projects seeking to renovate such units or to convert the units to another type of use.

**Policy 4D:** The City will continue to support the efforts of the Lakeland Housing Authority in its attempt to renovate and de-concentrate local public housing as well as to improve the surrounding neighborhoods in which public housing exists. The City may provide down payment assistance to LHA residents seeking homeownership.

**Policy 4E:** The City will continue to support infill lot re-use for existing or new residential development. Strategies shall include conducting inventories of vacant lots in target neighborhoods and sharing the inventory with potential developers and/or builders. The City will also work with the Lakeland Housing Authority in its efforts to build on vacant, infill lots to improve target neighborhoods and to provide affordable replacement homes that would offer homeownership opportunities for existing tenants of public, rental housing.

**Policy 4F:** The City will continue to offer impact fee waivers and reimbursements for qualified affordable housing projects.

**Policy 4G:** The City shall work with the Polk County School Board to ensure the local schools in older or declining neighborhoods are maintained and revitalized, where necessary.

**Policy 4H:** To encourage greater mix of income in neighborhoods and to assist in fair housing efforts, the City will continue to support the Lakeland Housing Authority's applications for additional funding for its Section 8, subsidized housing program.

**Policy 4I:** During the planning period the City will use downpayment assistance, impact fee reimbursements and other housing programs and incentives to assist a minimum of approximately 550 very low, low and moderate income households in meeting their housing needs with new housing, rehabilitated housing and/or rental assistance payments.

**Objective 5:** Continue to identify and protect historically significant housing.

**Policy 5A:** The City of Lakeland will continue to work to effectively protect and preserve structures deemed to be historically significant through the enforcement of appropriate design guidelines.

**Policy 5B:** The City of Lakeland will continue to promote the conservation and restoration of historically significant housing through the National Register of Historic Places designation, local historic designation, and assistance from the City's Historic Preservation Board.

**Objective 6:** Ensure that persons and businesses displaced by local government programs receive uniform and equitable treatment in finding relocation housing.

**Policy 6A:** The City of Lakeland will assist in finding standard housing at affordable costs for persons displaced through local government action.

# INTERGOVERNMENTAL COORDINATION ELEMENT

## INTRODUCTION

The purpose of the Intergovernmental Coordination Element is to identify existing mechanisms such as interlocal agreements between the City and various other entities, to assess the effectiveness of these mechanisms, and to provide guidelines regarding future coordination. Those guidelines must include a process to resolve conflicts. The element must also address how the City is and will in the future collaborate with adjacent local governments, the School Board, and other agencies providing services in the Lakeland area such as the water management district. Another issue which must be addressed is compatibility between the City's comprehensive plan and the plans of adjacent local governments.

This element includes an inventory, contained in TSD VIII-One in the *Technical Support Document*, of all City departments and how each interfaces with other governing entities. The inventory includes information on the nature of these relationships and their effectiveness. The City consists of the Office of the City Manager and its divisions plus the departments reporting to that office. The organization of these departments within the Lakeland city government structure is shown in Illustration VIII-1. The definition of coordination as a practical, working term is simply the coordination between two or more governmental entities on one or more issues.

## BACKGROUND

Lakeland shares common borders with both Polk and Hillsborough Counties. There are 17 incorporated municipalities within Polk's 1,823 square miles. Out of a total population of 585,733 in 2008, 365,265 resided in the unincorporated area of the county. It is estimated that by 2010 approximately 39% of these residents will live in the urbanizing area around Lakeland; many others live in northeast Polk County due to its proximity to the Orlando area.

Although Polk County has concerns about urban issues such as transportation, housing problems, and sewer service, the County has continued to focus upon historic issues of economic development, agriculture, and some attempt to address the environmental issues related to rapid growth including flood control. The need for economic diversification was magnified by the local effects of the recession during 2007-2010 period and spiraling downward property values. The County and municipalities in Polk all face challenges to maintain basic services for their residents given legislative caps on property tax increases and given local falling assessed values. These issues make imperative the need for cooperative relationships to promote economic development, attract new industries and assist in maximizing efficient service delivery to residents.



Polk County shares a 45-mile western boundary with Hillsborough County. Part of the Lakeland city limits extends westward to this common county line. Hillsborough is a 1,053 square mile coastal county with a 2009 population of 1,196,892 and only 3 incorporated municipalities. One of these municipalities is Plant City whose corporate limits now extend up to the shared County line and abut a portion of Lakeland's western boundary, as can be seen in Illustration VIII-2. Plant City had an estimated 2009 population of 34,860. Lakeland and Plant City may coordinate directly regarding current development proposals, but the Hillsborough City-County Planning Commission and staff, located in Tampa, are responsible for the comprehensive or long-range planning for Plant City. Thus, coordination efforts must include representatives from both entities, Plant City and the Hillsborough City-County Planning Commission. For example, continued development immediately west of and adjacent to County Line Road has been the topic of several joint discussions between Lakeland, Plant City, Polk County and Hillsborough County. Informal meetings have proposed the drafting of an interlocal agreement regarding the impact of growth along the County Line Road corridor and use of access management to preserve the roadway's capacity.

Southeast of Lakeland is Bartow, the County seat. The 2008 population of Bartow was estimated at 17,296. Bartow's corporate limits are south of the Lakeland Planning Area. The principal issues with Lakeland consist of service area agreements for potable water service and avoiding strip development along U.S. 98, the highway connecting these cities and for which the two Cities were joined by FDOT and Polk County in a Corridor Access Management Plan (CAMP) adopted in 2004. Coordination on these types of issues will become more important as Bartow expands northward and/or as Lakeland expands southward.

Between Bartow and the Hillsborough County line is the town of Mulberry, with an estimated 2008 population of 3,467. Mulberry is a gateway to the large phosphate mining operations in southern Polk County, and is literally surrounded by mined lands. Despite its location at the intersection of two well-traveled State highways, Mulberry has suffered slow growth due to the negative impacts of heavy industry and phosphate mining operations.

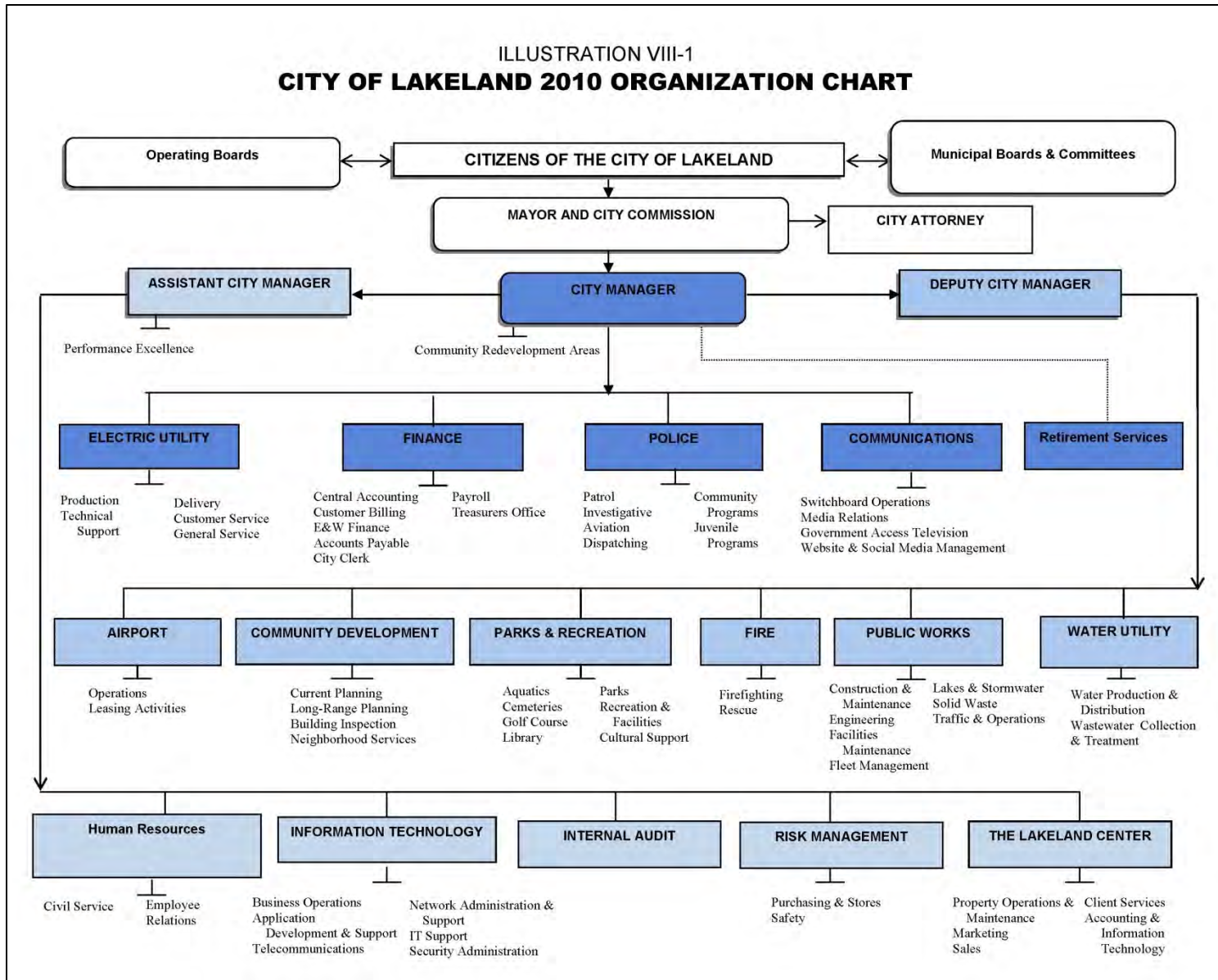
The urbanized Auburndale-Winter Haven area is located east of Lakeland. While some of this area includes mined-out and state-owned lands not suitable for development, it also includes older settled areas such as the community known as K-Ville as well as areas of anticipated new growth such as that surrounding the Polk County Parkway (e.g. the Polk County Commerce Center DRI). Although this area is buffered somewhat from the Lakeland urban area by the mined lands, there are intergovernmental issues involving municipal service areas, road projects, and compatibility of future land uses near the future Florida Polytechnic University campus. In 2005 the City of Lakeland and the City of Auburndale signed an Interlocal agreement regarding annexation areas and service areas as one means to facilitate future delivery.

When adopted in 1991, the Intergovernmental Coordination Element began with a series of meetings between Polk County and its municipalities. These meetings produced a memorandum of agreement which delineated Municipal Planning Area boundaries. The area for Lakeland is shown in Illustration VIII-3 and is referred to as the Lakeland Planning Area. This area is not a service area or a future annexation area, but an area where the City has legitimate planning concerns and desires some influence over the development of private and public improvements. All of the area receives some public services from the City. Major parts of the area receive two or more City services and may be considered for future annexation.

Polk County retains ultimate planning jurisdiction over the unincorporated lands within the Lakeland Planning Area, with Lakeland recommending on a case-by-case basis preferred land use designations to the County. Both Polk County and the City of Lakeland have future land use maps which include these unincorporated lands. A major goal of the joint planning effort has been to produce consistent future land use maps. Where land use designations may vary, once again, Polk County has ultimate jurisdiction. Specific areas which will require close coordination with the County include the area south of and proximate to the Lakeland Linder Regional Airport, land areas along the US Hwy 98 S. corridor, and land uses east of the City next to Williams/FPU within the Polk County DRI known as the Polk Commerce Center. At some point the City and County may consider a new joint planning agreement to identify future land uses, issues and opportunities for coordination and agreed upon principles for land use changes.

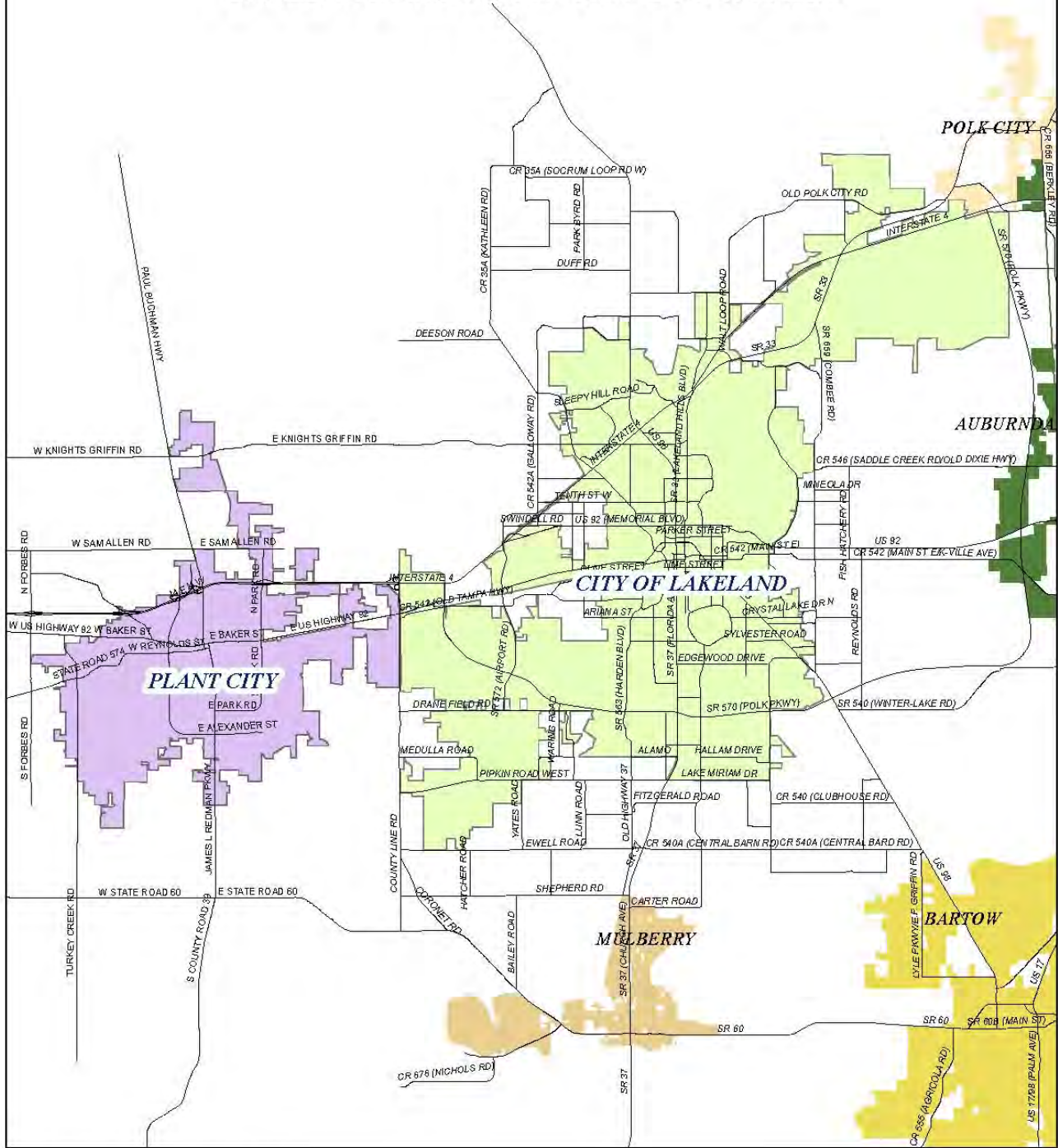
Also of mutual concern is the planning and implementation of transportation improvements and improved, expanded transit services which cross jurisdictional borders. The Lakeland Mass Transit District is the entity that operates the public bus service for the city limits as well as the Lakeland metro area located within Polk County. Efforts to coordinate with the County on transportation issues are made primarily through the countywide Transportation Planning Organization (TPO). These are by no means the full list of issues which the City and County must coordinate. Similar land development regulations are typically sought between the two entities due to potential annexation activity on the City's part. Coordination of solid waste services, wastewater effluent disposal/reuse opportunities, and coordination of alternative water supply and conservation activities will also be increasingly important over time.

ILLUSTRATION VIII-1  
**CITY OF LAKELAND 2010 ORGANIZATION CHART**



Source: City of Lakeland Fiscal Year 2010 Annual Budget.

## ILLUSTRATION VIII-2 LAKELAND AND PLANT CITY BOUNDARIES

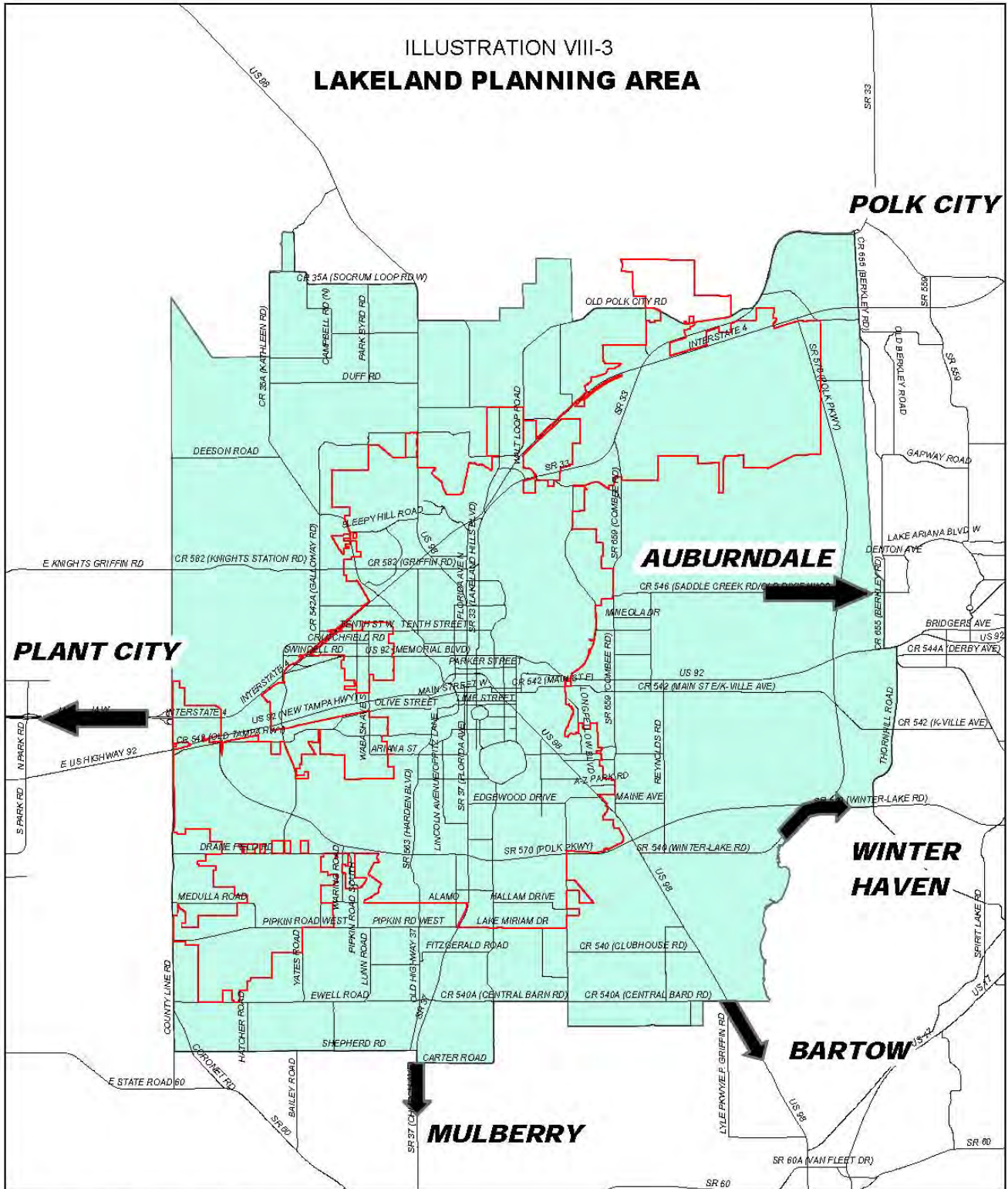


Source: Lakeland Community Development Department, 2010



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ILLUSTRATION VIII-3  
**LAKELAND PLANNING AREA**



Source: Lakeland Community Development Department, 2010



Lakeland Corporate Limits



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## SUMMARY OF FINDINGS

### INVENTORY

There are five adjacent municipal governments and two adjacent counties with which the City of Lakeland coordinates activities ranging from routine project reviews to State mandated permitting. A survey of individual City departments revealed that for most of the entities with which the City coordinated, the working relationships are in good condition. There are several mechanisms which appear to be weak or in need of improvement, especially as apply to regulatory agencies. This is detailed in TSD VIII-One in the *Technical Support Document* which lists the coordinating entities, the mechanisms used to facilitate coordination, the nature of the relationship with each City department, and an assessment of effectiveness.

While this element does not examine all routine, on-going interactions between the City and other entities, and excludes almost all City-Federal interactions, there are as many as 178 intergovernmental coordination activities listed in the *Technical Support Document*. The coordinating mechanisms in the inventory are classified as “State Law” (i.e., required by statute or mandate), “formal” (established by interlocal agreement, contract, etc.), “routine” (on-going activity often put in place by a formal agreement), and “informal” (usually voluntary interaction). Most coordination occurs within a formal or State law framework. Informal coordinating mechanisms represent about 33 percent of all mechanisms.

Lakeland coordinates more with Polk County than any other local government. Coordination with Polk County represents about 23 percent of all coordination mechanisms. Examples of the various coordination activities between the City and Polk County include State mandated civil defense coordination, the formal contract to provide City fire protection outside the City limits, and informal communication between the City and County Public Works departments to share accident and traffic count data. Another major coordination effort involves establishing and maintaining levels of service on local roadways as discussed in greater detail in the Transportation Element.

### CONFLICT RESOLUTION

There are a variety of coordinating arrangements established to deal with areas of overlapping jurisdictions. These include the Transportation Planning Organization (TPO) to coordinate transportation projects within Polk County, and the Southwest Florida Water Management District permitting procedures to manage water supplies, maintain natural drainage systems and protect property from flooding caused by development. Other areas of interaction which could benefit from an established coordination mechanism are discussed in the Issues and Opportunities section.

Finally, the Goal, Objectives and Policies section of this element allows for the formation of an Ad-Hoc conflict resolution committee under the direction of the City Manager when direct staff contact fails to resolve a conflict with another local government. Developed in

conjunction with Polk County, the process outlines steps to be taken to resolve conflicts and changes in levels of involvement should an impasse occur. While this process has not been needed as of early 2010, it is an intermediate step that may resolve the problem prior to formal conflict resolution proceedings with official mediators.

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## **OTHER COMPREHENSIVE PLANS**

The Intergovernmental Coordination Element (ICE) must address the relationship of Lakeland's comprehensive plan to the plans of other adjacent governments and the school district's facilities plan. Coordination with Polk County has included discussion of what process may be best to use in coordinating annexation notification and future land use of the annexed area. The County receives a copy of all proposed/transmitted City Plan amendments, map and text. The County was also copies on the City's draft Evaluation & Appraisal Report findings, for their review and comment. Coordination between agencies occurs as time permits. In January, 1999 a Land Use and Transportation Forum made up of planners from Polk County, the Central Florida Regional Planning Council and cities including Lakeland began meeting regularly to discuss intergovernmental issues. This forum has continued to be used for coordination regarding land use and transportation issues and is hosted by the Polk County TPO. Coordination activities are on-going among most adjacent local governments including Hillsborough County and Plant City regarding plan amendments, developments of regional impact, annexations, utility service planning areas and transportation issues.

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## **CAMPUS MASTER PLANS**

Formerly, the University of South Florida Polytechnic had a Lakeland campus in conjunction with the Polk State College located just south of Lakeland on Winter-Lake Road. However, the Williams Company, as part of their Development of Regional Impact located near the Polk Parkway and south of Interstate 4, donated several hundred acres to USF Polytechnic for a new campus to be located in the northeast corner of the DRI. USF entered into a campus development agreement with the City in December of 2007. The campus was later designated to become Florida Polytechnic University and opened in 2014. Pursuant to Ch. 240.155 Florida Statutes, the City must recognize and coordinate as necessary with any campus master plans prepared for campuses within the City limits. There are at least five post-secondary institutions within the City including Florida Southern College, Florida Metropolitan University, Florida Career Institute, the Academy at Lakeland Linder Regional Airport, and Southeastern College. Other non-state institutions within the Planning Area, outside the City limits, include Polk State College and Travis Technical College.

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## **COLLABORATIVE PLANNING**

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### **THE SCHOOL BOARD:**

The City works with the Polk County School Board to achieve various objectives. These include school concurrency, siting new schools, joint use of recreation facilities/parks and the sharing of demographic and development data.

The City signed an interlocal agreement with Polk County and the Polk County School Board in 2001 regarding public school facility and land use planning per Ch. 163.31777 F.S. The agreement includes procedures for annual sharing of local government population and development data, school board facility plans, siting of new schools, an annual summit of elected officials, collocation and shared use of facilities. In 2007 the City adopted the Public School Facilities Element that provides for a county-wide uniform school concurrency management system in coordination with the School Board, the County, and the 14 cities in Polk County that are not exempt from the concurrency requirements per Ch. 163.3180(13) F.S.

**School Concurrency Management System:** In March 2008, the City, Polk County School Board (PCSB), County, and the other 14 non-exempt cities in the Polk County School District implemented a uniform school concurrency management system as required per Chapter 163.3180(13) F.S. and in accordance with the Interlocal Agreement for Public School Facilities Planning. The concurrency management system is implemented at the sub-district level and based on the School Board's financially feasible capital facilities plan to provide for a uniform level of service. The formalization of the exchange of data related to proposed residential development was necessary for the School Board to make school concurrency capacity determinations prior to the City's consideration for approval of residential site plans and plats. The City provides notice to and coordinates with the PCSB regarding land use or zoning actions which may increase residential densities as per the Interlocal Agreement on Educational Facilities. Additionally, a formal process to implement mitigation for school facilities has been established. School concurrency mitigation agreements require the School Board and the affected local government to concur to the terms of the agreements with the applicant/developer.

#### **POLK COUNTY AND OTHER MUNICIPALITIES:**

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**Annexation:** Lakeland coordinates with Polk County regarding many issues. Several small county enclaves were annexed between 2000 and 2009 per interlocal agreements whereby the annexations were agreed to by the City and the County. As part of the regular, staff-level intergovernmental coordination between the City and County, the City provided the County with a map of its annexations and the future land use designations assigned to each area. The City uses a checklist approach to issue a form letter to Polk County when an annexation is proposed, prior to any public hearing. A letter and a location map are sent to the County and any applicable city to tell them generally where the proposed annexation is located and to contact us if there are any concerns or questions. The letter requests the County to identify the future land use designation on the subject property in order to facilitate the processing of a City future land use designation for the same property. This notification will chiefly benefit the County by assisting them in keeping their Future Land Use Map updated in regard to corporate limits. However, it will also allow an opportunity for consideration of appropriate utility service area adjustments and/or land use density and intensity changes for the unincorporated area near the new corporate limits. The City has



also committed to notifying adjacent cities where Lakeland proposes an annexation within about a mile of their corporate limits.

**Utility Service Planning Areas:** In 1993, the City and the County reached an agreement regarding delineation of utility service planning areas for potable water and wastewater. The agreement provides for an annual review and includes a map of the agreed upon utility planning area (see Illustration VIII-4 Interlocal Utility Agreement). Any changes to the map or agreement must be reviewed and approved by the two political bodies.

The City hopes to establish formal utility service planning area and common boundary (annexation) agreements with the all adjacent municipalities in Polk County. At the 1999 conference on Intergovernmental Coordination held in Bartow and led by the Florida Department of Community Affairs it was determined that, if feasible, the County may decide to serve those areas where the cities do not provide utility service. Also, private franchise systems may exist within any of the municipal service territories. The Cities and County may also want to discuss the need for any formal written agreements regarding utility service provision for areas outside or in between the delineated service planning areas; if no written agreements are currently needed then they can reassess this during their relevant discussions of utility service areas. One forum for such discussion is the local, informal city manager (and county) meetings held approximately each month. Any conflicts regarding utility service areas should first be addressed informally by staff and/or the relevant city or county manager.

In 2005, Lakeland entered into an agreement with Auburndale regarding water and wastewater service areas and general agreement on common jurisdictional boundaries. The interlocal agreement includes an illustration of these boundaries, subject to future changes as mutually agreed upon between the two cities. Although these agreements are subject to revision from time to time, they should assist in maintaining good intergovernmental relations.

**Other Coordination with Polk County:** Lakeland holds agreements with the County that address provision of fire, law enforcement, recycling services and parks and recreation. Since 1999, the County's parks and recreation master plan has documented a complete inventory of all existing parks including those within the cities. One objective of the master plan is to define the role and relationship between the County and municipal recreation service providers. Furthermore, the City works with the Polk County Transportation Planning Organization regarding coordination of transportation issues including roadways, level of service issues, non-motorized trails/routes, aviation, bus service, mass transit/rail service and multi-modal districts and corridors. The City participates in the TPO's Land Use and Transportation Forum, intended to address coordination of level of service and land use issues in regard to the regular five year update to the Long Range Transportation Plan. This forum provides an opportunity for municipalities to improve consistency of land use and transportation planning with each other and with the County. In regard to aviation, the City participates in the Polk County Joint Airport Zoning Board (JAZB) and the Joint Airport

Zoning Board of Adjustment (JAZBA) to review aviation issues in the County, including municipal airports. Hillsborough County is also a member of the Polk County JAZB due to overlapping airspace in eastern Hillsborough and western Polk counties.

Other collaborative planning efforts between the City and County involve provision of affordable housing, and library services. The City of Lakeland participates in the Countywide library system, formed in the late 1990's, in which County residents now have access to City library facilities at no charge. In regard to housing, Lakeland and the County are participants in the Polk Homeless Coalition which addresses services and housing for the homeless and those in transition to regular, non-emergency shelter housing. The City also agreed to assist the County in expending some of the County's State Housing Initiatives Partnership (SHIP) funding, specifically to accomplish housing rehabilitation in the Paul A. Diggs neighborhood of northwest Lakeland, and has coordinated other housing efforts where possible.

As part of their overall effort to enhance coordination of their mutual land use planning efforts, the City and County may wish to consider an updated interlocal or joint planning agreement regarding land use and public services coordination. This agreement could address potential City annexation areas and how City future land use would relate to the area's Polk County future land use designations. Such an interlocal agreement may allow expansion of the City's Comprehensive Plan Certification area and could enhance coordination of other local planning initiatives like sector or special area planning, corridor planning and coordinated development review processes.

## **OTHER REGULATORY AGENCIES**

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The City coordinates with regulatory regional and state agencies such as the water management district and Department of Environmental Protection, as needed. Much of the formal coordination efforts are listed in the Inventory for this element, found in the *Technical Support Document*. Informal coordination includes exchange of data, newsletters and review of draft plans or plan amendments. For example, City staff attends meetings set up by the Southwest Florida Water Management District (SWFWMD) regarding their most recent plans and studies including regional water supply assessments. In addition, Lakeland's Water Utility Director is a member of the "working group" for the Southern Water Use Caution Area (SWUCA). Issues regarding the City's updated water level of service standards and water conservation efforts will continue to be coordinated with the SWFWMD to ensure consistency with district policy and guidelines. Moreover, per Florida Statutes, local governments that are subject to a regional water supply plan must adopt a local 10-year water supply facilities work plan that identifies alternative water supply projects from the SWFWMD regional water supply plan or other locally proposed projects in their Comprehensive Plan. The City of Lakeland adopted its local water supply plan in 2007 in coordination with the Regional Water Supply Plan. The City's local water supply plan will be required to be updated every five years, within 18 months of SWFWMD's 5 year update of the Regional Water Supply Plan.

## ISSUES AND OPPORTUNITIES

### POLK COUNTY SCHOOL BOARD

Though the primary mission of any school district is education, the delivery of this service is tied to the planning profession through the need for and sharing of the analysis of population projections, school site selections, transportation and other infrastructure needs. Coordinating the planning for schools with City planning activity is important to ensure that the school functions well within the given neighborhoods. For example, the cooperative arrangement for the joint use of the City's Dobbins Park by Dixieland Elementary enhances the neighborhood's use of the park while benefiting the school. Often school facilities are ideally located for the delivery of neighborhood recreation services. This is the case with Southwest Elementary and Middle Schools which have recreation facilities within an established residential neighborhood. An arrangement between the City and School Board making the outdoor facilities available for public use after school hours relieves the need to duplicate public recreation services in the neighborhood. In return, the recreation areas have received City funds to put in place new, additional recreation equipment.

The Polk County School Board interacts with the City regularly. One of the best examples of such coordination was an agreement in which the two entities agreed to fund an architectural master plan for revitalizing a local high school campus (Lakeland Senior High). Another example is the joint use of the City's Lake Bonny Park with the School Board. The City also participates in the School Board's process for the location or siting of new schools; at times we have disagreed over the impacts from the sites selected by the Board. The historical lack of a clear State requirement for school districts to abide by local concurrency requirements (for evaluating the impacts of the new schools on roadways, parks, water, wastewater and other public services) has meant schools could be constructed without meeting any local concurrency standard. However, Chapter 235 and 163.31777, Florida Statutes, do require new or expanded schools to be consistent with a local government's future land use element.

Lakeland entered into an interlocal agreement in mid-2001 with the Polk County School Board and Polk County Board of County Commissioners regarding educational facility and land use planning. This agreement was signed by all cities in Polk County. The interlocal agreement addresses a host of issues including: annual steering committee meetings of the school district and local government staff to share population and residential development data; joint use of facilities such as parks or playgrounds; school site selection including a technical review process; inclusion of a School Board representative on the local government's planning board as an ex-officio member; local government review of the five year School District Facilities Work Program; and an annual summit of the elected officials of the School Board and local governments in Polk County to discuss the effectiveness of implementation of the interlocal agreement on school facilities planning.

The Polk County School Board's 5-year facilities plan indicates what needs there are in various geographic areas for building new elementary, middle or high schools in and around

the Lakeland area, to relieve overcrowding and/or imbalanced socio-economic and/or racial populations within local schools. Public schools are allowed in any future land use category of the *Lakeland Comprehensive Plan* (with exceptions for conservation/preservation areas and the Green Swamp ACSC.)

The City will continue to work with the Polk County School Board to identify appropriate sites for new schools in the City of Lakeland and/or in the City's water and wastewater service areas. In the years following the County's adoption of a school impact fee on new residential development in 2003, significant school construction and rehabilitation occurred. During this time Highland Groves Elementary and Tenoroc High School were constructed and several new charter schools opened to meet the demand for school capacity.

The possible rezoning of existing schools due to the introduction of new school facilities often presents a dilemma for parents and students. Changes to school zones are considered highly connected to preservation of neighborhood stability and housing values. The City recognizes that residents of neighborhoods prefer neighborhood elementary schools that are located within walking distance of students' homes and that housing choices and investments are often made in part due to the particular school zone within which the residence is located. Schools also represent community assets in the form of a local meeting place for residents. Parent organizations that are vital to volunteer labor at schools are sometimes disrupted or temporarily disabled due to school rezoning actions. It is therefore crucial that the impact of rezoning of schools be equitable and minimizes disruptions to neighborhoods located far beyond the location of the new school facility.

In 2007 Lakeland adopted the Public School Facilities Element to implement school concurrency pursuant to section 163.3180 of the Florida Statutes and formalize the planning process between local governments and school boards. The element includes a locally set level of service standard for school capacity and links the local level of service standard to local government development review processes.

## **OTHER LOCAL COMPREHENSIVE PLANS**

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State guidelines for the Intergovernmental Coordination Element require an analysis of "growth and development proposed in comprehensive plans in the area of concern" (adjacent local governments). The local governments adjacent to the City of Lakeland are shown on Illustration VIII-3.

There are several issues in the plan elements which could benefit from improved intergovernmental coordination. In particular, the water and wastewater service areas of the adjacent cities are the subject of a formal interlocal agreement similar to what has been achieved with Polk County. The City entered into a utilities service agreement with the City of Auburndale in 2005 to identify common jurisdictional boundaries for the provision of water and sewer in the northeast sector of the Lakeland planning area. Currently, the City is involved in on-going negotiations with the City of Bartow with the intent of formalizing an agreement on water, sewer and electric service areas in the southeast sector of the

Lakeland planning area. This would assist each local government in clarifying the service areas and providing for an annual opportunity for review and update of the agreement.

The City and Polk County have an on-going cooperative effort in regard to coordinated review of new proposed development adjacent or within proximity to the City corporate limits. This is a staff-level effort to notify the other jurisdiction of pending amendments to their respective Future Land Use Maps, including potential annexations. The City has requested that the County forward information regarding pending plan amendments to Lakeland with sufficient time to allow our input prior to the County staff report being completed. On the part of the City, there is a need to provide assurance that, prior to a formal public hearing, the County is notified of Lakeland's intent to annex any unincorporated area. Large annexations brought about by referenda and annexations of enclaves pursuant to an interlocal agreement with Polk County have built-in, mandatory notification requirements. Typically, single property annexations due to wastewater annexation agreements require a letter of notification to the County and request for County land use information. Note that Illustration VIII-5, Year 2020 Potential Corporate Limits, depicts an area where the City may eventually grow/annex. However, these areas are subject to change or delay for various reasons including fiscal constraints.

The State's Comprehensive Plan Certification Program presented the City and County with a new opportunity to update or adopt a new formal Interlocal/joint planning agreement on land use planning coordination between the City and County. The Certification Program allowed the State to certify that Lakeland's Comprehensive Plan meets certain standards as defined in Chapter 163.3246, Florida Statutes, that translate into no further State or regional review of many types of amendments to the City's Comprehensive Plan. The City was originally certified in the summer of 2004 and the certified area is depicted in Illustration VIII-6, Lakeland Comprehensive Plan Certification Area. By Statute, the City and the State Department of Community Affairs (DCA) outline in a written agreement all provisions for the City's certification including monitoring measures, a work program to improve on some planning issues related to certification, and normal stipulations such as what might cause revocation of the certification. While the Statute allows certification to extend as long as 10 years, it also requires re-evaluation of certification eligibility at the time of the community's Evaluation and Appraisal Report or EAR. Lakeland's EAR was adopted in 2009 and it's certification has remained in good standing. Pursuant to Florida Statute the State-designated Area of Critical State Concern (ACSC) is not permitted to be included in the certified area and amendments for new DRIs (which the City no longer will have as a Dense Urban Land Use Area or DULA per 2009 legislation); text amendments addressing new legislatively mandated changes such as the first adoption of the Public School Facilities Element, are also excluded from exemption.

Annexed lands are not covered by certification unless the certified city has a DCA-approved Joint Planning Area agreement with the County that indicates conceptual land uses for the annexed land. The JPA agreement must be followed by an amendment to the

Comprehensive Plan to adopt that JPA boundary as the new applicable Certified Area as part of the procedure to amend the Certification Agreement and its associated boundaries.

However, proposed future land use map amendments within the certified area qualify as exempt from State review due to Lakeland's certification. For example, the entire Central City development area has been included in the Certified area, and exempt from State and regional review of land use changes therein, since 2004. Most proposed text amendments to the City's plan have also been exempt from State review. This offers several advantages to the City including shortened time for amendments to go into effect once adopted by the Commission, a shortened time for formal review of proposed land use map amendments and more certainty to private sector interests once local approvals are secured. Per the Certification Agreement the City is required to hold a public hearing on the annual certification monitoring report; that report includes analyses to evaluate progress per the agreement's statistical and programmatic provisions. However, lack of progress on a given monitoring factor such as urban compactness or affordable housing, would not, by itself, be enough to nullify certification.

Historically and relative to the City of Lakeland, Polk County has tended to be liberal in its development approvals, although somewhat limited by lack of infrastructure and services. The City has been more restrictive and cautious in extending wastewater service beyond the corporate limits. The result has been more rapid growth on the periphery of the City limits which may lack complete urban services. When these areas are annexed into the City, there may be problems with drainage, wastewater service, access management, or issues which the City inherits. In the 2001-02 period, the City and County adopted the same multi-modal level of service standard for the transportation system to allow for more consistent development review standards. It will be important to continue coordination on this issue through the TPO long range plan update process as that multi-modal LOS standard becomes more refined. Also, as the County's land development code has been updated, and where the code is properly enforced, there have been fewer annexation related problems.

County implementation and interpretation of its comprehensive plan in terms of where and to what extent development is allowed can also sometimes be an issue of concern. For instance, in the period following the 1990 adoption of the County's comprehensive plan, the County tended to approve requests for new or expanded strip-type development along major roadways in Linear Commercial Corridors, including where such approvals expand the depth or length of the existing commercial corridor. Lakeland on the other hand, exercised a more conservative approach in interpreting policies regarding infill of existing linear or "strip" commercial corridor development. The different political realities that the two jurisdictions must contend with and operate within can impose a practical limit on the degree of consistency of land use and development review consistency.

However, the City will continue to pursue coordination regarding common land use planning with Polk County to ensure land use compatibility in the Lakeland Urban Area. For

instance, coordination will be required for land use proposals near the Lakeland Linder Regional Airport and along major roadways and transit corridors such as U.S. Hwy 98 and S.R. 37/Florida Avenue. As the City migrates towards a form based code in its *Land Development Regulations*, new differences between the City and County in terms of development standards may be encountered. This may require a higher level of communication between city and county current planning staff and consideration of how the differences may be minimized.

One opportunity for increased cooperation is the City's Sector Planning efforts. The City divided the metro Lakeland area into geographic units that mostly followed physical boundaries such as roads or waterways. These "sectors" were locally defined to help group together neighborhoods and surrounding areas that could be more closely studied for trends and projections, needs and opportunities with the findings presented in a brief fold out brochure like "plan" that was user-friendly. The sectors typically include unincorporated areas adjacent to city boundaries; some sectors are mostly inside the city while others are mostly outside the city. Each sector planning effort strives to review existing land use trends, population projections, infrastructure needs and capital planning for the area. Inter-agency coordination for the City's sector planning efforts typically include Polk County, the School Board, service providers like law enforcement and outreach to any identifiable neighborhood groups.

As Lakeland moved forward in 2012 with its third sector plan in Northwest Lakeland (having already completed Southwest Lakeland and Downtown), coordination with the County became more critical since the Northwest Lakeland sector lies primarily within unincorporated Polk County. Additional sectors that will require County input and coordination include East Lakeland (Sector 4), Southeast Lakeland (Sector 9), North Lakeland (Sector 6), Northeast Lakeland (Sector 5), and South Central Lakeland (Sector 3). Sectors which have pressing redevelopment, crime and/or other significant challenges within the unincorporated portion of a sector will typically benefit from a higher level of County involvement and coordination.

## **FACILITIES OF COUNTYWIDE AND REGIONAL SIGNIFICANCE**

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Excluding transportation, there is not a formal process in place for consideration of the siting of facilities with countywide significance, including locally unwanted land uses, other than the public hearing process. However, there does not appear to be a major issue pending in the next 10-year planning period.

Developments of Regional Impact (DRIs) are reviewed through a series of workshops and hearings held by the Central Florida Regional Planning Council and Board of County Commission, with some opportunity for City input. The City has had concerns regarding the 2008 approval of the CSX Intermodal Logistics Center DRI located in Winter Haven. The City's concerns are chiefly regarding impacts of increased freight train traffic downtown and the possibility of the increased freight traffic preempting any future potential for commuter rail service to connect Lakeland to Tampa and Orlando along the existing rail right of way.

The elimination of DRI review for Dense Urban Land Use areas per 2009 legislation (SB 360), will require greater local commitment to coordination regarding transportation and public services impacts and any impacts to regionally significant resources.

Regional visions and other efforts to connect the central Florida region via mass transit supported by One Bay (Tampa Bay area) and MyRegion.Org have created forums for Lakeland to participate in shaping a regional connection concept. Probably the most significant opportunity for regional connectivity is the potential for federally funded High Speed Rail (HSR) between Tampa and Orlando with a stop in Lakeland. Since Florida has been awarded funding for HSR, greater levels of regional involvement, coordination and cooperation will be required to ensure this new regional transportation system and its station locations compliment the City's and region's long range growth management plans.

## **HILLSBOROUGH COUNTY**

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The east-west runway at Lakeland Regional Airport is less than 2 miles from the Hillsborough/Polk County line. The airport tower control zone encompasses a 5-mile radius with the airspace approach to the east-west runway (Runway 9) beginning over eastern Plant City and Hillsborough County. The Plant City zoning ordinance includes the M-AP Airport-Industrial District which permits a variety of industrial, agricultural and commercial operations while restricting lighting, radio and electronic use, smoke emissions and setting height and other limitations which could interfere with airport operations in the area of Plant City's airport, located on the west side of the City. The Plant City future land use map indicates a large area of industrial uses in east Plant City due to several DRIs approved in that area.

In addition, Hillsborough County approved a very tall tower (between 1,500 to 2,000 feet high) in eastern Hillsborough County that had been denied a permit by the Polk County Joint Airport Zoning Board of Adjustment (anything over 500 ft. requires a variance from JAZBA) to locate the tower in southwest Polk County. Thus, future coordination regarding land use approvals between Lakeland, Plant City and/or the Hillsborough City-County Planning Commission will be important to maintaining an obstruction-free and flight-hazard free zone in the airspace for our respective airports.

Since 2008, Lakeland has been informally participating in the Tampa Bay Area Regional Transit Authority (TBARTA) Land Use Working Group. TBARTA was created in 2007 to develop and implement a Regional Master Plan for the seven-county West Central Florida region consisting of Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas and Sarasota Counties. Lakeland and Polk County were identified as key partners and invited to participate. Lakeland staff regularly attends the Land Use Working Group meetings to discuss long range goals to connect the TBARTA area with Lakeland via regional bus and rail transit and related land use issues.



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## **LAKELAND HOUSING AUTHORITY**

The Lakeland Housing Authority plays a crucial role in providing housing for low income City residents. The Authority owns 453 housing units in various locations of the City and administers a Section 8 rent supplement program that assists a similar number of households. There is typically a long waiting list for the available units and on-going challenges in maintaining this housing stock.

It is in the City's interest to work with the Housing Authority to ensure units are properly maintained to meet all City codes and to best serve the Authority's clients. Intergovernmental coordination has continued regarding the issues of affordable housing, homelessness, and how public housing may be integrated into mixed use neighborhoods that can offer services (retail, educational, medical, transit etc) within walking distance of public housing clients. The City will continue to coordinate traditional activities that may assist the Housing Authority, including code enforcement and public housing rehabilitation. On-going coordination and open communication is necessary to address other problems and accomplish mutual benefits for the City, the Authority and their clients.

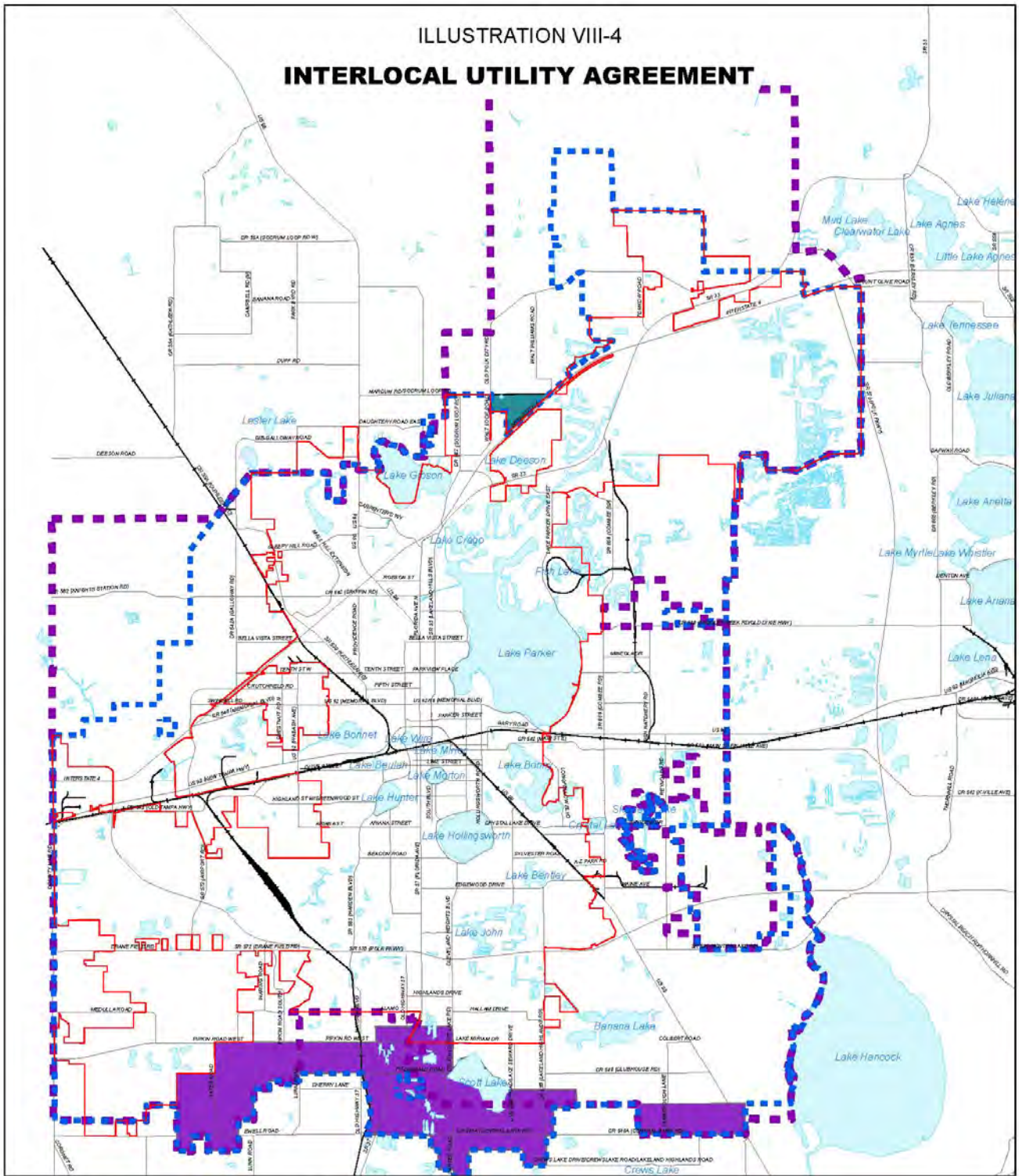
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## **AREA OF CRITICAL STATE CONCERN (ACSC)**

A portion of Lakeland City limits are within the Green Swamp Area of Critical State Concern (ACSC). The first annexation in the Green Swamp involved about 100 acres of conservation lands located north of I-4 and part of the Bridgewater DRI. Today, the total area within the Green Swamp ACSC is approximately 1,897 acres that extends north and east of the Bridgewater DRI (see Illustration VIII-7) and include the City's Northeast Wellfield and adjacent SWFWMD owned lands. There are about 5,992 acres of Green Swamp ACSC within the Lakeland Planning Area but the majority of these lands (4,095 acres) are located outside of the City's corporate limits under the jurisdiction of Polk County.

The guiding principles of development for the Green Swamp ACSC were adopted as Policy 2K of the Future Land Use Element in conjunction with the amendment to the FLUM to include the Bridgewater DRI. Later Policies X1 through X17 were adopted to implement standards to protect the area's environmentally sensitive features from encroachment by primarily business park uses that are attracted to the Interstate 4 and State Road 33 corridor because of easy access to the rest of central Florida for distribution purposes. The City will continue to require all development plans to meet the standards adopted in this Plan as regards special development limitations and State statutory review authority. However, the City looks forward to the opportunity to reach some type of formal written agreement with the Florida Department of Community Affairs regarding the level of reviews which must be regularly submitted to the FDCA for its review, e.g., as long as the City is compliant with its adopted regulations and Plan provisions for the ACSC, limit State review of proposed development projects to the construction plans stage, foregoing site plan submittals to the State.

# ILLUSTRATION VIII-4 INTERLOCAL UTILITY AGREEMENT



Source: Lakeland Water/Wastewater Department, 2010



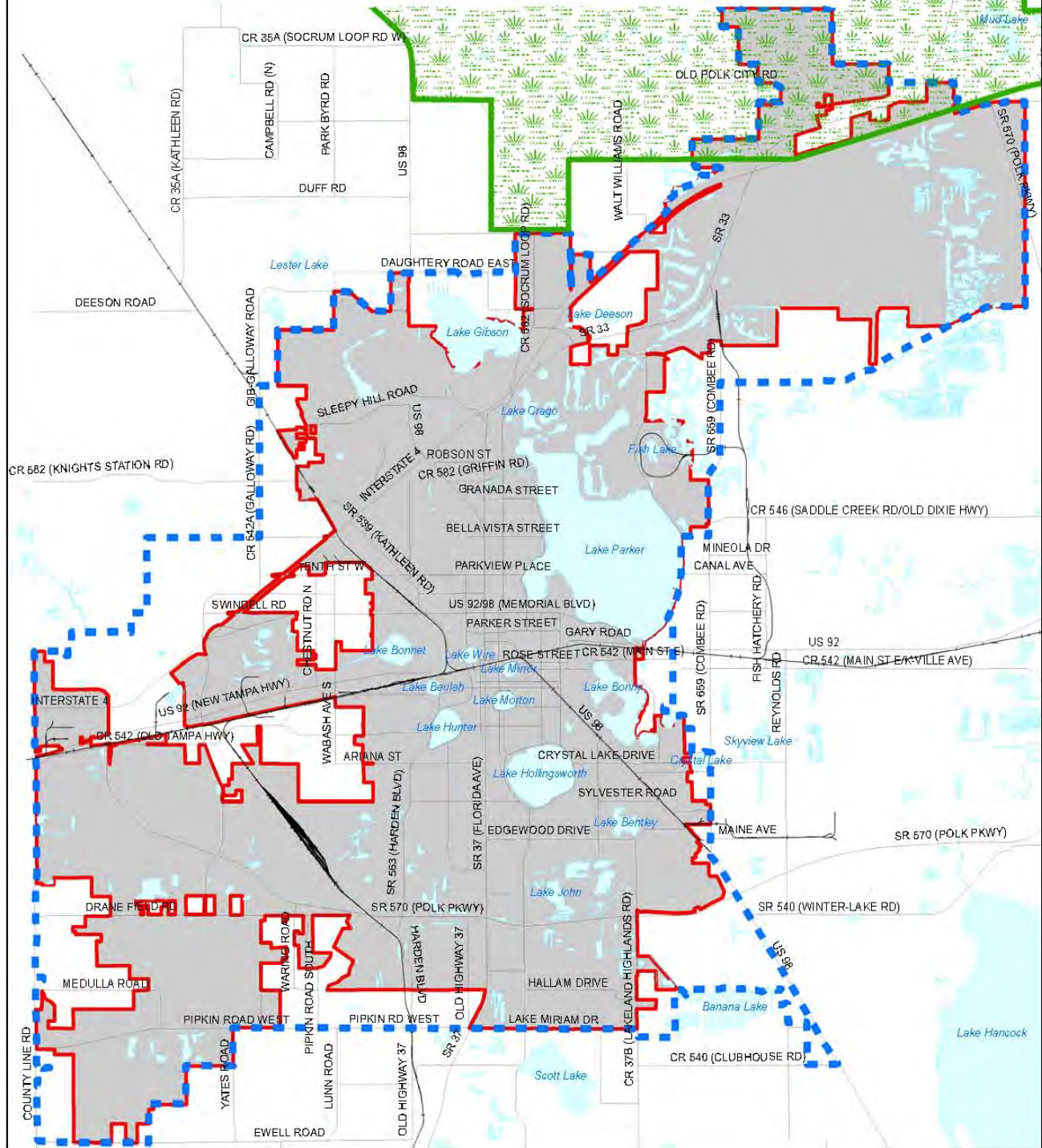
- City Limits
- Water Service Area
- Wastewater Service Area

- County Water / Lakeland Sewer Planning Area
- Lakeland Water / County Sewer Planning Area



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ILLUSTRATION VIII-5  
**YEAR 2020 POTENTIAL CORPORATE LIMITS**



Source: Lakeland Community Development Department, 2010



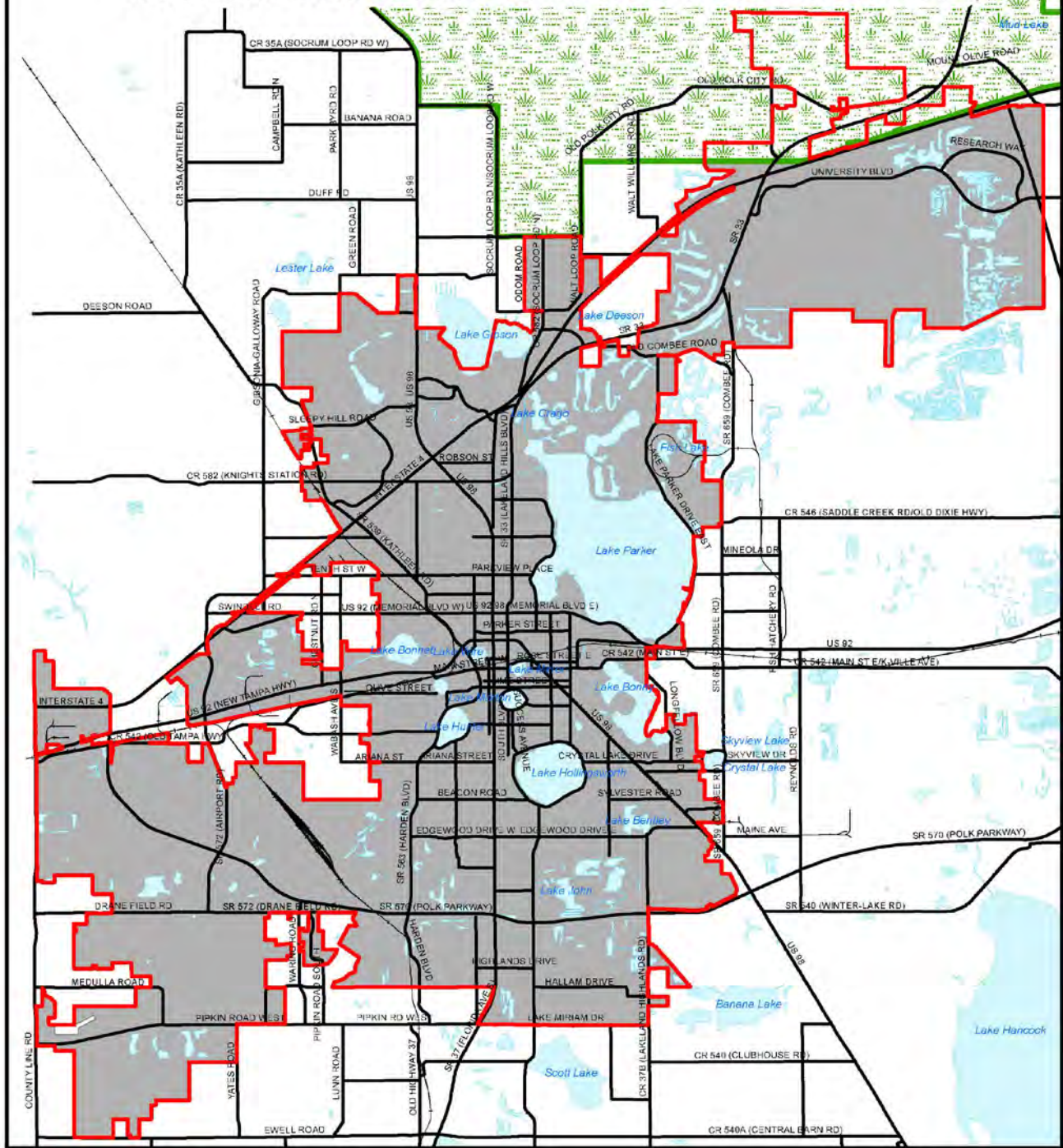
- Existing Corporate Limits
- 2020 Corporate Limits
- ACSC






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ILLUSTRATION VIII-6

**LAKELAND COMPREHENSIVE PLAN CERTIFICATION AREA**



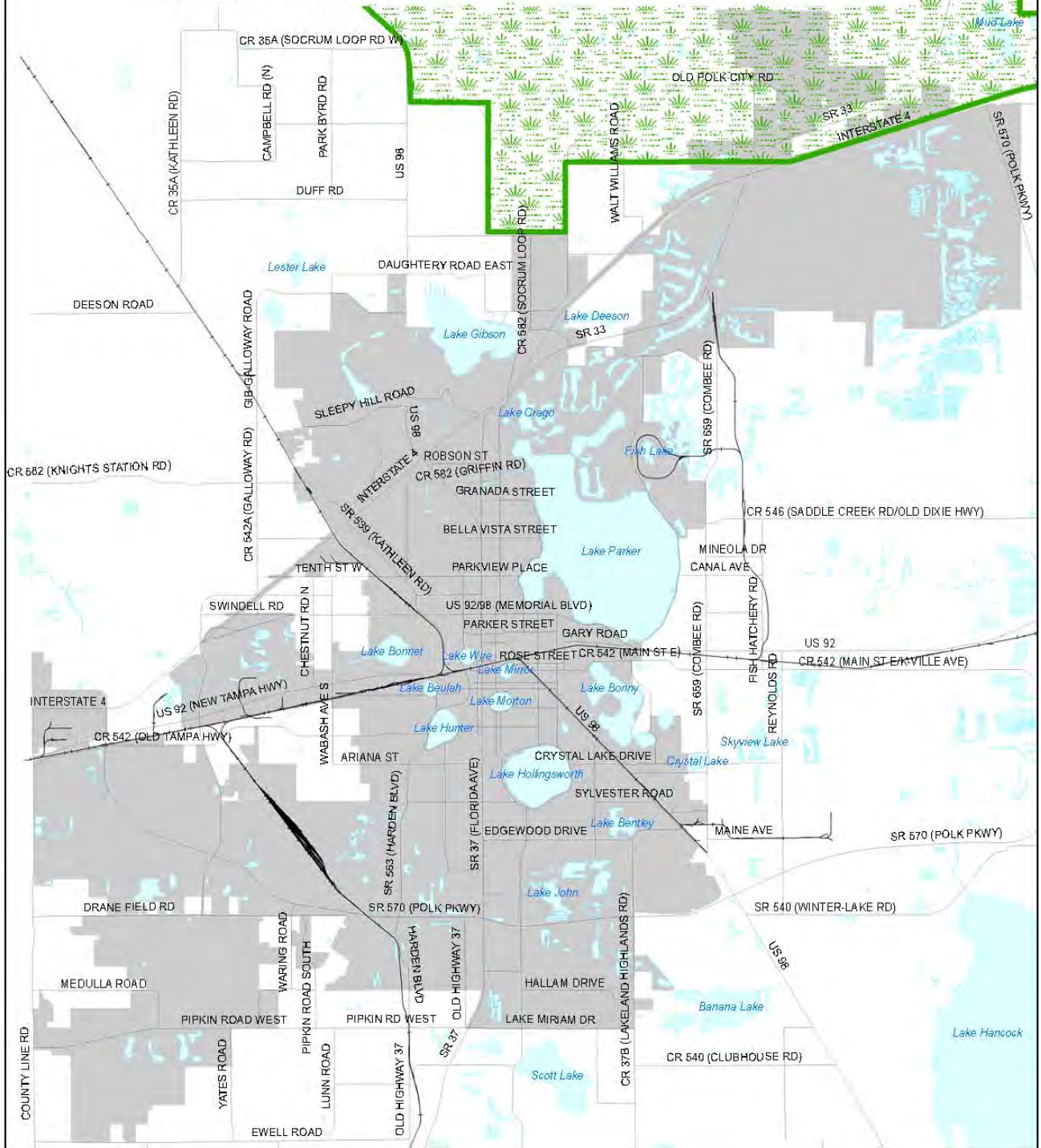
-  Current Lakeland City Limits
-  Comprehensive Plan Certification Area  
Date of Boundary: December 31, 2017
-  Green Swamp ACSC - Not Qualified for Certified Area

**Ordinance #5706**  
Adopted 5/7/18





Source: Lakeland Community Development Department, 2017  
Z:\Certification\2017\Certification Area\_17.mxd

# ILLUSTRATION VIII-7 GREEN SWAMP AREA OF CRITICAL STATE CONCERN



Source: Lakeland Community Development Department, 2010



-  Existing Corporate Limits
-  ACSC



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## GOAL, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to intergovernmental coordination issues. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the measurable and attainable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Intergovernmental Coordination Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this comprehensive plan and with the goals and policies of the *Central Florida Strategic Regional Policy Plan*.

**GOAL:** To improve governmental efficiency and effectiveness, and resolve conflicts and incompatibilities through cooperation, communication, and flexible relationships between Lakeland and all other government organizations which address issues that affect Lakeland.

**Objective 1:** Share information and seek intergovernmental agreements with appropriate governmental entities, including independent special districts, in order to improve intergovernmental coordination and collaborative planning. Provide updates to the text and future land use map of Lakeland's Comprehensive Plan to adjacent local governments at least annually.

**Policy 1A:** Lakeland will continue to maintain a listing of interlocal agreements. This listing shall be updated no less than every seven years or as part of the next evaluation and appraisal report on the Comprehensive Plan.

**Policy 1B:** Lakeland will participate in the Polk County local hazard mitigation strategy process and disaster redevelopment planning process and will review related plans for incorporation into the City's plans.

**Policy 1C:** Lakeland will continue to participate in the regular exchange of information with other governmental entities. The type of information to be considered includes, but is not limited to: building permits, zoning cases, engineering plans, demographics, proposed annexation areas, socio-economic information, utility service areas and capacity, and proposed land use map amendments.

**Policy 1D:** Lakeland elected officials and administrative personnel will participate in Polk County intergovernmental coordination/cooperation workshops and/or joint workshops with the Polk County School Board.

**Policy 1E:** City staff shall continue to participate in the Planners Working Group as established in the Interlocal Agreement for Public School Facilities Planning to set direction, plan for the annual school summit, formulate recommendations and discuss issues related to the Public School Facilities Element and the Interlocal Agreement as well as ancillary infrastructure improvements needed to support schools and ensure safe access to school facilities.

**Policy 1F:** The City will exchange land use and zoning information with the Hillsborough County City-County Planning Commission (HCCCPC) and Plant City for the purpose of coordinating land use and infrastructure at the County line and also for the protection of airspace within the Lakeland Airport control zone.

**Policy 1G:** The City will coordinate relevant lake improvements, stormwater improvements, and park acquisitions with the plans of appropriate state and regional agencies, including water management district surface water improvement plans, Fish and Wildlife Conservation Commission habitat protection plans, and the plans of the State Greenways and Trails Commission.

**Objective 2:** Establish, maintain, and improve intergovernmental coordination for collaborative planning efforts including joint or extra-territorial services, changes to service or corporate limits, any joint committees for review of locally unwanted land uses, and regulatory concerns.

**Policy 2A:** Lakeland will actively work towards developing and implementing formal and informal agreements with affected parties on the following issues:

1. Utility planning service areas, for all City-maintained potable water and wastewater systems;
2. Collection and reduction of hazardous and solid waste;
3. Development within, and maintenance of, stormwater drainage systems and any joint drainage studies or projects;
4. Water quality and quantity studies;
5. Conservation uses as defined by Chapter 9J-5.003 FAC;
6. Recreational and open space efforts including:
  - a. location of new facilities;
  - b. joint use of facilities;
  - c. coordinating the provision of services; and
  - d. establishing greenbelts.
7. Coordination for the provision and maintenance of transportation systems including: aviation, mass transit, traffic circulation, and bicycle, sidewalk and trail networks;
8. Coordination for the provision or rehabilitation of group homes; adequate, affordable, low and moderate income housing; and shelter provisions for the homeless;
9. Prevention of the loss of endangered or threatened species populations;

10. Coordination for the provision of the following services:
  - a. fire protection;
  - b. law enforcement;
  - c. emergency medical;
  - d. animal control;
  - e. civil defense, including hurricane evacuation; and
  - f. libraries.
11. Coordination to locate new or expanded dredge disposal sites, if needed.
12. The City will cooperate with county-wide efforts such as the Livable Polk Initiative and the Polk Vision Building a Healthier Polk Initiative to improve public health and reduce the prevalence of obesity.

**Policy 2B:** The City of Lakeland will annex areas in a compact manner to avoid the formation of enclaves and work with Polk County to continue to reduce the number of existing enclaves.

**Policy 2C:** The City of Lakeland will inform Polk County in a timely manner of proposed annexations. The City will notify jurisdictions other than Polk County of proposed annexations when the affected area is within approximately one mile of the other jurisdiction's limits.

**Policy 2D:** The City of Lakeland will notify the appropriate enforcement agencies of any regulatory violations of which it becomes aware, and shall cooperate with those agencies in enforcing regulations.

**Policy 2E:** The City will review interlocal agreements with local governments for water and wastewater in terms of changes to the agreement on an as needed basis or when new partnership opportunities occur.

**Policy 2F:** As needed, Lakeland will discuss with the cities of Auburndale and Bartow the potential need for reassessing utility service area lines, if relevant, and share any official service area map updates. Official utility service planning area map updates will be provided to Polk County in order to ensure coordination for County utility and land planning.

**Policy 2G:** The City will continue to coordinate with Polk County regarding the use of the North Central landfill relative to recycling and reduction of total wastes by weight.

**Policy 2H:** The City will coordinate with Polk County and other jurisdictions regarding planning and implementation efforts as relates to Lakeland's local sector planning program and where such affects the area of another jurisdiction. Adopted local sector plans will serve as a guide for future land use and facility planning within the sector as well as a resource for neighborhood outreach and redevelopment, where appropriate. Input from and



coordination with Polk County will be of prime importance where a majority of the land within a sector is within the unincorporated area and/or where key challenges in the sector such as crime, infrastructure or redevelopment needs or other issues involve the County.

**Objective 3:** The City shall maintain mechanisms to ensure regular and timely coordination of planning and development issues with other governmental entities as pertains to the City's planning program.

**Policy 3A:** The Planning Division of the Lakeland Community Development Department will maintain procedures for the review of comprehensive plans and comprehensive plan amendments which will include:

1. Identifying intergovernmental issues and conflicts;
2. Identifying the impacts of capital projects listed in the Capital Improvements Element of the *Lakeland Comprehensive Plan* upon the provision of basic services; and
3. Determining the relationship of development proposed within the *Lakeland Comprehensive Plan* to the development proposed in the comprehensive plans and/or comprehensive plan amendments of the following entities:
  - a. Polk and Hillsborough counties; and
  - b. adjacent municipalities.

This shall include distributing a copy of relevant proposed plan amendments to adjacent local governments.

**Policy 3B:** The City of Lakeland will, at least annually, implement the procedures established in Policy 3A. If any issues or negative impacts are identified, Lakeland will implement Policy 6A.

**Policy 3C:** The City of Lakeland will review, in a timely manner, copies of applications to Polk County for major development orders, or proposed County future land use map amendments, that fall within the Lakeland Planning Area with regard to consistency with the City's comprehensive plan.

**Policy 3D:** The City of Lakeland will continue to participate in meetings for the Polk County Planners' Forum and/or the Heart-of-Florida chapter of the American Planning Association or other such groups to coordinate planning efforts. Lakeland will attend at least 50 percent of these meetings in a given calendar year.

**Objective 4:** Cooperate in an effort to obtain consistency between the *Lakeland Comprehensive Plan* and the plans of the Polk County School Board, other units of municipal, County, regional, special taxing district and State governments providing services but not having regulatory authority over the use of land.

**Policy 4A:** The City of Lakeland will continue to actively participate in implementing the interlocal agreement with the Polk County School Board as regards the

coordination of locating new schools and expanding or redeveloping existing school facilities.

**Policy 4B:** The City of Lakeland will continue to participate on any siting committee established by the Polk County School Board in order to locate a site for a new public school in the City or in the Lakeland Planning Area.

**Policy 4C:** The City shall continue to exchange data with the School Board regarding population projections, development trends, the 5-year Schedule of Capital Improvements Projects and school board (5-year) facility plans as such data or plans are updated but not less than annually.

**Policy 4D:** The City will continue to coordinate with the School Board regarding shared use of recreational facilities owned by either entity. In addition, the City shall pursue collocation of parks, libraries and other public facilities with public educational facilities, as appropriate and feasible.

**Policy 4E:** The City will recognize campus master plans of all State university post-secondary institutions located within its jurisdiction. Review of a State campus master plan or its update shall be made to ensure coordination and consistency with the City's Comprehensive Plan. A consistency review of the campus master plans for non-state post-secondary institutions shall also be considered where a "campus" exists or is planned and shall include review against applicable land development regulations.

**Policy 4F:** The City will continue to work with Polk County School Board to identify appropriate sites for new schools in the City of Lakeland and/or in the City's water and wastewater service areas. As called for in the adopted Interlocal Agreement, this coordination will include participation in annual school facility planning summits, data sharing, planning for joint use of facilities and public school facility site selection committee.

**Policy 4G:** As per Ch. 235, Florida Statutes, the planning for new or expanded educational facilities must consider the effects of the location of public education facilities, including the feasibility of keeping central city facilities viable, in order to encourage central city redevelopment and the efficient use of infrastructure while discouraging uncontrolled urban sprawl.

**Policy 4H:** As per Ch. 235, Florida Statutes, if the proposed site for a new or expanded educational facility is consistent with the future land use policies and categories of the *Lakeland Comprehensive Plan*, the City may not deny an application for such a facility but may impose reasonable development standards and conditions which consider the site plan and its adequacy as relates to environmental concerns, health, safety and welfare, and effects on adjacent property.

**Policy 4I:** To the maximum extent feasible, the City will work with the Polk County School Board to ensure minimal impact of potential rezoning of school enrollment zones to existing neighborhoods and the housing investments made by residents of those neighborhoods.

**Policy 4J:** The City shall notify the school board of all proposed residential development projects, which are subject to school concurrency per the Interlocal Agreement for Public School Facility Planning.

**Policy 4K:** The City of Lakeland will continue to participate on the Technical Advisory Committee, Land Use and Transportation Forum, and Mass Transit Steering Committee for the Polk County Transportation Planning Organization (TPO), as well as on the TPO Board, to ensure coordination regarding transportation issues. Coordination with the provider of transit services shall include mutually agreed upon corridors for future transit capital and/or operational investments and improvements, based upon consistency with the future land use and transportation elements of the City and County regarding designated transit corridors and centers and connectivity planning.

**Policy 4L:** The City of Lakeland will continue to participate in the proceedings of the Polk County Joint Airport Zoning Board, as needed.

**Policy 4M:** The City will coordinate with SWFWMD to ensure review of any applicable updates published for the District's Regional Water Supply Plan regarding the projection of future water demand and supply for both potable water and alternative sources.

**Policy 4N:** The City will exchange water supply information with the SWFWMD, Central Florida Regional Planning Council, and local governments through water supply planning work groups and meetings on an as-needed basis.

**Policy 4O:** The City will participate in the implementation of the SWFWMD's Regional Water Supply Plan updates, to enable the City to design and implement an effective local water supply plan.

**Policy 4P:** Any development which is located in the City of Lakeland and meets or exceeds the DRI thresholds established in Chapter 380.06 F.S. shall be approved by the City's Planning Board as a PUD or other similar action. As a Dense Urban Land Area or DULA per Florida Statutes, such developments are exempt from traditional full state and regional agency review when located in the City of Lakeland. However, a local review process will require that at least 120 days prior to the first scheduled public hearing on the PUD or similar action, the applicant shall submit a copy of their development proposal, all associated and relevant studies and updates to the same, to the City of Lakeland, the Polk Transportation Planning Organization and the Central Florida Regional Planning Council. For locations within the City's traditional CRAs (Downtown, Dixieland and Midtown), a more

expedited timeframe may be utilized where recommended by the Community Development Director or his designee. In its staff review, the City may request additional information from the applicant to ensure an adequate and accurate basis upon which to base final staff recommendations. Also, in its recommendations to the City Planning Board and City Commission, city staff shall give significant weight to the review comments and any key recommendations for conditions of approval received from the Polk TPO and the CFRPC.

**Objective 5:** Coordinate, as appropriate, any change in established level-of-service standards for public facilities, including, at minimum, for all 10-year updates to the *Lakeland Comprehensive Plan*, and five-year updates to the Polk County Long-Range Transportation Plan.

**Policy 5A:** The City of Lakeland will inform appropriate governmental entities of proposed changes in level-of-service standards, at minimum, as applicable under State law.

**Policy 5B:** The City of Lakeland will, when notified of other governmental entities proposed changes in their level-of-service standards, review and comment on these changes in particular in regard to direct or indirect impact on the City and consistency with the City's level of service standards.

**Objective 6:** Establish mechanisms to resolve, in a timely manner, any conflicts which arise between the City of Lakeland and other governmental entities.

**Policy 6A:** Staff at all levels, in all departments/divisions, will initially work with staff of other governmental entities in an informal manner to resolve any conflicts. If conflicts cannot be resolved in this manner the department/division head will inform the City Manager. For those governmental entities that have existing agreements with Lakeland that address the resolution of conflicts, the City will use the procedures set forth in that agreement. For those governmental entities that do not have an existing agreement with Lakeland addressing the resolution of conflicts, the City Manager will address the conflict through the procedures established in Policy 6B through Policy 6D.

**Policy 6B:** The City Manager or designee will, upon receipt of a written request from either an aggrieved governmental entity or a department head, assign an appropriate number of staff members to an Ad-Hoc Conflict Resolution Committee. The City Manager will request that the affected entity(ies) also appoint members to this committee. If any involved entity fails to appoint a representative to this committee, the City Manager will request that the Central Florida Regional Planning Council's informal mediation process be used.

**Policy 6C:** The Conflict Resolution Committee will send, in a timely manner, a recommendation for addressing the conflict to the City Manager and the chief administrator in charge of the affected entity(ies).

**Policy 6D:** The City of Lakeland will request any governing body rejecting the Conflict Resolution Committee's recommendation to state, in writing, the reason(s) for that rejection and to state an alternative solution(s). The Conflict Resolution Committee will then reconvene to reconsider its original recommendation with regard to this new information, and may modify that recommendation. If no resolution of the conflict can be reached through the Conflict Resolution Committee, the parties involved will take the issue to the respective elected officials. If the elected officials cannot reach an agreement they will request that the Central Florida Regional Planning Council's informal mediation process be used.

# CAPITAL IMPROVEMENTS ELEMENT

## INTRODUCTION

The Capital Improvements Element (CIE) of the *Lakeland Comprehensive Plan* is one mechanism through which the City achieves the intent of the 1985 Growth Management Act, i.e. planning for the availability of public facilities and services to support development concurrent with the impacts of such development. The Capital Improvements Element is designed to evaluate the need for additional public facilities based on the uses indicated on the Future Land Use Map and levels of service outlined in this Plan. The CIE must consider the cost of needed improvements which are the responsibility of the City, address the ability to finance the necessary improvements, and adopt local policies to guide the timing, location, and funding of capital improvements.

The five-year Capital Improvements Program (CIP), prepared as part of the Capital Improvements Element, serves as the mechanism for implementation of the Capital Improvements Element. The Capital Improvements Program identifies the estimated cost of capital expenditures that will be required within the first five years after Plan adoption, and lists target revenue sources and is updated each year to ensure that capital needs are continually identified within a five-year timeframe.

The Capital Improvements Element is structured to satisfy the requirements of Chapter 163, Florida Statutes and Rule 9J-5, Florida Administrative Code. Following an introduction, existing conditions are outlined, issues and opportunities then are examined, and finally goal, objective and policy statements are given. The Capital Improvements Element has three appendices. Appendix IX-One is a compilation of tables that comprises the City's Five-Year Capital Improvements Program and which is updated annually. Appendix Table IX-One (B)(2) addresses developer-funded significant transportation projects as agreed to with the City. Appendix IX-Two addresses roadway capacity improvements as programmed by the City, County, and State. Appendix IX-Three is the City's Connectivity Plan which is phased as a 15-year plan that clearly identifies strategies, implementation mechanisms, funding sources and a phased capital improvements schedule for multi-modal projects.

## SUMMARY OF FINDINGS

Projecting capital needs required to support proposed future land use is based upon analyses presented in other elements of this Comprehensive Plan. This element documents the revenue currently available or expected to be available to fund these capital needs. The resulting inventory and analysis serves as the foundation for preparation of the five-year Capital Improvements Program.

### NEEDED CAPITAL IMPROVEMENTS PROJECTS

The identified capital needs for various comprehensive plan elements with level of service and capital expenditure requirements are indicated below. All projects needed to correct existing deficiencies and meet future needs for the next five fiscal years are included in the Capital Improvements Program.

The tables in Appendix IX-One present current needs as outlined in the City's most recently updated and adopted five-year Capital Improvements Program (CIP). Appendix IX-Two presents the next five years of road-related projects in City, County, or State CIPs and as found in the Adopted Long-Range Transportation Plan. The CIP for the City of Lakeland is updated and changed every year as the new City budget is approved by October 1. The numbers for any specific line item for a facility type may be shifted to future years or may be increased or decreased. In addition, funding for some line items are sometimes combined into a new line item and therefore have a new description. Thus, due to the budgeting process, one year's CIP is not necessarily comparable and traceable over time to a future year CIP.

Some capital projects involve a combination of improvements related to maintenance of a facility and capacity or performance related improvements to the facility. The reason improvements or maintenance activities are needed may be either to address existing deficiencies (such as a failed drainage way) or to address anticipated growth (such as sewer plant capacities), while others might combine replacement and enhancement by starting out as addressing a deficiency and resulting in an actual upgrade in service due to the type of the new part or replacement facility.

### Lakeland Community Redevelopment Agency

The Lakeland Community Redevelopment Agency is a quasi-governmental agency with revenues from tax increment financing and other sources, including the Public Improvement Fund. Tables IX-One(A)(1-3) outline the revenues and expenditures for these funds; the City has three existing CRA funds: one for the central or core downtown, one for what is known as the Dixieland area south of the core downtown, and one north of the In-Town Bypass to I-4 known as "Mid-Town" CRA.

### Transportation Facilities

Existing levels of service on the major road network were based on annual traffic counts conducted by Polk Transportation Organization (TPO) using a methodology from the 2000

Highway Capacity Manual and the Florida Department of Transportation. Approximately 146 directional roadway links make up the major road network within or immediately bordering the Lakeland city limits. As of 2009, seven were below minimum LOS standards in at least one direction in the P.M. peak. Of the roads operating below traditional roadway standards (i.e. at LOS E and F), two were on the State highway system, three were on the County road system, and two were the responsibility of the City; however, some of these segments met multimodal standards. Expenditures for transportation facilities, over the next five fiscal years, under the CIP, are shown in Table IX-One(B)(1) [Transportation Fund] in Appendix IX-One. The Transportation Fund is primarily supported by local option gas taxes and transportation impact fees.

Table IX-One(B)(2) [Developer-Funded Transportation Projects] has been added to the CIP to itemize those transportation projects that are to be developer-funded, as required in adopted Development Agreements, Development Orders, and other binding plans. The funding amounts in Table IX-One(B)(1) and Table IX-One(B)(2) may be subject to adjustments and changes depending upon the stage of completion. Costs may change as projects proceed to engineering level details, as right-of-way is completed, and as adjustments are made for the changing costs of material and/or labor for projects not yet out for bid.

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### **Aviation Facilities**

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Table IX-One(C) [Lakeland Linder Regional Airport] in Appendix IX-One outlines the project phasing, costs, and anticipated revenue source for all aviation-related projects considered for funding in the next five fiscal years. This table also includes capital expenditures and revenues associated with the City's "Airsides Center," located within the airport complex, which is owned by the City and leased to private businesses.

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### **Parking System**

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Table IX-One(D) [Parking System Fund] in Appendix IX-One outlines the revenues and expenditures primarily related to the City-owned parking garages.

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### **Potable Water**

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The City of Lakeland Water Utilities Department completes an annual review of the City's water utility system and determines necessary capital projects and estimated project costs. Table IX-One(E) [Department of Water Utilities] in Appendix IX-One outlines projects and costs identified for the next five fiscal years.

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### **Wastewater**

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The City of Lakeland Water Utilities Department completes an annual review of the City's wastewater system and determines necessary capital projects and expenditures. Table IX-One(F) [Wastewater Fund] in Appendix IX-One outlines projects and cost estimates identified in the next five fiscal years.



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### **Solid Waste**

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No capital expenditures are shown for this item.

### **Stormwater**

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The City of Lakeland Public Works Department completes an annual review of the City's stormwater system and determines necessary capital projects and estimated projected costs expenditures. Table IX-One(H) [Stormwater Fund] in Appendix IX-One outlines projects and costs identified for the next five fiscal years.

### **Recreation and Open Space**

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Implementation of the Recreation and Open Space Element of the *Lakeland Comprehensive Plan* will ultimately be achieved through the provision of facilities and services required to meet the public need and to maintain adopted levels of service. Table IX-One(G) [Public Improvement Fund] in Appendix IX-One includes a list of projects for recreation and highway beautification for the next five years, and the estimated cost of completion for each project.

### **Fire Department Improvement Fund**

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Although the Comprehensive Plan does not generally deal with the issue of fire protection, because it is a basic public service needed for development and growth it is included in the City's five-year Capital Improvement Program. The revenues and expenditures for the City's fire service for the next five fiscal years are included in the Public Improvement Fund Table IX-One(G).

## **PUBLIC EDUCATION AND PUBLIC HEALTH SYSTEMS**

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Historically, Rule 9J-5.016, Florida Administrative Code, required the CIE to include the identification of the geographic service area and location of major system components for the public education and public health systems within the local government's jurisdiction. The identified system components are outlined below.

### **Public Education**

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The City of Lakeland and the Lakeland Planning Area are within the jurisdiction of the Polk County School Board. A list of public secondary and elementary schools is provided below. There are 61 schools in the Lakeland Planning Area. The approximate geographic location of area schools is provided in Illustration IX-1.

Achievement Academy – Lakeland  
716 E. Bella Vista Street  
Lakeland, Florida

Crystal Lake Middle  
2410 N. Crystal Lake Drive  
Lakeland, Florida

Best Program – Auburndale  
2820 K Ville Avenue  
Auburndale, Florida

Dixieland Elementary  
416 W. Ariana Street  
Lakeland, Florida

Bill Duncan Opportunity Center  
3333 Winter Lake Road  
Lakeland, Florida

Doris Sanders Learning Center  
1201 Enchanted Drive  
Lakeland, Florida

Blake Academy  
510 Hartsell Avenue  
Lakeland, Florida

Dr. N. E. Roberts Elementary  
6600 Green Road  
Lakeland, Florida

Boswell Elementary  
2820 K'Ville Ave.  
Auburndale, Florida

Drop Back In Academy  
Admin Office: 302 East Memorial Blvd.  
Lakeland, Florida

Carlton Palmore Elementary  
3725 Cleveland Heights Blvd.  
Lakeland, Florida

George Jenkins High School  
6000 Lakeland Highlands Road  
Lakeland, Florida

Churchwell Elementary  
8201 Park Byrd Road  
Lakeland, Florida

Griffin Elementary  
3315 Kathleen Road  
Lakeland, Florida

Cleveland Court Elementary  
328 E. Edgewood Drive  
Lakeland, Florida

Harrison School for the Arts  
750 Hollingsworth Road  
Lakeland, Florida

Combee Elementary  
2805 Morgan Combee Road  
Lakeland, Florida

Highland City Elementary  
5355 9th Street SE  
Highland City, Florida

Countywide ESE-Dwight Smith Center  
951 Mt. Airy  
Lakeland, Florida

Highlands Grove Elementary  
4510 Lakeland Highlands Road  
Lakeland, Florida

Crystal Lake Elementary  
700 Galvin Drive  
Lakeland, Florida

Jesse Keen Elementary  
815 Plateau Avenue  
Lakeland, Florida

Kathleen Elementary  
3515 Sheretz Road  
Lakeland, Florida

Kathleen Middle  
3627 Kathleen Pines  
Lakeland, Florida

Kathleen Senior High  
1100 Red Devil Way  
Lakeland, Florida

Kathleen Senior High School:  
Central Florida Aerospace Academy  
4141 Medulla Road  
Lakeland, Florida

Lake Gibson Middle  
6901 N. Socrum Loop Road  
Lakeland, Florida

Lake Gibson Senior High  
7007 N. Socrum Loop Road  
Lakeland, Florida

Lakeland Highlands Middle  
740 Lake Miriam Drive  
Lakeland, Florida

Lakeland Montessori Middle at  
The Polk Museum of Art  
800 East Palmetto Street  
Lakeland, Florida

Lakeland Montessori Schoolhouse  
1124 N. Lake Parker Ave  
Lakeland, Florida

Lakeland Senior High  
726 Hollingsworth Road  
Lakeland, Florida

Lawton Chiles Middle Academy  
400 N. Florida Avenue  
Lakeland, Florida

Lena Vista Elementary  
208 S. Berkley Road  
Auburndale, Florida

Lincoln Avenue Academy  
1330 N. Lincoln Avenue  
Lakeland, Florida

McKeel Academy of Applied Tech.  
1810 W. Parker Street  
Lakeland, Florida

McKeel Elementary – Charter  
411 N. Florida Ave.  
Lakeland, Florida

Medulla Elementary  
850 School House Road  
Lakeland, Florida

North Lakeland Elementary  
410 Robson St.  
Lakeland, Florida

Oscar J. Pope Elementary  
2730 Maine Ave.  
Eaton Park, Florida

PACE Center for Girls  
3037 Lakeland Hills Blvd.  
Lakeland, Florida

Padgett Elementary  
110 Leelon Road  
Lakeland, Florida

Philip O'Brien Elementary  
1225 E. Lime Street  
Lakeland, Florida

Polk State College-Collegiate High  
School – Charter  
3425 Winter Lake Road  
Lakeland, Florida

R. Bruce Wagner Elementary  
5500 Yates Road  
Lakeland, Florida

Rochelle School of the Arts  
1501 Martin Luther King, Jr. Ave.  
Lakeland, Florida

Scott Lake Elementary  
1140 State Road 540-A  
Lakeland, Florida

Sikes Elementary  
2727 Shepherd Road  
Lakeland, Florida

Sleepy Hill Elementary  
2285 Sleepy Hill Road  
Lakeland, Florida

Sleepy Hill Middle  
2215 Sleepy Hill Rd.  
Lakeland, Florida

Socrum Elementary  
9400 Old Dade City Road  
Lakeland, Florida

South McKeel Academy  
2222 Edgewood Drive South  
Lakeland, Florida

Southwest Elementary  
2650 Southwest Avenue  
Lakeland, Florida

Southwest Middle  
2815 S. Eden Parkway  
Lakeland, Florida

Tenoroc Senior High  
4905 Saddle Creek Road  
Lakeland, Florida

Traviss Career Center  
3225 Winter Lake Road  
Lakeland, Florida

Traviss Career Center: Teen Parent  
3225 Winter Lake Rd  
Lakeland, Florida

Valleyview Elementary  
2900 E. State Road 540-A  
Lakeland, Florida

Wendell Watson Elementary  
6800 Walt Williams Road  
Lakeland, Florida

West Area Adult & Community School  
604 S. Central Avenue  
Lakeland, Florida

Winston Elementary  
3415 Swindell Road  
Lakeland, Florida

## Public Health

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The City of Lakeland and the Lakeland Planning Area are served by the Polk County Public Health Unit, a division of the State of Florida (Department of Children and Family Services). Local services include a public health clinic and a Women, Infants, and Children (WIC) Program site. These facilities (shown on Illustration IX-1) are located at 3241 Lakeland Hills

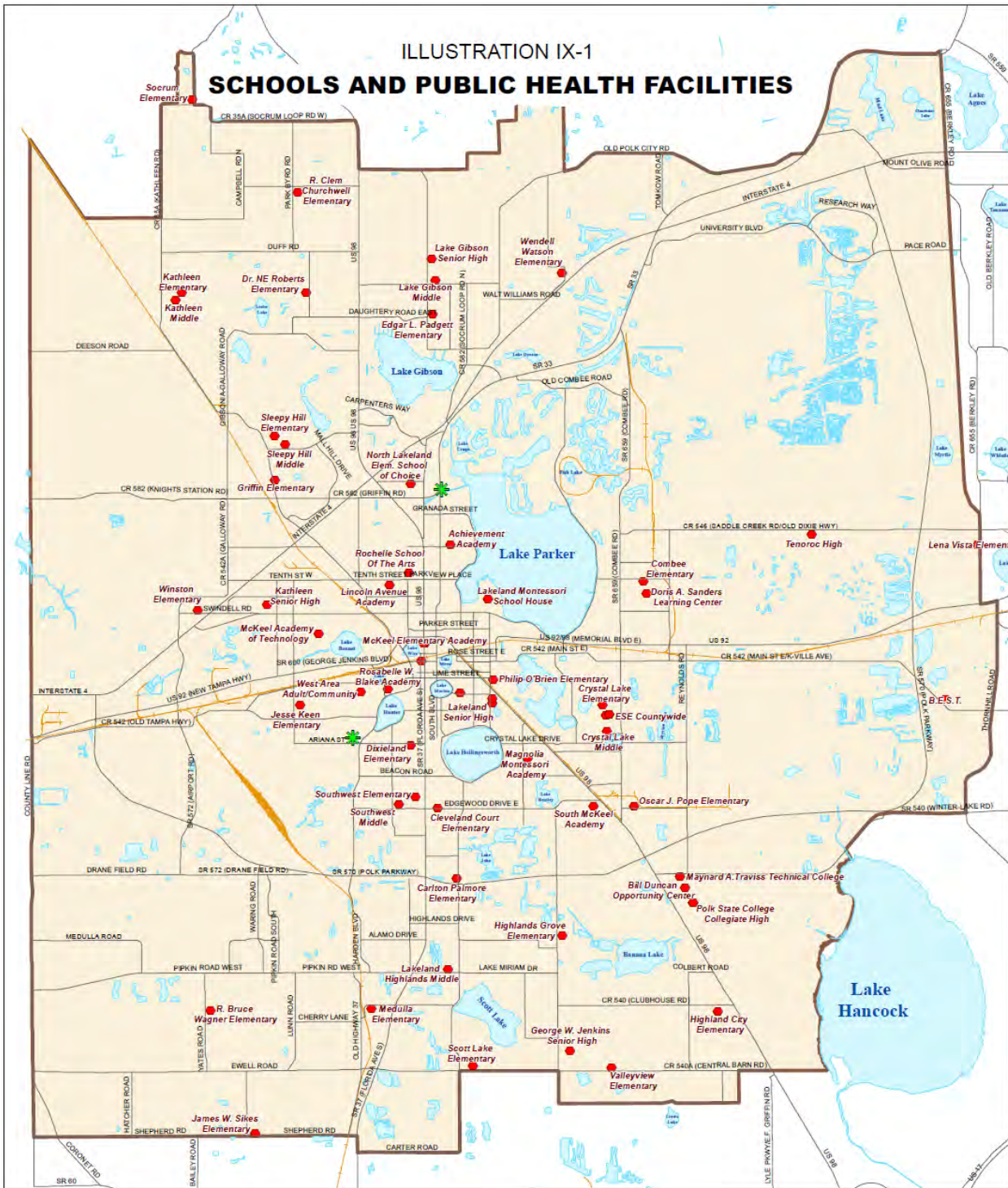
Blvd. and 1291 Ariana Avenue in Lakeland, Florida and serve the City and surrounding planning area.

### **Fiscal Impact of Proposed Public Education and Public Health Facilities**

Public health facilities to be built or expanded within the planning timeframe will have no substantial fiscal or physical impact on the provision of infrastructure. The School Board is not planning any new public schools within the Lakeland Planning Area within the 2020 planning time frame. Each facility located within the City or a wastewater agreement area will be evaluated for consistency with the City's Future Land Use Element, including the impact to public infrastructure (roads, water, solid waste, wastewater, and drainage).

ILLUSTRATION IX-1

**SCHOOLS AND PUBLIC HEALTH FACILITIES**



Source: Lakeland Community Development Department, 2017



- Lakeland Area Schools
- \* Public Health Facility

Z:\Comp\_Plan\CI\2017\IX-1 Schools and Public Health\_11-17\_Use.mxd

## EXISTING REVENUE SOURCES

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Provision of identified capital improvements is contingent upon the ability of local governments to pay for those needs. Traditionally, localities have had three major choices in securing funds for capital improvements financing:

1. Federal and State grants;
2. Long-term borrowing; and
3. Other Self-financed sources.

The City of Lakeland generates revenue from a number of sources. The following revenue sources are used for the purpose of financing capital improvements:

**Gas Tax Revenue:** Lakeland is no longer using a broad range of utility tax revenues (such as taxes on communications, propane, electric, water, natural gas, and fuel oil sold within the City limits of Lakeland) for capital improvements. The gas tax is still used for capital improvement costs and includes the City's share of the optional gas tax on motor fuel that is levied by Polk County. Interest earned on these funds prior to disbursement are also included in this category.

The gas tax money is restricted for use on certain transportation related expenditures. A portion of those funds have historically been used to subsidize the operating expenditures of the general fund and the parking fund.

**Hospital Lease Revenues:** Hospital lease revenues consist of the proceeds from a 40 year lease agreement with a 501(c)(3) non-profit corporation that was formed to operate the Lakeland Regional Medical Center (LRMC). Those facilities are owned by the City of Lakeland and are leased to this corporation in exchange for lease payment. The annual amount payable to the City under the terms of the lease is 2.25% of gross revenues, less write offs from main hospital operations and 2.25% of the net incomes of the affiliate operations. The City Commission has expressed its desire to limit expenditure of these funds primarily to capital projects and projects that promote the arts.

**State Revenue Sharing Fund:** No longer available for capital improvements since 1995.

**General Fund Revenues:** General fund revenues consist primarily of property tax revenues, utility tax revenues, charges related to parks, recreation, or public safety, and certain transfers from other operating funds of the City. Expenditures for capital outlay from this fund generally average less than 1% of the total budget of that fund.

**County Fire Contract:** County fire contract fees are paid to the City of Lakeland by Polk County to provide fire protection to certain unincorporated areas that are contiguous to the City limits. Polk County has determined that it is not economically feasible to provide service to certain areas using their own resources due to the small geographic areas involved. As the City annexes property the size of these areas diminish; therefore, the long-term reliability of this revenue source is not strong. A portion of these revenues is used to finance maintenance of fire

department facilities as well as to subsidize a small portion of the operating costs incurred within the general fund.

**Wastewater Revenues:** Wastewater revenues consist of the monthly billings issued to users of the system to defray the cost of providing wastewater service. A small percentage of these revenues is used to subsidize the general fund budget.

**Potable Water Revenues:** Potable water revenues consist of the monthly billings issued to users of the system to defray the cost of providing water service.

**Refuse Revenues:** Refuse revenues consist of the monthly billings issued to users of the system to defray the cost of providing refuse collection and disposal service.

**Airport Operating Revenues:** Airport operating revenues consist of the proceeds from land and building leases as well as commissions on sales of aviation fuel.

**Internal Service Billings:** Internal service billings are made by the City's Motor Pool and the Central Stores Warehouses to offset the costs associated with operating the City's fleet of vehicles and the purchase of operating supplies from the central warehouse.

**Federal and State Grants:** The City receives grants from the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT) to finance improvements to the Lakeland Linder Regional Airport. The City also receives an annual entitlement from the U.S. Department of Housing and Urban Development (HUD) to operate a low income, owner-occupied housing rehabilitation program. Other grants are also received on an irregular or sporadic basis as projects qualify, including historic preservation grants.

**Impact Fees:** Impact fees are charges levied against new construction or changes in use of residential, commercial, industrial and institutional facilities to help defray the capital cost of providing municipal services required by those new facilities or uses.

**Bond Proceeds:** Bond proceeds, after deducting financing costs associated with marketing, form short-term and long-term debt issued in the name of the City of Lakeland. Relatively small issues will have maturities of 5 to 10 years. Larger projects, mostly those that involve the construction of revenue-producing facilities such as power plants and wastewater treatment plants, are financed over a 30-year term.

**Internal Loans:** The City has established an internal loan fund which contains monies used to finance capital projects when the dollar value does not justify a formal, external debt issuance.

The City of Lakeland recognizes the changing nature of capital improvements financing. As a result, the City is continually exploring new and innovative ways to answer the capital needs of a growing community.



## **LOCAL PRACTICES GUIDING TIMING AND LOCATION OR EXTENSION OF PUBLIC FACILITIES**

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The City of Lakeland identifies capital needs annually during the citywide budget process. Projects are outlined which will be included in the five-year Capital Improvements Program. The consolidated proposed capital improvements budget is then included as part of the City's Proposed Annual Budget and provides the City Commission with a long-range view of the City's ability to finance the acquisition, construction, improvement, or expansion of public facilities and equipment expected over the next five years. The purpose of the Capital Improvements Program and overall Citywide Preliminary Budget is not to generate a "wish list" of possible City facilities. Rather, it is used as a tool for balancing the need for facilities that are considered critical to the smooth operation of the City against the limited resources that are available to finance capital expansion. Accordingly, the Capital Improvements Program includes only those projects which can be realistically paid for with the funds that will be available over the next five years. The inclusion of non-essential projects in the Capital Improvements Program is discouraged because it can jeopardize the City's ability to approve projects that are essential.

A capital improvement is a major addition to the City's inventory of assets. For purposes of this plan, a capital improvement involves expenditures for an asset which has a cost of \$25,000 or more and has a useful life of five years or more. This generally involves such projects as the construction, purchase, or major renovation of land, buildings, utility facilities, streets or other physical structures. It can also include major equipment items not permanently attached to a public facility.

## **FISCAL IMPLICATIONS OF EXISTING AND FUTURE CAPITAL IMPROVEMENTS NEEDS**

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Needed projects, funding sources, and amounts for each project are found in Table IX-One in Appendix IX-One.

The cost estimates indicated are based on projects outlined by the individual department heads during the budget process. The costs are primarily based on historical costs and examination of the cost of similar projects. A detailed description which includes the cost breakdown and phasing or project completion schedule is identified for each project during the annual budget preparation and update of the Capital Improvements Program.

## **USE OF CAPITAL IMPROVEMENTS TIMING AND LOCATION TO SUPPORT EFFICIENT LAND DEVELOPMENT**

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Development of a comprehensive land use plan in conjunction with the development of a detailed five-year Capital Improvements Program gives the City of Lakeland the opportunity to ensure that efficient land development is supported by the timing and location of capital improvements necessary to serve anticipated development. The Capital Improvements Program focuses on meeting needs and trends necessary to implement the desired land use

pattern and maintain adopted levels of service. It serves as a development guidance tool and is intended to guide the need for services, not just demand. The Capital Improvements Program becomes, in essence, the primary tool to shape the conditions conducive to achieving the desired land use pattern.

## **ABILITY TO FINANCE CAPITAL IMPROVEMENTS**

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The provision of necessary public facilities and services is contingent upon the ability of the City to pay for or finance what is required. An assessment of this ability can be achieved by comparing the forecast of revenues and forecast of expenditures. Table IX-1 outlines **all** anticipated revenue for the next five years, encompassing revenue from all sources, and **all** anticipated expenditures of the City of Lakeland, including operating, capital and debt capacity. Tables IX-1 through IX-4 present projected City revenues and debt levels as a brief snapshot of City budgetary health. However, these tables do focus on the level of service related budgets for capital projects versus operational costs, within the City's overall general budget. The details of the City's 5-year Capital Improvement Program are included in Appendix IX-One to this Element. State law also requires the City to adopt (by reference) the 5-year capital works program for county schools and for roads, i.e., the Polk County School Board 5-Year Work Program, and the FDOT Work Program, both of which are updated annually by their respective agencies. CIE Policies 2D, 2E and 2F address these state requirements. The City's Appendix IX-Two summarizes the committed transportation projects in the District One FDOT Work Program and in the Transportation Engineering portion of the Polk County Adopted 5-Year Capital Improvement Program. As an added resource, citizens may wish to view the details of CIPs of related agencies, available on the internet.

<b>Proposed Millage Per \$1,000: 5.5644</b>	<b>2018/19 Estimate</b>	<b>2019/20 Estimate</b>	<b>2020/21 Estimate</b>	<b>2021/22 Estimate</b>	<b>2022/2023 Estimate</b>
CASH BALANCE BROUGHT FORWARD	36,691,372	37,425,199	38,173,703	38,937,177	39,715,921
ESTIMATED REVENUES					
Ad Valorem Taxes	33,478,302	34,147,868	34,830,825	35,527,442	36,237,991
Sales and Use Taxes	15,444,200	15,753,084	16,068,146	16,389,509	16,717,299
Licenses and Permits	4,534,656	4,625,349	4,717,856	4,812,213	4,908,457
Intergovernmental Revenues	51,058,963	52,080,142	53,121,745	54,184,180	55,267,864
Charges for Services	423,538,508	432,009,278	440,649,464	449,462,453	458,451,702
Fines & Forfeits	2,781,002	2,836,622	2,893,354	2,951,222	3,010,246
Miscellaneous Revenue	44,947,486	45,846,436	46,763,364	47,698,632	48,652,604
<b>TOTAL SOURCES</b>	<b>575,783,117</b>	<b>587,298,779</b>	<b>599,044,755</b>	<b>611,025,650</b>	<b>623,246,163</b>
Transfers In	191,582,326	195,413,973	199,322,252	203,308,697	207,374,871
Fund Balances/Reserves	36,813,145	37,549,408	38,300,396	39,066,404	39,847,732
<b>TOTAL REVENUES, TRANSFERS, &amp; BALANCES</b>	<b>804,178,588</b>	<b>820,262,160</b>	<b>836,667,403</b>	<b>853,400,751</b>	<b>870,468,766</b>
EXPENDITURES					
General Government Services	26,799,761	27,335,756	27,882,471	28,440,121	29,008,923
Public Safety	72,968,731	74,428,106	75,916,668	77,435,001	78,983,701
Physical Environment	404,328,835	412,415,412	420,663,720	429,076,994	437,658,534
Transportation	47,410,897	48,359,115	49,326,297	50,312,823	51,319,080
Economic Environment	11,767,509	12,002,859	12,242,916	12,487,775	12,737,530
Human Services	186,054	189,775	193,571	197,442	201,391
Culture/Recreation	49,012,702	49,992,956	50,992,815	52,012,671	53,052,925
<b>TOTAL EXPENDITURES</b>	<b>612,474,489</b>	<b>624,723,979</b>	<b>637,218,458</b>	<b>649,962,828</b>	<b>662,962,084</b>
Transfers Out	191,582,326	195,413,973	199,322,252	203,308,697	207,374,871
Fund Balances/Reserves	121,773	124,208	126,693	129,226	131,811
<b>TOTAL APPROPRIATED EXPENDITURES TRANSFERS, RESERVES AND BALANCES</b>	<b>804,178,588</b>	<b>820,262,160</b>	<b>836,667,403</b>	<b>853,400,751</b>	<b>870,468,766</b>

**Source:** City of Lakeland, Finance Department, 2018.  
(Estimated values have been rounded to the nearest dollar)

Table IX-2 outlines revenues available to finance all capital improvements including that portion of the City's five-year Capital Improvements Program relating to Transportation, Aviation, Wastewater, Potable Water, Stormwater, Parking, and Public Improvements. The costs are based on the proposed projects presented by the various department heads for inclusion in the five-year Capital Improvements Program. The selected projects, expenditures, and funding sources appear in the adopted Capital Improvements Program.

**TABLE IX-2  
FORECASTED REVENUES AVAILABLE FOR CAPITAL IMPROVEMENTS**

<b>Revenue Fund:</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
LAKELAND LINDER INTERNATIONAL AIRPORT	20,604,940	24,360,803	27,723,390	10,418,091	10,814,091
PARKING	16,000	311,500	1,000	16,000	495,500
PUBLIC IMPROVEMENT	31,622,574	18,897,810	22,361,408	19,184,122	20,046,861
RP FUNDING CENTER	1,594,881	1,673,454	1,593,256	1,588,089	1,557,929
STORMWATER	6,933,896	6,682,555	7,545,794	7,835,624	7,707,792
TRANSPORTATION	12,121,904	15,028,379	6,514,933	6,579,790	7,594,456
WASTEWATER	8,942,296	8,581,938	8,921,938	7,621,938	13,326,938
WATER	22,703,015	9,502,832	7,646,414	8,813,414	5,751,414
LCRA	7,681,921	5,655,258	5,314,820	5,518,570	5,513,947
<b>TOTAL:</b>	<b>112,221,427</b>	<b>90,694,529</b>	<b>87,622,953</b>	<b>67,575,638</b>	<b>72,808,928</b>

**Source:** City of Lakeland, Finance Dept. 5 year Capital Program, 2018.

Table IX-3 outlines projected debt service obligations on outstanding bond issues for the next five years. Payments for debt service come from a variety of funding sources including, but not limited to, operating revenues, hospital lease revenues and general fund revenues.

**TABLE IX-3  
CITY OF LAKELAND  
PROJECTED DEBT SERVICE**

	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Airport	3,210,164	3,151,941	2,836,039	7,902,354	3,312,022
Cleveland Heights Golf Course	17,151	17,151	12,863	-	-
Department of Information Tech Fund	1,368,201	1,355,455	1,355,346	1,075,749	1,057,815
Electric & Water Utility Funds	41,437,197	39,172,683	36,986,414	35,034,703	33,661,194
Fleet Management Fund	1,178,724	-	-	-	-
General Fund	244,862	244,862	244,862	184,794	127,427
Internal Loan Fund	14,016,027	10,573,670	12,114,376	16,685,757	7,055,406
Lakeland Airside Center	29,214	-	-	-	-
Lakeland Center Fund	1,310,102	987,095	956,958	943,394	792,062
Public Improvement Fund	7,617,772	5,484,336	4,311,944	3,432,932	3,418,692
Water/Wastewater Fund	5,044,173	5,039,873	4,032,648	4,019,498	4,027,873
<b>TOTAL</b>	<b>76,808,086</b>	<b>67,341,566</b>	<b>64,145,950</b>	<b>70,553,681</b>	<b>54,392,004</b>

**Source:** City of Lakeland, Finance Department, 2018.

In addition to existing bond issues, the City of Lakeland may seek future bonding to finance large capital projects or a series of smaller projects. The City has an excellent repayment history.

The City of Lakeland, as of September 30, 2010, had a gross total property value of \$5,547,829,373. Lakeland has historically maintained a low millage rate below 3.00 until 2004 when it increased to 3.545. Table IX-4 outlines projected taxable value for millage assessment and projected ad valorem revenues.

**TABLE IX-4  
CITY OF LAKELAND  
FUTURE PROJECTION OF GENERAL FUND PROPERTY ASSESSED VALUATIONS AND PROPERTY TAX RATES**

<b>Fiscal Year Ending September 30</b>	<b>Assessed Valuation (1)</b>	<b>Tax Rate In Mills</b>	<b>Total Tax Levy</b>	<b>Current Tax Collections</b>	<b>Percent of Levy Collected</b>	<b>Delinquent Tax Collections</b>	<b>Total Tax Collections</b>	<b>Ratio of Total Collection to Tax Levy</b>
2019	6,016,988,654	5.4644	32,269,975	32,123,997	99.55	94,686	32,218,683	99.84
2020	6,317,838,087	5.4644	33,883,474	33,730,197	99.55	99,420	33,829,617	99.84
2021	6,633,729,991	5.4644	35,577,648	35,416,706	99.55	104,391	35,521,098	99.84
2022	6,965,416,491	5.4644	37,356,530	37,187,542	99.55	109,611	37,297,153	99.84
2023	7,313,687,315	5.4644	39,224,357	39,046,919	99.55	115,091	39,162,010	99.84

(1) The State of Florida, by statute, requires property appraisers to assess all property within the State at 100% of market value. Therefore, the assessed valuation and estimated actual value is the same.

**Source:** City of Lakeland, Finance Department, 2018.

As with all local governments in Florida, the City of Lakeland could assess up to 10 mills should the revenue become essential to the City's economic vitality. However, this is unlikely given the City's historic low millage rates and the ability to finance the majority of the City's needs from other revenue sources, including dividends from the City-owned electric, water, wastewater and solid waste utilities. It must be noted, however, that legislative action imposed on local governments by the Florida legislature in the summer of 2007 imposed certain restrictions on efforts to increase property tax millage rates. Per those rules, increases in the assessed value of non-homesteaded properties cannot exceed 10% in any given tax year, excluding school taxes. By simple majority vote, local governments are limited to assessing the roll-back rate (which equal's a rate that amounts to the same amount of taxes collected the prior year) plus an adjustment equal to the increase in state-wide per capita income as determined by the State. With a super-majority vote (2/3rds) of the governing council (City Commission), the locality can increase that rate by up to 10%. Any millage rate in excess of that rate, up to the cap of 10 mills, can be adopted only by unanimous vote of the City Commission or by referendum of the voters.

The City of Lakeland also has large operating costs for the various departments providing services to City residents. The major utility services – electric, water, solid waste, and wastewater -- are supported by charges for services. Operating costs for other departments are derived from a variety of revenue sources available to the City.

## ISSUES AND OPPORTUNITIES

An effective capital improvements programming process can provide numerous benefits to local governments. Specifically, a Capital Improvements Program can ensure that plans for community services are carried out; can allow improvement proposals to be tested against a set of policies; can better schedule public improvements that require more than one year to construct; can provide an opportunity, assuming funds are available, to purchase land before costs go up; and can provide an opportunity for long-range financial planning and management.

There are several key issues surrounding the development of a successful Capital Improvements Program for the City of Lakeland. The primary issues addressed in this Capital Improvements Element are:

1. The development of a Capital Improvements Program which ensures that public facilities and services are available concurrent with the impacts of development;
2. Coordination and consistency between the Capital Improvements Element and the other elements of the plan having level of service and capital expenditure requirements; and,
3. Development of a comprehensive plan and five-year capital improvements budget which demonstrates financial feasibility.

In addition, the challenge of addressing transportation capacity projects is discussed.

## CONCURRENCY REQUIREMENT

The *Lakeland Comprehensive Plan*, as with all plans developed under the 1985 Growth Management Act, must address the issue of concurrency. At a minimum, concurrency requires that all public facilities and services needed to support new development must be in place when the development occurs or must be provided concurrent with the development. Lakeland adopted a concurrency management ordinance in March of 1991 and has administered that program since. This ordinance was revised in late 2006 due to the statutory mandate for local governments to adopt proportionate fair share program provisions.

As a result of concurrency requirements, the Capital Improvements Element and Capital Improvements Program are the key to successful implementation of the *Lakeland Comprehensive Plan*. The Capital Improvements Element sets forth the goal, objective and policy statements which will guide the local decision making process. The Capital Improvements Program outlines the five-year capital projects plan, showing capital expenditures and anticipated funding sources.

In addition to the Capital Improvements Element and Capital Improvements Program, the City of Lakeland has a Concurrency Management System. The adopted management



system ensures that locally adopted level of service standards for roadways, public schools, potable water, sanitary sewer, solid waste, drainage, recreation, and mass transit are maintained. The City of Lakeland will issue no new development orders (i.e. permits, plats, site plan approvals) unless concurrency is certified. The specific administrative procedure necessary to implement this requirement is outlined in the Future Land Use Element.

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## **INTERNAL CONSISTENCY**

In order to successfully implement the *Lakeland Comprehensive Plan*, the Capital Improvements Element and Capital Improvements Program must be coordinated and consistent with the other elements of the plan which have level of service or capital expenditure requirements.

Projects identified within the various comprehensive plan elements are outlined within the Capital Improvements Element and, where feasible, funded in the Capital Improvements Program. In addition, project and funding decisions outlined in the Capital Improvements Program are designed to support the Future Land Use Map.

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## **FINANCIAL FEASIBILITY**

It is through development of the Capital Improvements Element and Capital Improvements Program that local governments must demonstrate the financial feasibility of the proposed comprehensive plan. Within the Capital Improvements Program, the City of Lakeland has outlined a schedule of capital improvements for which the City has fiscal responsibility for funding the next five years. The projects are ranked according to those needed to correct existing deficiencies, those needed to accommodate desired growth and maintain adopted level of service standards, and those which represent logical public service and facility extension into the defined Urban Development Area.

After projects are identified and prioritized, the cost and funding sources are identified. In most cases the funding sources are definite. In some instances, however, the funding of a project may rely on some type of local referendum. In those cases, several alternatives are presented. For example, if attempts at bonding should fail, an increase in ad valorem taxes might be pursued. The primary emphasis is ensuring that adequate revenues exist to fund capital projects required within the next five years, to assist in plan implementation.

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## **ROADWAY LEVEL OF SERVICE**

The five-year Capital Improvements Program is the mechanism by which the City of Lakeland will efficiently stage the timing, location, projected cost, and revenue sources derived from the other comprehensive plan elements, in support of the Future Land Use Element. The Capital Improvements Program is also used to document the financial feasibility of the *Lakeland Comprehensive Plan*.

Given the level of service standards detailed in Policy 2A of the Capital Improvements Element, adequate revenues are available to correct deficiencies, replace worn-out facilities and accommodate growth projected in the Future Land Use Element for all services except

roadways. Transportation system deficiencies are a result of many years of benign neglect through lack of adequate funding of the State, County and City road system. In January 1988, the City of Lakeland became proactive on roadway funding implementing impact fees for State, County arterial and City collector road improvements.

It is important to note that transportation capacity projects are very time intensive to construct. Four steps are required for each major improvement: project development and environmental study (PD&E), preliminary engineering (PE) or design, right-of-way acquisition, and construction.

The listing of needed capacity projects in the Polk County Transportation Planning Organization's (TPO) Long Range Transportation Plan is the first step in the formal FDOT-coordinated road planning and construction process. Since many of the existing deficiencies occurred over many years, it will also take many years to correct these, even with adequate funding in place.

While road planning and construction activities are underway, the City has used the Comprehensive Plan, especially the Future Land Use Map and Element, to improve the future demand on the transportation system. Levels of service are tied to transit and sidewalk networks, most found in the Central City area where higher densities are encouraged. Increased densities and adequate funding are expected to improve transit ridership as well as non-motorized mode split. Transit ridership has experienced a steady increase over the last planning period and, with implementation of existing and updated Comprehensive Plan policies in the Transportation and Future Land Use Elements, this increase may accelerate.

The City has aggressively pursued construction of a downtown streetscape program which improves pedestrian access in the downtown area. Also, as identified in the Transportation and Recreation and Open Space Elements, bicycle planning for commuting as well as recreation is being incorporated in numerous City projects and in the Lake-to-Lake Greenway Connector plan.

Although the City has no authority over the budgets of the Polk County Board of County Commissioners (BOCC) or the Florida Department of Transportation (FDOT), these funding sources are shown in the *Technical Support Document* TSD IX-Two outlining the transportation capacity projects over a five-year period. Projects and funding sources are likewise shown in the FDOT's adopted Five-Year Work Program and included in the TPO's Transportation Improvement Program (TIP).

## GOAL, OBJECTIVES AND POLICIES

The following goal, objective and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to capital improvements planning and programming. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the attainable and measurable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective and policy statements in the Capital Improvements Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this plan and with the goals and policies of the *Central Florida Strategic Regional Policy Plan*.

**GOAL:** The City of Lakeland will take actions necessary to adequately provide needed public facilities and services concurrent with the impacts of development. This will be done in a manner which protects investments in and maximizes the use of existing facilities, while promoting orderly, compact urban growth.

**Objective 1:** Capital improvements will be provided to correct existing deficiencies, to accommodate desired future growth, and to replace worn out or obsolete facilities.

**Policy 1A:** The City of Lakeland will include all projects of \$25,000 or larger identified in the other elements of this plan as necessary to maintain adopted levels of service or correct existing deficiencies in the five-year Capital Improvements Program.

**Policy 1B:** The City of Lakeland will prioritize all proposed capital expenditures according to the following guidelines:

Priority 1: Correction of an existing deficiency.

Priority 2: Accommodate desired growth or maintain adopted levels of service.

Priority 3: Replace worn out and obsolete facilities or a logical extension of facilities and services within the designated Urban Development Area.

**Policy 1C:** The City of Lakeland will provide, or require others to provide, needed capital expenditures for the replacement or renewal of obsolete or worn out capital facilities.

**Policy 1D:** The City of Lakeland shall demonstrate that the CIP is financially feasible by adopting into the CIE a 5-year schedule of capital improvements which includes publicly funded projects, and which may include privately funded projects for which the local government has no fiscal responsibility, necessary to ensure that adopted level-of-service standards are achieved and maintained. Financial feasibility of the 5-year schedule of

capital improvements shall mean that sufficient revenues are currently available, or will be available from committed funding sources, for the first three (3) years, or will be available from committed or planned funding sources for years four (4) and five (5), which are adequate to fund the projected costs of the capital improvements listed in the CIP. Committed and/or planned revenue sources for financing programmed capital improvements may include, but are not limited to, ad valorem taxes, bonds, state and federal funds, other tax revenues, impact fees, and developer contributions. Exceptions to the definition of a balanced, financially feasible 5-year schedule of capital improvements are as follows:

- a. If the CIP relies on planned revenue sources in the 5-year schedule that require referenda or other actions to secure the planned revenue source, the CIE must, in the event the referenda are not passed or actions do not secure the planned revenue source, identify other existing revenue sources that will be used to fund the capital projects or otherwise amend the CIE to ensure financial feasibility;
- b. The requirement that level-of-service standards be achieved and maintained shall not apply if the 5-year schedule of capital improvements reflects developer contributions pursuant to a proportionate fair-share agreement; and
- c. The requirement that the 5-year schedule of capital improvements be financially feasible shall not apply if the 5-year schedule of capital improvements reflects developer contributions pursuant to a proportionate fair-share agreement and additional contributions, payments or funding sources are reasonably anticipated during a period not to exceed 10 years to fully mitigate impacts on the transportation facilities.

**Policy 1E:** The City's 5-year schedule of capital improvements will reflect all projects in the corresponding five (5) years of the Water Supply Facilities Work Plan that make an improvement and/or increase in capacity of potable water facilities.

**Objective 2:** Land use decisions and other decisions regarding the issuance of development orders and permits will be based on the development requirements of this plan, land development regulations, and availability of public facilities and services necessary to support such development while maintaining adopted level of service standards.

**Policy 2A:** Level of service standards for public facilities and services shall be established as follows:

All new roadways constructed within the City will be designed to accommodate a minimum of Level of Service D. Upon plan adoption, the City of Lakeland will use the following multi-modal transportation level of service standards in reviewing the impacts of new development and redevelopment upon facilities:

Upon plan adoption, the City of Lakeland will use the following multi-modal transportation level of service standards in reviewing the impacts of new development and redevelopment upon facilities. The 2009 Florida Legislature approved the Community Renewal Act (more commonly known as “Senate Bill 360”), which established Lakeland as a “Dense Urban Land Area” (DULA). As a DULA, the same legislation allowed Lakeland to become a citywide Transportation Concurrency Exception Area (TCEA) in which traditional concurrency standards would no longer apply should the city decide it no longer wanted to apply such standards and instead adopt a mobility plan containing alternative measures and standards to meet future travel demand in lieu of primarily traditional roadway widening projects. The City of Lakeland’s Connectivity Plan includes the following strategies:

- Continued annual City funding for sidewalk improvements (see adopted City 5 year CIP);
- Continued annual City funding (including CRA funding) for brick street program, re-paving maintenance program and where economically feasible, incorporation of striping to add bike lane demarcation, and/or to enhance pedestrian crossings and other multi-modal improvements;
- Continued funding of City roadway inventory maintenance and updates to identify extent of gaps for pedestrian and bicycle pathways and target opportunities to address enhanced connectivity in all roadway maintenance projects;
- Continued requirements for new or re-development to fund and implement on and off site bicycle parking, pedestrian ways, transit shelters and/or transit transfer stops as per the City’s adopted multi-modal level of service standards;
- Increased residential densities along key transit corridors per the Future Land Use Element’s policies for Transit Oriented Corridors (TOCs);
- Improved multi-modal mobility along network roadways through private and public funding of roadway typologies outlined in this Element and transit friendly building and site design for new/re-development through requirements of the Future Land Use Element for the Central City Transit Supportive Area;
- Access Management per Article 26 of the City’s LDRs, and Corridor Management Planning, including where needed, multi-jurisdictional inter-local agreements to establish common standards in a corridor;
- Provisions for expanded transit service through Polk Transit Authority and Charter County Transit Surtax referendum scheduled for November 2010 and/or subsequent transit related revenue initiatives including grants;
- Transportation Demand Management Strategies;
- Implementation of future land use strategies that promote compact, complimentary/mixed use, contiguous and transit-friendly land use patterns within the Central City Transit Supportive Area (CCTSA) and Transit Oriented Corridors (TOC);
- Implementation of Citywide Pathways Plan, including completion of Lake-to-Lake Bikeway Network; and

- Further development of parking strategies that support improved utilization of transit, bicycle and pedestrian transportation modes.

The City of Lakeland has coordinated with the Polk TPO and Polk County to modify its multi-modal level-of-service standards to incorporate these connectivity plan strategies. The table below contains the “Multi-Modal Transportation level of Service Standards – Locally Preferred with TCEA.

**Multi-Modal Transportation Level of Service:**

Approaches for intersections are normally expected to function at the same minimum LOS standard for the road link of that approach. Details of intersection standards will be outlined in the City’s LDRs but shall generally include mast arm traffic control apparatus as well as pedestrian crossing controls as approved by the City. Locally preferred roadway LOS standards are included in the matrix below. However, for the TOC and CCTSA areas, and where roadway capacities are and/or will be exceeded with the proposed development (i.e., where the volume to capacity or v/c ratio will be in excess of 1.0), then the outlined multi-modal (bus, bike, sidewalk etc) improvements are required and intended to help offset the City’s lower road based level of service standards in these areas. Any cap set for roadway volumes would trigger road &/or intersection improvements in addition to all the multi-modal improvements detailed below. Feasibility of improved transit services refers to operational feasibility as per the transit provider, and/or constructability in terms of right of way needed for any dedicated transit facility.

## Multi-Modal Transportation Level of Service Standards – Locally Preferred with TCEA<sup>5</sup>

Geographic Area	Multi-Modal Standard	Roadway Standard <sup>1</sup>	Mobility & Connectivity Requirements <sup>6&amp;7</sup>
	All standard size transit buses to have bike racks on bus.		Meet COL Access/Site Circulation, Maximum Parking & Sidewalk Land Development Regulations (LDRs); Target: Implement Roadway Typology
Transit Oriented Corridors Overlay (TOC) & Activity Centers within TOC	Transit Service (≤ 30 min in peak times) Bus Rapid Transit (BRT) Service, Where Feasible Premium or Circulator Service (≤ 15 min headways), Where Feasible  Sidewalk/Bike Lane Network: Direct Access to Site & Within Corridor  Rail Service, As Applicable	"E" <sup>2&amp;3</sup>	All: Transit shelter or bench & bike parking  Address sidewalk or bike route gap, as applicable in corridor  Employment & Retail Centers: superstop (=larger or multiple shelters); Mixed Use Commercial Centers: transit transfer center &/or park & ride lot  Bus Pull Out Lane, where recommended; TDM Strategy, if applicable  Grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Connections to multiple streets as per City LDRs. Where connections to multiple streets are not feasible, auto/bike and pedestrian cross-access between adjacent properties required. Direct connections required to adjacent uses within master planned developments.
Central City Transit Supportive Area (CCTSA)	Transit Service (≤30 min. in peak times) Sidewalk/Bike Lane Network Access	"E" <sup>3</sup>	Transit Shelter/bench & Bike Parking; superstop, transfer center and/or park & ride facilities required where appropriate. Address Sidewalk & Bike Path Gaps within ¼ mile, as applicable TDM strategy, if applicable  Required maximum block length as per LDRs. Grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Connections to multiple streets as per City LDRs. Where connections to multiple streets are not feasible, auto/bike and pedestrian cross-access between adjacent properties required. Direct connections required to adjacent uses within master planned developments.
Urban Development Area (UDA)	Transit Service (≤ 60 minutes in peak times)	"E"	Transit Shelter/bench & Bike Parking; superstop, transfer center and/or park & ride facilities required where appropriate.

Geographic Area	Multi-Modal Standard	Roadway Standard <sup>1</sup>	Mobility & Connectivity Requirements <sup>6&amp;7</sup>
UDA Continued	Sidewalk/Bike Network Access in ½ mile		Provide Multi-Use Sidepaths as appropriate Provide Bike/Trail linkages Transit transfer or superstop, as applicable, for activity center & interchange land uses  Internal grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Direct connections required to adjacent uses within master planned developments. Where applicable, developments must be configured to accommodate publicly-privately funded connector roads in the Transportation Element that relieve nearby collector or arterial roads.
Suburban & Rural Development Areas <sup>4</sup>	Transit Service Where Feasible Sidewalk / Bike Network Connections if within ½ mile	“D”	On-site trails/sidepaths, as appropriate Shelters for Active Transit Route  Internal grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Direct connections required to adjacent uses within master planned developments. Where applicable, developments must be configured to accommodate publicly-privately funded connector roads in the Transportation Element that relieve nearby collector or arterial roads.

<sup>1</sup> LOS is measured for the peak hour/peak direction using the average of the two highest peak hours

<sup>2</sup> COL mobility strategies as per above chart shall be required in TOCs; in addition, the roadway Volume/Capacity ratio may have a cap per other policies in the Transportation Element; Roadway Standards based on service volumes and adopted highway LOS standard as given in the Polk TPO’s Roadway Network Database or service volumes obtained through more detailed roadway segment analyses required through the City’s development review process.

<sup>3</sup> LOS may be measured on an averaged corridor basis for facilities with common trip ends.

<sup>4</sup> Major Developments, e.g., large PUDs and DRIs or their equivalents may have specific transportation standards and requirements applied through a development order.

<sup>5</sup> Improvements funded by the Transportation Regional or County Incentive Grant Programs are restricted to State LOS standards. The City will work with the Florida DOT regarding mobility issues for Strategic Intermodal (or FIHS) system facilities within the TCEA (TCEA does not require FDOT approval.)

<sup>6</sup> Grid network also includes modified design and layout configurations that provide multiple efficient routes for access and circulation.

<sup>7</sup> These are examples of Mobility & Connectivity Requirements intended to help meet the above Multi-Modal Standards; it is not an all inclusive list, i.e., other improvements, including enhanced transit services, may be necessary to meet the City’s standards (see also Policy 4A.7).

**Source:** Lakeland Community Development Department, 2010.



## **MASS TRANSIT:**

The City of Lakeland and Lakeland Area Mass Transit District establish a coordinated level of service for mass transit as per the multi-modal level of service standards found in Policy 2A above. While the City's connectivity plan LOS standards address transit as it relates to roadways, the City of Lakeland does not control the Transit service, which is an independent district. The Polk County TPO produces a Transit Development Plan (TDP) which lists several measures of transit service, one of which is to achieve, at minimum, a ridership of 15 passengers per hour on the bus routes that have been in operation for more than five years. Transit shelters, other stop improvements, transit-supportive project design and transit district annexation will be required as appropriate through the City's development review processes.

## **POTABLE WATER:**

### **a. Quality**

Compliance with all Florida Department of Environmental Protection (FDEP) and Federal Drinking Water Standards.

### **b. Quantity**

- System-wide water quantity will be sufficient to furnish a minimum of 150 gallons per capita per day, on an average annual basis to address both residential (domestic) and commercial water supply needs;
- domestic service is targeted at approximately 130 gpd per capita;
- per capita consumption targets are given in Infrastructure Element Objective 1.3;
- minimum flow pressures are also established as follows:
  - 20 psi for fire flow events
  - 30 psi for peak demand periods.

- c.** All stormwater treatment and disposal facilities must meet the water quality standards established in the Florida Administrative Code. Specifically, all stormwater discharge facilities must be designed so that the receiving water body is not degraded below the minimum conditions necessary to ensure suitability for its classification. Any exemptions, exceptions or thresholds found in Chapters 17-25 or 17-40, Florida Administrative Code, are not applicable as a deviation from these locally established standards.

## **WASTEWATER:**

### **(a) Quality**

Compliance with all standards of the U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP).

**(b) Quantity**

System-wide wastewater collection and treatment will be sufficient to provide a minimum of 128 gallons per capita per day on an average annual basis. Plant expansion shall be planned in accordance with F.A.C. 62-600.405.

**SOLID WASTE:**

**LEVELS OF SERVICE**

**(a) Quantity**

Provide adequate pickup and disposal service to accommodate a *minimum* of five pounds (5.4 lbs.) per capita per day. Intergovernmental coordination efforts with Polk County will include an annual report to the Polk County Environmental Services Director stating the City service area population and the anticipated annual tonnage of solid waste to be disposed of at the North Central Landfill.

**(b) Pickup**

Provide for a minimum of twice weekly residential garbage and containerized trash pickup for conventional garbage truck collection and once weekly where automated garbage truck collection is implemented, with collection of recyclables and yard/bulk trash and tree trimmings at a minimum of once a week.

**RECREATION AND OPEN SPACE:**

- a.** 5.98 acres of park/open space per 1,000 population with 50% of this acreage in active facilities such as community and neighborhood parks;
- b.** A minimum of one recreation complex per 30,000 population.
- c.** One community park per 25,000 residents and one neighborhood park per 8,500 residents.

**PUBLIC SCHOOL FACILITIES:**

Consistent with the Interlocal Agreement for Public School Facilities, the uniform, district-wide level-of service standards for elementary, middle and high schools are established as 100 percent of Florida Inventory of School Houses (FISH) capacity and relocatables, as defined further in the Schools Element. The LOS standards are set as follows for special school types:

- a. Magnet and School of Choice:** One hundred percent (100%) of enrollment quota as established by the School Board or court ordered agreements and as adjusted by the school board annually.
- b. Other:** K-8, 6<sup>th</sup> grade centers, 9<sup>th</sup> grade centers, 6-12 are at one hundred percent (100%) of DOE FISH capacity.
- c. Special:** Including alternative education or special programmatic facilities will be determined by the type and use of programs for each facility.

- d. **Conversion Charter Schools:** The capacity is set during contract negotiations and the School Board has limited or no control over how many students the schools enroll. The School Board is unable to “rezone” students to a conversion charter to maximize utilization.

**Policy 2B:** The City of Lakeland will provide, or require others to provide, public facilities and services needed to support development concurrent with the impacts of such development.

**Policy 2C:** The City of Lakeland will coordinate proposed development or redevelopment with State and regional agencies to consider whether the proposed action will affect State agency, water management district, or school district facility plans.

**Policy 2D:** The City of Lakeland adopts by reference the Polk County School Board’s Fiscal Year 5-Year District Facilities Work Program, as approved and amended annually by the School Board, that includes school capacity sufficient to meet anticipated student demands projected by the County and municipalities and based on the adopted level of service standards for public schools. The 5-year schedule of improvements ensures the level of service standards for public schools are achieved and maintained within the 5-year period. Annual updates to the schedule shall ensure levels of service standards are achieved and maintained within each year of subsequent 5-year schedule of capital improvements. Annual updates by the School Board will be adopted by reference as the City annually updates its CIE and CIP.

**Policy 2E:** The City of Lakeland adopts by reference the FDOT’s 5 Year Work Program for District One as approved and amended annually by the FDOT. Annual updates by the FDOT as pertain to Lakeland will be incorporated in the City’s annual updates to its CIP.

**Policy 2F:** The City of Lakeland will account for de minimis project trips through the application of annual growth rates (as developed by the Polk Transportation Planning Organization) for all monitored roadway links in public or private traffic analyses conducted within the City. These growth rates shall be applied in addition to “reserved” trips tracked in the City’s Concurrency Management Database.

**Objective 3:** Future development will bear a proportionate cost of facility improvements necessitated by development in order to maintain adopted level of service standards. For capital improvements that will be funded by the developer, financial feasibility shall be demonstrated by being guaranteed in an enforceable development agreement or interlocal agreement, or other enforceable agreement. These development agreements and/or interlocal agreements shall be reflected in the 5-year schedule of capital improvements if the capital improvement is necessary to serve development within the 5-year schedule.

**Policy 3A:** The City of Lakeland will continue to implement its impact fee ordinances in order to assess new development a pro rated share of the costs required to provide public facilities and services.

**Policy 3B:** The City of Lakeland will continue to negotiate with private development in the provision of capital facilities to serve proposed development. Lakeland's Proportionate Fair-Share Program provides a method by which the impacts of development on transportation facilities can be mitigated by the cooperative efforts of the public and private sectors and includes a methodology for assessing proportionate fair-share mitigation options. This proportionate share program shall provide for the following:

- a. A developer may apply for approval to satisfy all transportation concurrency requirements by contributing or paying proportionate fair-share mitigation if construction or implementation for transportation facilities identified as mitigation for transportation system impacts are specifically identified for funding in the City's 5-year schedule of capital improvements program (CIP), including those portions of the CIE which reference State and County funded transportation improvements, or if the City Commission approves adding the facilities to the next annual update of the 5-year CIP;
- b. Proportionate fair-share mitigation shall be applied as a credit against impact fees to the extent that all or a portion of the proportionate fair-share mitigation is used to address the same capital infrastructure improvements contemplated by local impact fee ordinances;
- c. Mitigation for development impacts to facilities on the State Strategic Intermodal System made pursuant to an approved proportionate fair-share agreement requires the concurrence of the Florida Department of Transportation; and
- d. Nothing in the ordinance shall require the City of Lakeland to approve a development that is not otherwise qualified for approval pursuant to the City's Concurrency Management system.

**Policy 3C:** School facility concurrency mitigation options shall be available to address the impacts of residential developments when applicable elementary, middle, or high schools to which the development is assigned or districted by the PCSB, and all applicable schools in adjacent zones, exceed adopted levels of service standards. The school concurrency mitigation options shall be incorporated into the City's ordinance for concurrency management and shall be consistent with those options identified within the Polk County Interlocal Agreement for Public School Facility Planning and Chapter 163.3180, but at a minimum include donation, construction or funding of school improvements sufficient to offset the demand created by the proposed development. School facility mitigation must be reflected in the PCSB's adopted 5 Year Program of Work, or approved as an update to same. The City's annual CIE update will include this Program of Work by reference.

**Objective 4:** Fiscal resources will be managed in a manner which ensures the provision of needed capital improvements for previously issued development orders as well as future development and redevelopment.

**Policy 4A:** The City of Lakeland will continue to spend funds to maintain existing facilities and services at adopted levels of service.

**Policy 4B:** The City of Lakeland will limit the maximum ratio of outstanding indebtedness for providing capital facilities and services to no greater than 15% of the property tax base.

**Policy 4C:** The City of Lakeland will continue to adopt a five-year capital improvements budget and annual capital budget as part of its budgeting process.

**Policy 4D:** The City of Lakeland will continue to secure grants and private funding, whenever available, to assist in the provision of needed capital improvements, including grants to assist in emergency preparedness and hazard mitigation efforts.

**Policy 4E:** The City of Lakeland will expend monies for capital improvements in accordance with the policies outlined within all elements of this plan.

## MONITORING AND EVALUATION

Pursuant to Chapter 163, Florida Statutes, this element will be reviewed and updated annually to ensure required public facilities are available to maintain the adopted level of service standards. Monitoring and evaluation of the Comprehensive Plan and the Capital Improvements Element will be the responsibility of the Planning Division of the Lakeland Community Development Department. Deficiencies and recommendations will be presented to the City Administration for appropriate handling during budget updates.

This annual review will include the following considerations:

1. Any correction, updates, and modifications concerning cost; revenue sources; acceptance of facilities pursuant to dedications which are consistent with the element; or the date of construction of any facility enumerated in the element;
2. The Capital Improvements Element's continued consistency with the other elements and its support of the Future Land Use Element.

**APPENDIX IX-ONE**  
**CAPITAL IMPROVEMENTS PROGRAM**

**Source:** City of Lakeland Annual Budgetary Process  
(All City Departments, including Finance)

**TABLE IX-ONE(A)(1)  
DOWNTOWN CRA FUND**

TYPE OF FUND	Budget Year					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023			
<b>REVENUES:</b>								
Tax Increment Revenues	1,524,000	1,554,000	1,585,000	1,617,000	1,649,000			
Investment Income	35,766	28,009	22,710	20,057	17,807			
Unappropriated Surplus	221,641	151,399	75,784	64,295	87,743			
<b>TOTAL REVENUES</b>	<b>1,781,407</b>	<b>1,733,408</b>	<b>1,683,494</b>	<b>1,701,352</b>	<b>1,754,550</b>			
<b>EXPENSES:</b>								
<b>Debt Service:</b>								
Debt Service- Residential Redevelopment	400,000	400,000	400,000	400,000	400,000	LCRA	-	FLUE - Obj. 7
<b>Miscellaneous Projects:</b>								
Property Management	40,000	41,200	42,436	43,709	45,020	LCRA	-	
Mowing	10,612	10,718	10,825	10,934	11,043	LCRA	-	
Oak Street Parking-Mgmt Services	16,000	18,000	20,000	22,000	24,000	LCRA	-	
Community Policing Innovation	26,607	9,431				LCRA	-	
Fix-It-Up Program	75,000	75,000	75,000	75,000	75,000	LCRA	-	
<b>Neighborhood Projects:</b>								
North Downtown Master Plan	250,000	250,000	250,000	250,000	300,000	LCRA	I	FLUE - Obj. 7
Downtown Infrastructure	300,000	350,000	350,000	350,000	350,000	LCRA	I	CIE-Obj. 1
Central Bark	50,000					LCRA	I	FLUE- Obj. 5
Small Project Assistance	150,000	150,000	100,000	100,000	100,000	LCRA	I	CIE-Obj. 1
<b>Corridor Enhancements:</b>								
Small Project Assistance	200,000	150,000	150,000	150,000	150,000	LCRA	I	CIE-Obj. 1
<b>Operating:</b>								
Tax Increment Refunds	145,000	155,000	155,000	163,000	156,000	LCRA	-	
Annual Audit/Reporting Requirements	2,388	2,459	2,533	2,609	2,687	LCRA	-	
Other Operating Expenses	115,800	121,600	127,700	134,100	140,800	LCRA	-	
<b>TOTAL EXPENSES</b>	<b>1,781,407</b>	<b>1,733,408</b>	<b>1,683,494</b>	<b>1,701,352</b>	<b>1,754,550</b>			
<b>UNAPPROPRIATED SURPLUS:</b>								
Beginning Balance	1,021,893	800,252	648,853	573,069	508,774			
Sources/(Uses)	(221,641)	(151,399)	(75,784)	(64,295)	(87,743)			
Ending Balance	800,252	648,853	573,069	508,774	421,031			

Level of Service code:  
M = Maintain I = Improve - = not applicable



**TABLE IX-ONE(A)(2)  
DIXIELAND CRA FUND**

TYPE OF FUND	Budget Year					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
Tax Increment	274,000	279,000	285,000	291,000	297,000			
Interest Income	19,210	19,790	20,380	20,990	21,620			
Unappropriated Surplus	275,446	240,396	14,990	642	(3,724)			
<b>TOTAL REVENUES</b>	<b>568,656</b>	<b>539,186</b>	<b>320,370</b>	<b>312,632</b>	<b>314,896</b>			
<b>EXPENSES:</b>								
<b>CORRIDOR ENHANCEMENTS:</b>								
Small Project Assistance	80,000	50,000	30,000	30,000	30,000	LCRA	-	
Alley Improvements	10,000	10,000	10,000			LCRA	-	
SFLA Corridor Improvements	350,000	350,000	150,000	150,000	150,000	LCRA	-	
<b>Miscellaneous:</b>								
Landscaping & Maintenance by others	1,951	2,010	2,070	2,132	2,196	LCRA	-	
Operating Expenses	113,537	116,000	118,000	120,000	122,000	LCRA	-	
Annual Report	5,000	5,000	5,000	5,000	5,000	LCRA	-	
Publications and Promotions	2,500	2,500	2,500	2,500	2,500	LCRA	-	
Alley Maintenance	2,400	2,600	2,800	3,000	3,200	LCRA	-	
Community Policing Innovation	3,268	1,076				LCRA	-	
<b>TOTAL EXPENSES</b>	<b>568,656</b>	<b>539,186</b>	<b>320,370</b>	<b>312,632</b>	<b>314,896</b>			
<b>UNAPPROPRIATED SURPLUS:</b>								
Beginning Balance	640,248	364,802	124,406	109,416	108,774			
Sources / (Uses)	(275,446)	(240,396)	(14,990)	(642)	3,724			
Ending Balance	364,802	124,406	109,416	108,774	112,499			

**TABLE IX-ONE(A)(3)  
MID-TOWN CRA FUND**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
(M, I or -)								
<b>REVENUES:</b>								
Tax Increment	3,279,000	3,345,000	3,412,000	3,480,000	3,550,000			
Interest Income	96,000	18,000	17,000	22,000	27,000			
Misc. Revenues				147,580				
Unappropriated Surplus	1,956,858	19,664	(118,044)	(144,994)	(132,499)			
<b>TOTAL REVENUES</b>	<b>5,331,858</b>	<b>3,382,664</b>	<b>3,310,956</b>	<b>3,504,586</b>	<b>3,444,501</b>			
<b>EXPENSES:</b>								
<b>Neighborhoods:</b>								
Northeast Neighborhood	300,000	300,000	425,000	500,000	450,000	LCRA	-	FLUE - Obj. 7
Northwest Neighborhood	300,000	300,000	425,000	500,000	450,000	LCRA	-	FLUE - Obj. 8
<b>Redevelopment Plan MUAC:</b>								
East Main Street Master Plan	600,000	400,000	400,000	300,000	300,000	LCRA	-	
<b>Corridor Enhancements:</b>								
Ingraham Avenue Enhancements	10,696	11,017	11,348	11,688	12,039	LCRA	-	
Landscape Intown Bypass	9,179	9,454	9,738	10,030	10,331	LCRA	-	
Landscape Parker Street	9,179	9,454	9,738	10,030	10,331	LCRA	-	
Landscape US 98 - Griffin to 10th Street	17,047	17,558	18,085	18,628	19,187	LCRA	-	
Landscape US 98 - Memorial to 10th Street	17,047	17,558	18,085	18,628	19,187	LCRA	-	
MLK-Memorial to 10th St	9,179	9,454	9,738	10,030	10,331	LCRA	I	TE -Policy 6B
Gilmore Ave- Parkview to Bella Vista				250,000		LCRA	I	TE- Policy 6B
E. Main Street Landscaping Maintenance	13,659	14,069	14,491	14,926	15,374	LCRA	-	
Providence Rd - W 10th St to Griffin Rd	400,000					LCRA	I	TE -Policy 6B
Redevelopment of Massachusetts Ave Properties	800,000	400,000	300,000			LCRA	-	
West Lake Parker/Lakeshore Trail Improvements	350,000					LCRA	I	TE -Policy 6B
Memorial Boulevard	550,000	50,000	50,000	100,000	100,000	LCRA	I	TE -Policy 5N
Parkview Place Pedestrian Improvements					300,000	LCRA	I	TE- Policy 6B
<b>Miscellaneous:</b>								
CRA Annual Report	6,415	6,607	6,805	7,009	7,219	LCRA	-	
Community Policing Innovation	204,457	64,093				LCRA	-	
Small Project Assistance	400,000	400,000	200,000	300,000	200,000	LCRA	-	
Property Management	120,000	122,400	124,848	127,345	129,892	LCRA	-	
Affordable Housing	15,000	15,000	15,000	15,000	60,000	LCRA	-	HE - Obj. 4
Operating Expenses	1,200,000	1,236,000	1,273,080	1,311,272	1,350,611	LCRA	-	
<b>TOTAL EXPENSES</b>	<b>5,331,858</b>	<b>3,382,664</b>	<b>3,310,956</b>	<b>3,504,586</b>	<b>3,444,501</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			

(M, I or -)

**UNAPPROPRIATED SURPLUS:**

Beginning Balance	2,399,312	442,454	422,790	540,834	685,828			
Sources / (Uses)	(1,956,858)	(19,664)	118,044	144,994	132,499			
Ending Balance	442,454	422,790	540,834	685,828	818,326			

Level of Service code:

M = Maintain I = Improve - = not applicable

**TABLE IX-ONE(B)(1)  
TRANSPORTATION FUND**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
Local Option Gas Tax - 6 cents	2,650,000	2,658,000	2,666,000	2,674,000	2,682,000			
Local Option Gas Tax - 5 cents	1,679,000	1,684,000	1,689,000	1,694,000	1,699,000			
State Revenue Sharing Gas Tax- 8th Cent	852,000	855,000	858,000	861,000	864,000			
Local Option Gas Tax-9th Cent	436,000	437,000	438,000	439,000	440,000			
Investments & Earnings	114,210	114,435	114,659	114,884	115,108			
Special Assessments - Alleys, Streets & Sidewalks	5,000	5,000	5,000	5,000	5,000			
Impact Fees- District 1	4,150,000	170,000			400,000			
Impact Fees- District 2	350,000	2,524,523	524,523	524,523	524,523			
Internal Loan- Wabash Ave Land Acquisition (Imp Fees)		2,500,000						
Internal Loan- Drane Field Rd Corridor Imp Phase 1 (Imp Fees)		1,500,000						
<b>FDOT Grants:</b>								
Three Parks Trail East		470,776						
Main Street Pathways		855,111						
FDOT Traffic Signal Maintenance Reimb.	524,673	529,920	535,219	540,571	545,977			
FDOT Advanced Traffic Management System	159,000	159,000	159,000					
Transfer from Parking- Handicap Park Fine Revenue	25,000	25,000	25,000	25,000	25,000			
Unappropriated Surplus	1,177,021	540,614	(499,468)	(298,188)	293,849			
<b>TOTAL REVENUES</b>	<b>12,121,904</b>	<b>15,028,379</b>	<b>6,514,933</b>	<b>6,579,790</b>	<b>7,594,456</b>			

<b>EXPENSES:</b>								
Sidewalk Projects	1,146,000	1,559,826	1,384,731	1,291,379	1,184,832			
Street Resurfacing and Sealing	3,915,000	3,048,500	3,004,205	3,402,181	3,957,497			
Street Improvements Projects	575,000	5,510,111	80,000	80,000	80,000			
Impact Fee Projects - District 1	4,150,000	170,000			400,000			
Impact Fee Projects - District 2	350,000	2,524,523	524,523	524,523	524,523			

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
							(M, I or -)	
Traffic Operations Projects	1,134,500	1,004,760	720,405	719,448	663,902			
Miscellaneous Improvements	835,404	899,159	800,069	546,259	288,203			
Contributions to Other Funds	16,000	311,500	1,000	16,000	495,500			
<b>TOTAL EXPENSES</b>	<b>12,121,904</b>	<b>15,028,379</b>	<b>6,514,933</b>	<b>6,579,790</b>	<b>7,594,456</b>			

**UNAPPROPRIATED SURPLUS:**

Beginning Balance	3,535,404	2,358,383	1,817,769	2,317,236	2,615,424			
Sources/(Uses)	(1,177,021)	(540,614)	499,468	298,188	(293,849)			
Ending Balance	2,358,383	1,817,769	2,317,236	2,615,424	2,321,575			

**SIDEWALK PROJECTS:**

S. Edgewood Drive (Taft St to US 98 S)		34,300	98,700			Gas Tax	I	TE - Policy 5A
Chestnut Road Sidewalk (US 92- Chestnut Woods Dr)	50,000	100,000				Gas Tax	I	TE- Policy 5A
Ariana St Dixieland Elementary School	116,000					Gas Tax	I	TE - Policy 5A
Olive St (Cornelia Ave to Central Ave)		26,250	75,750			Gas Tax	I	TE - Policy 5A
Sidewalk Repair & Replacement	750,000	776,250	803,419	831,538	860,642	Gas Tax	M	TE - Policy 5B
Lincoln Ave Sidewalk- SW Middle School to Beacon Rd.	48,000					Gas Tax	I	TE- Policy 5A
FDOT LAP- Three Parks Trail East		470,776				Gas Tax	I	TE - Policy 5D
E. Garden Street (Lkld. Hills Blvd. to W. Lk. Parker Dr.)	40,000					Gas Tax	I	TE- Policy 5A
Plateau Avenue Sidewalk (Hickory to Olive)	72,000					Gas Tax	I	TE- Policy 5A
Gilmore Avenue (Parkview - Bella Vista)		79,450	227,550			Gas Tax	I	TE- Policy 5A
Lakehurst Street Sidewalk				84,700	242,300	Gas Tax	I	TE- Policy 5A
Sylvester Road Sidewalk Phase 2			103,600	296,400		Gas Tax	M	TE- Policy 5A
Accessible Sidewalks Repair & Replacement	70,000	72,800	75,712	78,740	81,890	Gas Tax	M	TE- Policy 5A
<b>TOTAL SIDEWALK PROJECTS</b>	<b>1,146,000</b>	<b>1,559,826</b>	<b>1,384,731</b>	<b>1,291,379</b>	<b>1,184,832</b>			

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			

(M, I or -)

**STREET RESURFACING AND SEALING PROJECTS:**

Street Resurfacing and Sealing	3,060,000	2,523,500	2,599,205	2,677,181	2,757,497	Gas Tax	M	TE - Policy 1C
Pavement Markings	155,000	155,000	155,000	155,000	165,000	Gas Tax	M	TE - Policy 1C
Pavement Management Information System		120,000			120,000	Gas Tax	-	
Providence Road Milling and Resurfacing	150,000					Gas Tax	M	TE - Policy 1C
North Ten Acres Resurfacing	300,000					Gas Tax	M	TE - Policy 1C
Accessible Curb Ramps	250,000	250,000	250,000	250,000	250,000	Gas Tax	M	TE - Policy 1C
E. Edgewood Drive (Troy to New Jersey)				320,000		Gas Tax	M	TE - Policy 1C
N. Socrum Loop Rd (I-4 to Daughtery)					665,000	Gas Tax	M	TE - Policy 1C
<b>TOTAL STREET RESURFACING PROJECTS</b>	<b>3,915,000</b>	<b>3,048,500</b>	<b>3,004,205</b>	<b>3,402,181</b>	<b>3,957,497</b>			

**STREET IMPROVEMENT PROJECTS:**

Alley Maintenance & Improvements	75,000	80,000	80,000	80,000	80,000	Gas Tax	M	TE - Policy 1C
East-West Connector (City share of payoff)		75,000						
US 92 at Wabash Ave (FDOT Share)	500,000							
FDOT - Main Street Pathways		855,111				FDOT	I	TE- Policy 5D
Wabash Ave Land Acquisition- (Imp Fees)		2,500,000				Impact Fees		
S. Wabash Ave Extension (construction)		500,000						
Drane Field Road Corridor Imp Phase 1 (Imp Fees)		1,500,000				Impact Fees		
<b>TOTAL STREET IMPROVEMENT PROJECTS</b>	<b>575,000</b>	<b>5,510,111</b>	<b>80,000</b>	<b>80,000</b>	<b>80,000</b>			

**TRANSPORTATION IMPACT FEE PROJECTS:**

<b>District 1:</b>								
North Wabash Ave Extension	3,950,000					Impact Fees	I	TE - Policy 4C
Sidewalks for Collector Streets					400,000			
N. Florida Ave Sidewalk (Robson St. to Carpenters Way)		170,000				Impact Fees	I	TE - Policy 4C
Corridor Study from SR 33 to Walt Loop Rd	200,000							
<b>District 2:</b>								
S. Wabash Ave Land Acquisition- Debt Service		336,232	336,232	336,232	336,232			
Drane Field Rd Corridor Imp Phase 1- Debt Service		188,290	188,290	188,290	188,290			
East-West Connector (debt service-paid in 2028)	350,000	2,000,000				Impact Fees	I	TE- Policy 4C
<b>TOTAL TRANS. IMPACT FEE PROJECTS</b>	<b>4,500,000</b>	<b>2,694,523</b>	<b>524,523</b>	<b>524,523</b>	<b>924,523</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			

(M, I or -)

**TRAFFIC PROJECTS:**

Socrum Loop @ Old Combee Rd-(Signal Re-Build)	75,000					Gas Tax	M	TE - Objective 2
Traffic Calming Projects	35,000	40,000	40,000	40,000	40,000	Gas Tax	M	TE - Objective 2
Undesignated Projects	10,000	10,000	10,000	10,000	10,000	Gas Tax	-	
Traffic Sign Rehabilitation	50,000	50,000	50,000	50,000	50,000	Gas Tax	M	TE - Objective 2
Pedestrian & Bicycle Safety Enhancement Program	10,000	10,000	12,000	12,000	12,000	Gas Tax	-	
ITS Maintenance	20,000	20,000	25,000	25,000	25,000	Gas Tax	-	
LED Signal lamp replacement	31,000	31,000	32,000	33,000	34,000	Gas Tax	M	TE - Objective 2
Traffic Studies and Analysis	35,000	40,000	40,000	40,000	40,000	Gas Tax	-	
Advanced Traffic Management System O & M	350,000	360,500	371,315	382,454	393,928	FDOT	M	TE - Objective 2
COBALT Traffic Signal Controller Upgrade	75,000	75,000				Gas Tax	-	
Rectangular Rapid Flashing Beacons	30,000	30,000	30,000			Gas Tax	-	TE - Objective 2
Intersection Video Detectors	50,000	50,000	50,000			Gas Tax	-	
Traffic Control Devices	60,000					Gas Tax	-	TE- Objective 2
Traffic Ops ADA Restroom Renovation	40,000					Gas Tax	-	TE- Objective 2
Special Event Barricades/Traffic Cones	5,000	5,000	5,000	5,000		Gas Tax	-	TE- Objective 2
Solar Power Battery Maintenance	10,000	10,000				Gas Tax	-	TE- Objective 2
Spare 333 Traffic Signal Controller Cabinets	17,000					Gas Tax	-	TE- Objective 2
"Blue Toad" Traffic Signal Traffic Data Collection Devices	47,500	52,500	7,500	7,500	7,500	Gas Tax	-	TE- Objective 2
TMC Service Maintenance Agreement (SMA)				65,000		Gas Tax	-	TE- Objective 2
Gas Powered Generators for Traffic Signal Power Back-up Purposes	25,000					Gas Tax	-	TE- Objective 2
"Five Points" (Main/Sloan/Lemon/Lk Beulah) Intersection- Conversion		175,000				Gas Tax	I	TE- Policy 2E
Pedestrian Traffic Signal "Push Buttons" replacements	25,000					Gas Tax	M	TE- Objective 2
Accessible Sidewalks Repair & Replacement	60,000					Gas Tax	M	TE- Objective 5
North Ten Acres Resurfacing	5,000					Gas Tax	M	TE- Objective 5
Accessible Curb Ramps	10,000					Gas Tax	M	TE- Objective 5
East Edgewood Dr (Troy to New Jersey)	15,000					Gas Tax	M	TE- Objective 5
Traffic Operations Personnel	44,000	45,760	47,590	49,494	51,474			
<b>TOTAL TRAFFIC PROJECTS</b>	<b>1,134,500</b>	<b>1,004,760</b>	<b>720,405</b>	<b>719,448</b>	<b>663,902</b>			

Level of Service code:

M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			

(M, I or -)

**MISCELLANEOUS IMPROVEMENT PROJECTS:**

D/S on Internal Loan	564,500	544,500	524,500	189,513		Gas Tax	-	
Transportation ADA Compliance and Admin Services	94,500	99,225	104,186	109,396	114,865	Gas Tax	-	
Contingency	100,000	100,000	100,000	100,000	100,000	Gas Tax	-	
Concrete Crushing		75,000		75,000		Gas Tax	-	
APWA Accreditation		10,000				Gas Tax	-	
CSX Railroad Crossings Maintenance	23,000	23,000	23,000	23,000	23,000	Gas Tax	-	
ROW Mowing	46,504	47,434	48,383	49,350	50,337	Gas Tax	-	
Small Equipment for C&M	6,900					Gas Tax	-	
<b>TOTAL MISC. IMPROVEMENT PROJECTS</b>	<b>835,404</b>	<b>899,159</b>	<b>800,069</b>	<b>546,259</b>	<b>288,203</b>			

**CONTRIBUTIONS TO OTHER FUNDS:**

<b>Parking System:</b>								
Orange Street Garage		172,500			264,500			
Main Street Parking Garage		138,000			230,000			
Structural Inspection of Parking Garages	14,000			15,000				
Main Street Garage Vault Inspection	2,000	1,000	1,000	1,000	1,000			
<b>TOTAL CONTRIBUTIONS TO OTHER FUNDS</b>	<b>16,000</b>	<b>311,500</b>	<b>1,000</b>	<b>16,000</b>	<b>495,500</b>			
<b>TOTAL EXPENSES</b>	<b>12,121,904</b>	<b>15,028,379</b>	<b>6,514,933</b>	<b>6,579,790</b>	<b>7,594,456</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable



**TABLE IX-ONE(B)(2)  
DEVELOPER-FUNDED TRANSPORTATION PROJECTS**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023			
(M, I or -)								
<b>REVENUES:</b>								
Lakeland Central Park DRI (LCP Development LLC)*	2,237,146	849,466				Dev Agrmt 07/21/08		
Bridgewater (Partnership)	155,179					Dev Agrmt Amend 12/21/09		
Mall Hill Center (Doherty Holdings Second, LLC)	286,570					Dev Agrmt 06/20/11		
Lakeland Park Center (RAMCO Gershenson, Inc.)	93,600	93,600				Dev Agrmt 05/16/11		
University of South Florida Polytechnic (currently known as Florida Polytechnic University)	1,009,401					Dev Agrmt 12/21/07		
Publix Super Markets	117,120	483,547				PUD #5229 03/21/11		
Park of Commerce Phase I (RG Lakeland, LLC)	344,698					Mitigation MOU 2/15/12		
Park of Commerce Phase II (GB Lakeland Phase II Owner, LL	143,440					Mitigation MOU 5/10/18		
Lakeland Commerce Park/Cabot (Lakeland XF, LLC)						Mitigation MOU XXXX		
Gresham Village (Watkins Retail Group)	383,231					PUD #4918 10/15/07		
Lakes at Laurel Highlands (DR Horton)						PUD #4754 Am. 06/18/13		
Ruthven's @ Drane Field/Hamilton Road	6,000					Site Plan Review		
Towne Park Estates Phase II/Riverstone PUD (Macch 2, LLC & Atlantic Property Company, LLC)			100,000	100,000	100,000	PUD #4471 as amended 9/16/14; PUD #5677 on 12/18/17 and Dev Agrmt 3/8/18		
Eagles Landing (3300 Florida LLC)						PUD #5460 8/18/14		
Snow Property on SR 33 @ Old Combee Road		100,000				PUD #5474 11/3/14		
Audi Lakeland Transit Shelter Installation	17,000					PUD #5436 3/17/14		
Audi Lakeland Transit Shelter Payment	17,000					PUD #5436 3/17/14		
Starbucks/US 98 North Transit Shelter Payment	18,000					PUD#4773 as amended 7/21/15		

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023			
Reserve at Lakeland Square Transit Shelter	18,000					Mitigation SIT 15-038		
LHA- Williamstown Cottages (Shelter Relocation)	2,000					PUD #5524 as amended on 7/20/15		
Lake Gibson Village Transit Shelter & Bus Bay						PUD #5548 7/21/15		
CR 542 Sidewalk (Rooms To Go)						PUD #5543 11/16/15		
Bridgewater Collector Road Corridor (Ridge Development Group)						PUD #5675 12/18/17		
Oakbridge (The Drummond Company)	261,139					Amend Res #5447 06/04/18		
Equitas Mgt. Group (Kathleen Road 7-Eleven and Interstate Exchange)						CUP #5147 2/15/10		
Lakeland-Linder Regional Airport (Staybridge Suites)	25,000					Site Plan Review		
Project Marlin/Lakeland-Linder Regional Airport						Site Plan Review		
Airpark I, LLC						PUD #5658 8/21/17		
Airport Commerce Partners	25,000					Site Plan Review		
RRL Airpark, LLC								
Banyan Development Group	15,000					PUD #5642 6/19/17		
<b>TOTAL REVENUES</b>	<b>5,174,524</b>	<b>1,526,613</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>			

**EXPENSES:**

<b>Lakeland Central Park DRI</b>								
County Line Road at US 92 (New Tampa Hwy)*	2,217,146						I	TE Pol 4B; CIE Pol 3B
US 92 (New Tampa Hwy) at Wabash Av	20,000	849,466					I	TE Pol 4B; CIE Pol 3B
SR 572 (Airport Road) at SR 570 (Polk Parkway)								
<b>Bridgewater DRI</b>								
State Road 33 at Interstate 4 (Exit 38)	125,179						I	TE Pol 4B; CIE Pol 3B
Transit Shelters	30,000						I	TE Pol 4A.1; CIE Pol 3B
<b>Mall Hill Center</b>								
Griffin Rd at US 98	196,570						I	TE Pol 4B; CIE Pol 3B
Mall Hill Rd Sidewalk	30,000						I	TE Pol 4A.1&7; CIE Pol 3B
Transit Shelters	60,000						I	TE Pol 4A.1&7; CIE Pol 3B
<b>Gateway Commons PUD</b>								
Transit Circulator Route (Downtown to Site)	93,600	93,600					I	TE Pol 4A.1&7; CIE Pol 3B
<b>Florida Polytechnic University (formerly known as University of South Florida Polytechnic)</b>								
State Rd 33 (Interstate-4 @ Exit 33 to Exit 38)**	1,009,401						I	TE Pol 4B; CIE Pol 3B

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TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023			
	(M, I or -)							
<b>Riverstone</b>								
Southwestern Lakeland Transit Service Enhancements			100,000	100,000	100,000		M	TE Pol 4A.7; CIE Pol 2A
Medulla Road Extension							I	TE Pol 16C & Obj. 12; CIE Pol 3B
Medulla Road Extension @ West Pipkin Road							I	TE Pol 16C & Obj. 12; CIE Pol 3B
SR 572 (Drane Field Road) at Waring Road							I	TE Pol 16C & Obj. 12; CIE Pol 3B
Waring Road (Old Medulla to Drane Field Road)							I	TE Pol 16C & Obj. 12; CIE Pol 3B
<b>Miscellaneous</b>								
Lakes at Laurel Highlands (Winston Park Bl)							I	TE Pol 4A.1; CIE Pol 3B
Gresham Village County Line Backage Road	383,231						I	TE Pol 2I & 7G; CIE Pol 3B
Ruthven Hamilton Road Right-of-Way Dedication	6,000						I	TE Pol 7G & Obj. 12; CIE Pol 3B
Gateway Blvd Ext (E. of Whitten Rd.)	117,120	483,547					I	TE Pol 7G; CIE Pol 3B
State Road 33 at Interstate 4 (Exit 38): Park of Commerce Phase I	344,698						I	TE Pol 4A.1&7; CIE Pol 3B
State Road 33 at Interstate 4 (Exit 38): Park of Commerce Phase II	143,440						I	TE Pol 4A.1&7; CIE Pol 3B
State Road 33 at Interstate 4 (Exit 38) - Lakeland Commerce Park/Cabot							I	TE Pol 4A.1&7; CIE Pol 3B
Audi Lakeland Transit Shelter Installation	17,000						I	TE Pol 4A.1&7; CIE Pol 3B
Audi Lakeland Transit Shelter Payment	17,000						I	TE Pol 4A.1&7; CIE Pol 3B
Starbucks/US 98 North Transit Shelter	18,000						I	TE Pol 4A.1&7; CIE Pol 3B
LHA- Williamstown Cottages Shelter Relocation	2,000						I	TE Pol 4A.1&7; CIE Pol 3B
Reserve at Lakeland Square Transit Shelter	18,000						I	TE Pol 4A.1&7; CIE Pol 3B
Lake Gibson Village Transit Shelter & Bus Bay							M	TE Pol 4A.1&7; CIE Pol 3B
CR 542 Sidewalk							I	TE Objectives 5 & 6; CIE Pol 3B
Bridgewater Collector Rd (Ridge Development)							I	TE Pol 4A.1&7; CIE Pol 3B
Eagles Landing Park-and-Ride Land							I	TE Pol 4A.1&7; CIE Pol 3B
Snow Property Frontage Bike Path and Transit Shelter		100,000					I	TE Pol 4A.1&7; CIE Pol 3B
Lincoln Avenue Multi-Use Trail Right-of-Way							I	TE Pol 4A.1&7; CIE Pol 3B
Oakbridge DRI Transit Shelters & Prop-Share Payment	261,139						I	TE Pol 4A.1&7; CIE Pol 3B
Williams Commuter Assistance Program								CIE Pol 2A
Mall Hill Road Extension (Interstate Exchange)							I	TE Pol 4A.1; CIE Pol 3B
Lakeland-Linder Regional Airport (Staybridge Suites) Transit Shelter	25,000							TE Pol 4A.1 & 7; CIE Pol 2A
Aviation Drive Improvements, Transit Shelter and Bus Bay (Project Marlin/Lakeland-Linder Regional Airport)								TE Pol 4A.1, 7 & 8; CIE Pol 2A
Old Medulla Road @ Waring Road (Airpark)								TE Pol 4A.1
Airport Commerce Park (Transit Shelter)	25,000							TE Pol 4A.1 & 7; CIE Pol 2A
Airpark Bus. Pk./Lakeland Airside Center								TE Pol 4A.1, 7 & 8; CIE Pol 2A
Peak Hour Transit Service and Two Transit Shelters (Airpark)								TE Pol 4A.7; CIE Pol 2A
Providence Road Transit Stop Improvements at Providence Reserve (Banyan Development)	15,000							TE Pol. 4A.1 & 7; CIE Pol 2A
<b>TOTAL EXPENSES</b>	<b>5,174,524</b>	<b>1,526,613</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023			

(M, I or -)

Funding shown in Table IX-One(B)(1) for Contributions from Developers and Street Improvement Projects that relate to projects partially funded by developers does not reflect the most current figures as provided in this table.

\* The Florida Department of Transportation has programmed \$2,422,612 in two separate projects to construct the US 92/Wabash and County Line/US 92 intersection projects. \$613,000 is shown as possibly being needed by the developer to fund any cost overruns associated with the County Line/US 92 intersection project during the on-going design phase.

\*\* Funding shown is remaining amount from USF Campus Development Agreement that was not allocated to SR 33 capacity improvements (W. of Old Combee/Melody to E. of Old Combee/Deeson Pointe). Project construction was completed in 2013.

           - Cost estimate and date of implementation to be determined

**TABLE IX-ONE(C)  
LAKELAND LINDER REGIONAL AIRPORT**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
FAA Grants	4,583,371	4,555,665	8,018,663	1,962,000	3,870,000			
FDOT Grants	4,733,008	2,253,093	4,754,106	5,709,000	4,215,000			
Transfer from Lakeland Airport	256,475	898,953	2,055,140	2,747,091	2,729,091			
Internal Loan Fund	3,609,859	253,092						
Long-term Debt	7,386,400	16,400,000	12,895,481					
Unappropriate Surplus Used/ (generated)	35,827							
<b>TOTAL CAPITAL REVENUES</b>	<b>20,604,940</b>	<b>24,360,803</b>	<b>27,723,390</b>	<b>10,418,091</b>	<b>10,814,091</b>			
<b>EXPENSES:</b>								
<b>Maintenance Projects:</b>								
FDOT Facility Maintenance		2,000,000				FAA/FDOT	-	TE- Policy 11E
Miscellaneous Maintenance Projects	200,000	125,000	125,000	150,000	150,000	City	-	
<b>Terminal:</b>								
FAA/FDOT Terminal Apron	2,490,648							
<b>Runways &amp; Taxiways:</b>								
FAA/FDOT Rehab TWY E1		1,900,000				FAA/FDOT	-	TE- Policy 11E
FAA/FDOT Rehab TWY P				1,755,000		FAA/FDOT	-	TE- Policy 11E
FAA/FDOT EA Runway 9R-27L				425,000		FAA/FDOT	-	TE- Policy 11E
FAA/FDOT Rehab and Extend RWY 9-27			8,909,625			FAA/FDOT	-	TE- Policy 11E
FAA/FDOT Construct Parallel RWY 9R-27L					2,500,000	FAA/FDOT	-	TE- Policy 11E
FAA/FDOT EA Runway 9R-27L	400,000					FAA/FDOT	-	TE- Policy 11E
FAA/FDOT Rehab TWY H	2,201,985					City	-	TE- Objective 11
FDOT ILS and RVR	2,800,000					FAA/FDOT	-	TE- Policy 11E
<b>Facility Projects:</b>								
FDOT- Site Prep and Utility Installation for Intermodal Center	12,359,354					FAA/FDOT	-	TE- Objective 11
FAA/FDOT Rehab NE Quadrant		3,161,850				FAA/FDOT	-	TE- Policy 11E
FAA/FDOT ARFF Equipment					1,800,000	FAA/FDOT	-	TE- Policy 11E
FDOT Construct New T Hangers			2,750,000			FAA/FDOT	-	TE- Policy 11E
FDOT Construct Cargo Hangar		15,000,000				FAA/FDOT	-	TE- Policy 11E
FDOT New MRO Hangar			12,000,000			FAA/FDOT	-	TE- Policy 11E
<b>Debt Service:</b>								
FAA/FDOT Rehab TWY E1			21,340	21,340	21,340	FAA/FDOT	-	TE- Objective 14
FAA/FDOT Rehab NE Quadrant		3,162	35,511	35,511	35,512	FAA/FDOT	-	TE- Objective 14
FDOT Facility Maintenance		19,000	229,941	125,941	125,941	FAA/FDOT	-	TE- Policy 11E
FDOT Construct New T Hangers				123,545	123,545	FAA/FDOT	-	TE- Policy 11E
FAA/FDOT Rehab and Extend RWY 9-27				40,067	40,067	FAA/FDOT	-	TE- Objective 14
FDOT Construct Cargo Hangar		145,000	1,454,558	3,834,558	2,814,558	FAA/FDOT	-	TE- Policy 11E

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TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
FDOT New MRO Hangar			238,000	876,000	2,460,000	FAA/FDOT	-	TE- Policy 11E
FDOT- Site Prep and Utility Installation for Intermodal Center		1,729,407	805,457	588,808	588,808	FAA/FDOT	-	TE- Objective 14
FAA/FDOT Terminal Apron	2,540	28,530	28,530	28,530	28,529	FAA/FDOT	-	TE- Objective 11
FAA/FDOT Southeast Apron	150,413	35,063	911,638			FAA/FDOT	-	TE- Objective 11
FDOT ILS and RVR		213,791	213,790	2,413,791	125,791	FAA/FDOT	-	TE- Policy 11E
<b>TOTAL EXPENSES</b>	<b>20,604,940</b>	<b>24,360,803</b>	<b>27,723,390</b>	<b>10,418,091</b>	<b>10,814,091</b>			

**UNAPPROPRIATED SURPLUS:**

Beginning Balance	141,550	105,723	105,723	105,723	105,723			
Sources / (Uses)	(35,827)	0	0	0	0			
<b>Ending Balance - TOTAL</b>	<b>105,723</b>	<b>105,723</b>	<b>105,723</b>	<b>105,723</b>	<b>105,723</b>			

**TABLE IX-ONE(D)  
PARKING SYSTEM FUND**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M or I)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
<b>Transfer from Transportation Fund:</b>								
Structural Inspection of Parking Garages	14,000			15,000				
Orange Street Garage- Exterior Coating					264,500			
Orange Street Parking Garage- Interior Coating		172,500						
Main Street Parking Garage - Exterior Coating		138,000						
Main Street Parking Garage- Interior Coating					230,000			
Main Street Vault Inspection	2,000	1,000	1,000	1,000	1,000			
<b>TOTAL REVENUES</b>	<b>16,000</b>	<b>311,500</b>	<b>1,000</b>	<b>16,000</b>	<b>495,500</b>			
<b>EXPENSES:</b>								
<b>Orange Street Garage:</b>								
Orange St. Parking Garage- Exterior Coating		172,500				Gas Tax	-	
Orange Street Parking Garage- Interior Coating					264,500	Gas Tax	-	
<b>Main Street Garage:</b>								
Main St. Parking Garage- Exterior Coating		138,000				Gas Tax	-	
Main Street Parking Garage- Interior Coating					230,000	Gas Tax	-	
Main Street Vault Inspection	2,000	1,000	1,000	1,000	1,000	Gas Tax	-	
<b>Other Parking Services Projects:</b>								
Structural Inspection of Parking Garages	14,000			15,000		Gas Tax	-	
<b>TOTAL EXPENSES</b>	<b>16,000</b>	<b>311,500</b>	<b>1,000</b>	<b>16,000</b>	<b>495,500</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

**TABLE IX-ONE(E)**  
**DEPARTMENT OF WATER UTILITIES**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
Interest on Pooled Investments - Impact Fee Fund	100,000	100,000	100,000	100,000	100,000			
Interest on Pooled Investments - R&R Fund	100,000	100,000	100,000	100,000	100,000			
Connection Fees	470,000	490,000	510,000	510,000	530,000			
Transfer from Water Operations	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000			
Williams WTP Clearwell Design & Construction (SRL)	13,000,000							
DOT/County Proposed proj (GJ/98)		500,000	500,000	1,000,000	1,000,000			
Additional Transfer funded by Rates- SmartGrid	1,650,000	3,000,000	3,000,000	2,312,000				
Unappropriated Surplus	2,883,015	812,832	(1,063,586)	291,414	(478,586)			
<b>TOTAL REVENUES</b>	<b>22,703,015</b>	<b>9,502,832</b>	<b>7,646,414</b>	<b>8,813,414</b>	<b>5,751,414</b>			

(M, I or -)

**EXPENSES: COLLECTION SYSTEM**

**PRODUCTION:**

<b>RENEWAL AND REPLACEMENT FUND:</b>								
Combee WTP Ground Storage Tank #2	750,000					City	M	IF - Policy 1.1A
Williams WTP Clearwell Design & Construction (SRL)	13,000,000					City	-	IF- Policy 1.1A
Williams Ground Storage Tank Rehabilitation		250,000				City	-	
Williams Filter Rehabilitation		400,000	400,000			City	M	IF - Policy 1.1B
CWP4001 Production- Tools & Equipment	40,000	40,000	40,000	40,000	40,000	City	-	
CWP4002- PICS Capital Equipment	4,000	4,000	4,000	4,000	4,000	City	-	
CWP5030- Equipment Replacement	100,000	100,000	100,000	100,000	100,000	City	-	
CWP5505- NW Plant Auxiliary System Upgrades	100,000	100,000	100,000	100,000	100,000	City	I	IF - Policy 1.1A
CWP5519-NE Monitoring Well Equipment Replacement	10,000	10,000	10,000	10,000	10,000	City	M	IF - Policy 1.1B
Williams Liquid Chlorine Conversion					500,000	City	M	IF - Policy 1.4D
<b>TOTAL PRODUCTION</b>	<b>14,004,000</b>	<b>904,000</b>	<b>654,000</b>	<b>254,000</b>	<b>754,000</b>			

**TRANSMISSION AND DISTRIBUTION:**

<b>RENEWAL AND REPLACEMENT FUND:</b>								
SR 563 (Harden Blvd)- N/S Route- 36 inch Relocate				750,000		City	M	IF - Policy 1.2A
LWE9592 W. Pipkin Widening (Medulla to Harden)				500,000		City	M	IF - Policy 1.2A
SmartGrid (59%)	1,819,714	3,000,000	3,000,000	2,312,000		City	-	
Skyview System 6" Fire Protection Improvement/Six Iron/Fairway Dr	175,000					City	M	IF - Policy 1.2A
Skyview System 6" Fire Protection Improvement/Watersedge Dr	175,000					City	M	IF - Policy 1.2A
W. Lake Parker AC W.L. Replacement- Valencia to Bonaire	280,000					City	M	IF- Policy 1.1A
24" J & B/12" Water Main @ Bella Vista CSX Crossing	100,000					City	M	IF- Policy 1.1A
1600 Gal. Vaccum/with a Tandem Axle Truck	250,000					City	-	IF- Policy 1.1A
Leak Detection Correlator/Hydrophone	35,000					City	-	IF- Policy 1.1A
Outsourcing Engineering Design Work for Projects	40,000					City	-	IF- Policy 1.1A
Contingency Water Distribution	200,000	200,000	200,000	200,000	200,000	City	I	IF - Policy 1.2E
CWD5039- Undesignated Long Term Project Support	250,000	250,000	250,000	250,000	250,000	City	-	

Level of Service code:  
M = Maintain I = Improve - = not applicable



TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
							(M, I or -)	
CWE4001 Subdivision & Comm. Dev. Cap. Proj.	100,000	100,000	100,000	100,000	100,000	City	-	
CWD4002 New Service Connections	50,000	50,000	50,000	50,000	50,000	City	I	IF - Policy 1.1A
CWE4004 Minor Extensions & Sys Improvements	652,856	300,000	300,000	300,000	300,000	City	I	IF - Policy 1.1A
CWD4018 Distribution Facilities Replacement	80,000	80,000	80,000	80,000	80,000	City	M	IF - Policy 1.1A
CWD4021 New Water Meters	50,000	50,000	50,000	50,000	50,000	City	M	IF - Obj. 1.3
CWD5067 Meter Relocation/Improvement	7,500	7,500	7,500	7,500	7,500	City	-	
CWE4022 Tools & Equipment	30,000	30,000	30,000	30,000	30,000	City	-	
CWD4009 Hydrant Installation-New Annex	30,000	30,000	30,000	30,000	30,000	City	I	IF - Policy 1.2E
CWD4011 City Project Support (Capital Project Support)	250,000	250,000	250,000	250,000	250,000	City	-	
CWD15100 Traffic Control Support Capital	10,000	10,000	10,000	10,000	10,000	City	-	
CRR4023 Central Controlled Irrigation	6,000	6,000	6,000	6,000	6,000	City	-	
CWE5146 Purchase of Radios	5,200	5,200	5,200	5,200	5,200	City	-	
CWD4020 Water Meter Replacement	100,000	100,000	100,000	100,000	100,000	City	M	IF - Policy 1.1A
CWD4010 Backflow Prevention	75,000	75,000	75,000	75,000	75,000	City	-	
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>	<b>4,771,270</b>	<b>4,543,700</b>	<b>4,543,700</b>	<b>5,105,700</b>	<b>1,543,700</b>			

**ENGINEERING:**

**RENEWAL AND REPLACEMENT FUND:**

Contingency	250,000	250,000	250,000	250,000	250,000	City	-	
Lakeland Hills Blvd (Parkview to Granada)	200,000					City	M	IF - Policy 1.2A
Memorial Wabash - Ingraham	10,000					City	M	IF - Policy 1.2A
I4/CSX Bridge Replacement		30,000				City	M	IF - Policy 1.2A
South Wabash Extension		50,000				City	M	IF - Policy 1.2A
FDOT/County Proposed (GJ/98N/Pipken/33)	50,000	500,000	500,000	1,000,000	1,000,000	City	-	IF- Policy 1.1A
US 92 at County Line Rd (Widening & Intersection)		500,000		500,000	1,000,000	City	M	IF - Policy 1.2A
CWE4001 Subdivision & Commercial Dev. Cap. Proj.	392,613	350,000	350,000	350,000	350,000	City	-	

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TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
							(M, I or -)	
CWE4004 Minor Extensions & Sys Improvements	25,000	25,000	25,000	25,000	25,000	City	-	
CWD4011 City Project Support	35,000	35,000	35,000	35,000	35,000	City	-	
CWD4012 Polk County Project Support	35,000	35,000	35,000	35,000	35,000	City	-	
CWD4013 State / FDOT Project Support	45,000	45,000	45,000	45,000	45,000	City	-	
CWD4014 City Parks & Rec Support	40,000	40,000	40,000	45,000	45,000	City	-	
CDA5096 CROW Water Projects Easements	45,000	45,000	45,000	45,000	45,000	City	-	
Downtown Redevelopment Prepreparation	100,000	100,000	100,000	100,000	100,000	City	-	
<b>TOTAL ENGINEERING</b>	<b>1,227,613</b>	<b>2,005,000</b>	<b>1,425,000</b>	<b>2,430,000</b>	<b>2,930,000</b>			

**MISCELLANEOUS:**

**RENEWAL AND REPLACEMENT FUND:**

Polk Regional Water Cooperative	500,000	500,000	500,000	500,000		City	M	IF - Policy 1.2A
2010A CBA Bonds Payable	1,450	1,450	1,450	1,450	1,450	City	-	
Radio Replacement 2011	72,264	72,264	72,264	72,264	72,264	City	-	
DOIT Switch Replacement	26,418	26,418				City	-	
<b>TOTAL MISCELLANEOUS R&amp;R FUND</b>	<b>600,132</b>	<b>600,132</b>	<b>573,714</b>	<b>573,714</b>	<b>73,714</b>			

**IMPACT FEE FUND:**

Combee WTP Ground Storage Tank #2	1,000,000					Impact Fees	I	IF- Policy 1.1A
Contingency	100,000	100,000	100,000	100,000	100,000	Impact Fees		IF- Policy 1.1A
S/W Water Expansion		350,000	350,000	350,000	350,000	Impact Fees	I	IF- Policy 1.1A
Debt Service Sinking Funds Transfer- 2010 Sinking Fund Interest	1,000,000	1,000,000				Impact Fees	I	IF - Policy 1.1A
<b>TOTAL MISCELLANEOUS</b>	<b>2,100,000</b>	<b>1,450,000</b>	<b>450,000</b>	<b>450,000</b>	<b>450,000</b>			

**TOTAL EXPENSES**

	<b>22,703,015</b>	<b>9,502,832</b>	<b>7,646,414</b>	<b>8,813,414</b>	<b>5,751,414</b>			
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**UNAPPROPRIATED SURPLUS:**

Beginning Balance	4,000,598	1,117,583	304,751	1,368,337	1,076,923			
Sources / (Uses)	(2,883,015)	(812,832)	1,063,586	(291,414)	478,586			
<b>Ending Balance - TOTAL</b>	<b>1,117,583</b>	<b>304,751</b>	<b>1,368,337</b>	<b>1,076,923</b>	<b>1,555,509</b>			

**TABLE IX-ONE(F)  
WASTEWATER FUND**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
(M, I or -)								
<b>REVENUES:</b>								
Impact Fee Revenue	409,000	409,000	409,000	409,000	409,000			
Impact Fee Fund- Interest on Pooled Investments	100,000	100,000	100,000	100,000	100,000			
Contribution from Developers	5,000	5,000	5,000	5,000	5,000			
Transfer from WW Operations	6,500,000	6,700,000	6,700,000	6,700,000	6,700,000			
Oakpark/Summerfield Wastewater System Remediation	100,000							
DOT/County Proposed proj (GJ/98/33/Pipken)(Surcharge?)		500,000	500,000	1,000,000	1,000,000			
AA Digestion process Solar Dryers (SRL)					5,000,000			
R&R Fund- Interest on Pooled Investments	200,000	200,000	200,000	200,000	200,000			
Unappropriated Surplus (Used/Generated)	1,628,296	667,938	1,007,938	(792,062)	(87,062)			
<b>TOTAL REVENUES</b>	<b>8,942,296</b>	<b>8,581,938</b>	<b>8,921,938</b>	<b>7,621,938</b>	<b>13,326,938</b>			

**EXPENSES: COLLECTION SYSTEM  
SEWER MAINTENANCE:**

<b>RENEWAL AND REPLACEMENT FUND</b>								
Rehabilitate Sewer Lines	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	City	M	IF - Obj. 2.1F
Capital Equipment- Sewer line Maint.	45,000	45,000	45,000	45,000	45,000	City	-	
Inflow Reduction	40,000	40,000	40,000	40,000	40,000	City	M	IF - Obj. 2.1F
Sewer Maintenance- Manhole Rehabilitation	75,000	75,000	75,000	75,000	75,000	City	-	
Contingency- Collection	100,000	100,000	100,000	100,000	100,000	City	-	
Collection System Monitoring	50,000	50,000	50,000	50,000	50,000	City	-	
Other Construction Projects	50,000	50,000	50,000	50,000	50,000	City	I	IF - Policy 2.1D
Other Replacement Projects	70,000	50,000	50,000	50,000	50,000	City	M	IF - Obj. 2.1F
Western Trunk Manhole Rehab	250,000	250,000				City	M	IF - Obj. 2.1
Northside 30" Force Main ARVs Rehabilitation	225,000	225,000	225,000			City	M	IF - Obj. 2.1
Griffin Rd 24" Sanitary Sewer Lining	175,000	175,000	175,000			City	M	IF - Objective 2.1
Oakpark/Summerfield Wastewater System Remediation	100,000					City	M	IF - Objective 2.1
COL Sewer Line Easement Purchases	50,000		50,000		50,000	City	M	IF- Objective 2.1
Northside Plant Dump Pad	150,000					City	M	IF- Objective 2.1
Flushing SW Basin Forcemains	25,000		50,000		50,000	City	M	IF- Objective 2.1
Smartcover Installation		25,000		25,000		City	I	IF- Objective 2.1
S. Florida Ave Gravity Line Repair		200,000	200,000			City	M	IF - Objective 2.1
<b>TOTAL R&amp;R FUND</b>	<b>2,405,000</b>	<b>2,285,000</b>	<b>2,110,000</b>	<b>1,435,000</b>	<b>1,510,000</b>			
<b>Impact Fee Fund</b>								
Lunar Circle Force Main Upsizing	200,000					Impact Fee	I	IF- Objective 2.1
Citrus Wood L3865 Force Main Upsizing	650,000					Impact Fee	I	IF- Objective 2.1
<b>TOTAL IMPACT FEE FUND</b>	<b>850,000</b>							

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			

<b>TOTAL SEWER MAINTENANCE</b>	<b>3,255,000</b>	<b>2,285,000</b>	<b>2,110,000</b>	<b>1,435,000</b>	<b>1,510,000</b>			
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**PUMP STATIONS:**

<b>Renewal and Replacement Fund</b>								
Telemetry System Upgrades	100,000	100,000	50,000	50,000	50,000	City	-	
Wet Well Rehab	100,000	100,000	100,000	100,000	100,000	City	-	
Undesignated Pump / Panel Replacements	200,000	200,000	200,000	200,000	200,000	City	-	
Northwest Pump Station Rehab		350,000				City	M	IF- Objective 2.1
Undesignated Generatory Installation		300,000	300,000	300,000	300,000	City	I	IF- Objective 2.2
Martins Landing Pumps and Panel Rehab		150,000				City	M	IF- Objective 2.3
Edgewood Ext. Rehab			350,000			City	M	IF- Objective 2.4
Undesignated Generator Replacement	75,000	75,000	75,000	75,000	75,000	City	-	
Replace Publix Pump Station Controls	300,000					City	M	IF - Objective 2.1
Replace Westside Pump Station Controls	200,000					City	M	IF - Objective 2.1
Capital Equipment	25,000	25,000	25,000	25,000	25,000	City	-	
<b>TOTAL PUMP STATIONS</b>	<b>1,000,000</b>	<b>1,300,000</b>	<b>1,100,000</b>	<b>750,000</b>	<b>750,000</b>			

**TREATMENT PLANTS:**

<b>Glendale Treatment Plant</b>								
<b>Renewal and Replacement Fund</b>								
New Odor Control & Intermediate Station		125,000				City	-	
Climber Screen Repair					750,000	City	-	
Repair and Repave Service Roads				100,000		City	-	
Rehab & Repair Wetland Lift Station Pumps	100,000					City	M	IF - Objective 2.1
Generator & Switch Gear Replacement	200,000	300,000	300,000	400,000		City	-	
Control Panel Upgrades Glendale	100,000	150,000	150,000	150,000	150,000	City	-	
SCADA HACH WIMS Interface		100,000			100,000	City	-	
Replacement of Magnetic Flow Meters		65,000				City	-	
Glendale Controls				100,000		City	-	
Transfer to Fleet- Wastewater Vehicle Purchase	150,000					City	-	IF- Policy 3.1D
Replacement of ARV's (Reuse/Return/Wetlands)	225,000	225,000	225,000	225,000	225,000	City	M	IF - Objective 2.1
Rehab and Repair of Primary Clarifiers					150,000	City	M	IF- Policy 3.1D
Capital Equipment- Glendale	65,000	65,000	65,000	65,000	65,000	City	-	
Replacement of Sludge Pumping Equipment			150,000	150,000	150,000	City	-	
Undesignated Pumps & Motors	250,000	250,000	250,000	250,000	250,000	City	-	
<b>Northside Treatment Plant</b>								
<b>Renewal &amp; Replacement Fund</b>								
Undesignated Pumps, Motors and Controls	200,000	200,000	200,000	200,000	200,000	City	-	

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Rehab & Repair Digester Blowers			400,000			City	-	
Replacement of Clarifier Drive Mechanisms FY22				500,000	475,000	City	M	IF - Objective 2.1
Replacement of Influent Screen/Headworks			1,000,000			City	M	IF - Objective 2.1
New AA Digestion process Solar Dryers (SRL)					5,000,000	City	-	IF- Objective 2.1
Northside Controls	150,000	150,000	150,000	150,000	150,000	City	-	
Generator & Switch Gear Replacement	200,000	300,000				City	-	
Odor Control Rehab & Upgrade	125,000	125,000				City	-	
Grit Removal Improvements Northside	500,000					City	-	
Replacement of Magnetic Flow Meters		100,000	100,000			City	-	
Replacement of Sludge Pumping Equipment		100,000	100,000			City	-	
Capital Equipment Northside	25,000	25,000	25,000	25,000	25,000	City	-	
<b>Westside Treatment Plant</b>								
<b>Renewal &amp; Replacement Fund</b>								
Undesignated Pumps, Motors and Controls	75,000	75,000	75,000	75,000	75,000	City	M	IF - Obj. 2.3
Control Panel Upgrades	50,000	50,000	50,000	50,000	50,000	City	-	
<b>TOTAL TREATMENT PLANTS</b>	<b>2,415,000</b>	<b>2,405,000</b>	<b>3,240,000</b>	<b>2,440,000</b>	<b>7,815,000</b>			

**WETLANDS:**

<b>Renewal and Replacement Fund</b>								
Reverse Euthrophication/Wetlands Ecosystem	150,000					City	-	
Wetland Data Automation	50,000					City	-	CO- Objective 2
Wetlands Park	75,000	75,000	75,000	75,000	75,000	City	-	
Wetlands Gopher Tortoise Relocation		25,000		25,000		City	-	CO - Objective 5
Security Enhancements		20,000				City	I	CO- Objective 2
Connect to Public Water Supply	25,000					City	I	CO- Policy 2N
Fire Panel	30,000					City	M	CO- Objective 2
Wetland Renewable Energy		75,000				City	-	CO- Objective 7
Land Management	30,000	30,000	30,000	30,000	30,000	City	-	CO- Objective 2
Wetland Entrance Road	30,000					City	I	CO- Objective 2
Generator Replacement					30,000	City	M	CO- Objective 2
Contingency Wetlands	50,000	50,000	50,000	50,000	50,000	City	-	
Transfer to Fleet- Wastewater Vehicle Purchases	28,500					City	M	CO - Policy 2N
Capital Equipment- Wetlands	20,000	10,000	10,000	10,000	10,000	City	-	
<b>TOTAL WETLANDS</b>	<b>488,500</b>	<b>285,000</b>	<b>165,000</b>	<b>190,000</b>	<b>195,000</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			

(M, I or -)

**ENGINEERING:**

<b>Renewal and Replacement Fund</b>								
County Projects	20,000	20,000	20,000	20,000	20,000	City	-	
D.O.T. Projects	20,000	20,000	20,000	20,000	20,000	City	-	
Wastewater Support - Other City Departments	50,000	50,000	50,000	50,000	50,000	City	-	
Undesignated Utility Relocations	200,000	200,000	200,000	200,000	200,000	City	-	
Downtown Redevelopment Preparation -WW	100,000	100,000	100,000	100,000	100,000	City	-	
South Wabash Ave Extension		50,000				City	M	IF - Objective 2.2
FDOT/County Proposed (GJ/98N/Pipkin/33)(Surcharge)	50,000	500,000	500,000	1,000,000	1,000,000	City	-	IF - Objective 2.2
US 92 at County Line Rd (Intersection & Widening)			250,000	250,000	500,000	City	M	IF - Objective 2.2
Cataloging of Permits Easements & Service Agreements	6,000	6,000	6,000	6,000	6,000	City	-	
<b>Impact Fee Fund</b>								
S/W Wastewater Expansion		350,000	350,000	350,000	350,000	Impact Fee	I	IF- Objective 3.1
Subdivision and Commercial Development	350,000	350,000	350,000	350,000	350,000	City	I	IF - Policy 2.1B
Undesignated Capacity Expansion	150,000	150,000	150,000	150,000	150,000	City	I	IF - Policy 2.1B
<b>TOTAL ENGINEERING</b>	<b>946,000</b>	<b>1,796,000</b>	<b>1,996,000</b>	<b>2,496,000</b>	<b>2,746,000</b>			

**MISCELLANEOUS:**

<b>Renewal and Replacement Fund</b>								
Security Enhancements	50,000	50,000	50,000	50,000	50,000	City	-	
Local Limits Headworks Study		80,000				City	-	
Contingency	150,000	150,000	150,000	150,000	150,000	City	-	
Facilities Upgrades / Repairs and Replacements	50,000	50,000	50,000	50,000	50,000	City	-	
Tampa Bay Nitrogen Management Consortium	6,000					City	-	IF - Objective 4.1
Conductivity Abatement (center 289)	100,000	100,000				City	-	IF - Objective 4.1
Capital Equipment- Lab						City	-	
Radio Replacement 2011	60,938	60,938	60,938	60,938	60,938	City	-	
DOIT Switch Replacement	20,858	20,000				City	-	
New Pretreatment Building	400,000					City	M	CO - Policy 2N
<b>TOTAL MISCELLANEOUS</b>	<b>837,796</b>	<b>510,938</b>	<b>310,938</b>	<b>310,938</b>	<b>310,938</b>			
<b>TOTAL EXPENSES</b>	<b>8,942,296</b>	<b>8,581,938</b>	<b>8,921,938</b>	<b>7,621,938</b>	<b>13,326,938</b>			

**UNAPPROPRIATED SURPLUS:**

Beginning Balance	8,035,250	6,406,954	5,739,016	4,731,078	5,523,140			
Sources / (Uses)	(1,628,296)	(667,938)	(1,007,938)	792,062	87,062			
<b>Ending Balance - TOTAL</b>	<b>6,406,954</b>	<b>5,739,016</b>	<b>4,731,078</b>	<b>5,523,140</b>	<b>5,610,202</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

**TABLE IX-ONE(G)  
PUBLIC IMPROVEMENT FUND**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
LRMC Lease Payments	14,378,615	14,774,027	15,180,313	15,597,772	16,026,711			
Investment Earnings	323,519	332,416	341,557	467,933	480,801			
<b>Transfers From:</b>								
General Fund- SW Lakeland Fire Station	135,173	135,173	135,173	135,417				
General Fund- CHGC Irrigation Replacement Debt	197,266	197,266	197,266	197,266	197,266			
New Recreational Fees Fund	450,000							
CRA - Central Bark	50,000							
Internal Loan- CAD/Reporting System Replacement	1,500,000							
Internal Loan- Lake Cargo (Imp Fee and City)	2,650,000							
Intra-Fund Joker Marchant Stadium Capital Reserve	96,547	96,547	96,547	96,547	96,547			
Investment Rev & Principal from Sale of Lk Mirror Tower			2,250,000					
<b>Impact Fee Fund:</b>								
Parks & Recreation	4,049,102	859,206	525,000	300,000				
Police	600,000				600,000			
<b>Marchant Stadium Expansion Revenues:</b>								
State of Florida- Office of Tourism	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000			
Polk County Tourist Development Council	1,044,561	1,044,561	1,044,561	1,044,561	1,044,561			
<b>Library Revenues:</b>								
County Library Cooperative	161,960	105,000	200,000	200,000	200,000			
<b>Fire Department Revenues:</b>								
Fire Protection Fees	543,000	563,320	583,939	604,559				
Internal Loan- Training Center Expansion	2,650,000							
Transfer from Imp. Fee Fund	350,000	300,000	300,000	300,000	200,000			
Contributions and Donations	516,667	516,667	516,667	516,667	516,667			
Unappropriated Surplus- Used/(Generated)	926,164	(1,026,372)	(9,615)	(1,276,601)	(315,692)			
<b>TOTAL REVENUES</b>	<b>31,622,574</b>	<b>18,897,810</b>	<b>22,361,408</b>	<b>19,184,122</b>	<b>20,046,861</b>			

**EXPENSES:**

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Parks	3,954,845	3,801,204	10,570,573	4,523,951	4,452,198			
Recreation	4,822,958	2,187,000	428,000	309,000	691,000			
Parks & Recreation Impact Fee Projects	4,049,102	859,206	525,000	300,000				
Library	926,960	105,000	200,000	200,000	200,000			
Oak Hill Cemetery	157,900	130,700	32,200	82,370	35,500			
Police Department	2,144,877	60,164	60,000	1,594,653	600,000			
Fire Department	4,721,046	1,810,706	1,498,046	1,592,805	1,342,873			
Non-Departmental	3,015,605	1,789,032	1,793,032	1,827,032	1,861,032			
Contributions to Other Funds	7,829,281	8,154,798	7,254,557	8,754,311	10,864,258			
<b>TOTAL EXPENSES</b>	<b>31,622,574</b>	<b>18,897,810</b>	<b>22,361,408</b>	<b>19,184,122</b>	<b>20,046,861</b>			

**UNAPPROPRIATED SURPLUS:**

Beginning Balance	4,553,000	3,626,836	4,653,208	4,662,823	5,939,423			
Sources/(Uses)	(926,164)	1,026,372	9,615	1,276,601	315,692			
Ending Balance	3,626,836	4,653,208	4,662,823	5,939,423	6,255,116			

**EXPENSES:**

**PARKS:**

<b>Beautification Projects (Partial Grant &amp; 100% City Funded):</b>								
Neighborhood Beautification	50,000	50,000	50,000	50,000	50,000	City	-	
<b>Publix Charities Park (Formerly Commonground Park):</b>								
Playground Replacement					200,000	City	M	ROS- Policy 1B
<b>Cypress Youth Complex:</b>								
Soccer Complex	500,000					City	I	ROS - Obj. 1
<b>Dobbins Park:</b>								
Playground		75,000				City	I	ROS- Policy 1C
<b>Jackson Park:</b>								
Playground Replacement				80,000		City	M	ROS- Obj. 5
<b>Lake Mirror Park:</b>								
Lake Mirror Tower-D/S (Paid in FY '21)			5,000,000			City	-	
Sunflower Preschool Playground Equipment			200,000			City	M	ROS - Policy 5A
<b>Lake Parker Park:</b>								
Maintenance Building					75,000	City	I	ROS- Policy 1B
<b>Marchant Stadium:</b>								



TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Field Replacement -D/S	65,835	448,944				City	-	
Berm D/S	370,120	370,120	370,120	370,120	359,920	City	-	
Marchant Stadium- D/S State & County (Paid FY '36)	2,044,561	2,044,561	2,044,561	2,044,561	2,044,561	City	-	
Marchant Stadium - D/S City Share Paid in FY '36	651,829	651,829	651,829	651,829	651,829	City	-	
Marchant Stadium- Capital Reserve					500,000	City	-	ROS- Policy 1B
<b>Peterson Park:</b>								
Playground Replacement				150,000		City	M	ROS- Obj. 5
Fan Seating ADA Upgrades (All 6 fields)				85,000		City	I	ROS- Policy 5B
<b>Sertoma Park:</b>								
Park Renovation			50,000			City	M	ROS - Policy 5A
<b>Westside/Southwest Complexes:</b>								
Westside Playground Replacement				200,000		City	M	ROS - Policy 5A
Southwest Playground Replacement				100,000		City	M	ROS - Policy 5A
Southwest Complex- Clubhouse Remodel				225,000		City	M	ROS - Policy 5A
Westside Complex Concession Stand Rehab				225,000		City	M	ROS - Policy 5A
<b>Woodlake Park:</b>								
Playground Replacement					125,000	City	M	ROS- Policy 5A
Lights for Pickle Ball Courts				125,000		City	I	ROS- Obj. 5
Replace Tennis Court Lighting					275,000	City	M	ROS- Policy 5A
<b>Irrigation Projects:</b>								
Centralized Irrigation System				50,000		City	-	
<b>Sportsfield Projects:</b>								
Sports Field Lighting-Maintenance	30,000	30,000	30,000	30,000	30,000	City	-	
<b>Miscellaneous Parks Projects:</b>								
Parks Maintenance Projects	60,000	62,000	64,000	66,000	68,000	City	M	ROS - Policy 5A
Park Consultant Design Services	30,000	30,000	30,000	30,000	30,000	City	-	
Pavement Management System - (Re-pave Park Paths)	25,000	26,250	27,563	28,941	30,388	City	M	ROS - Policy 5A
Southwest Park Land Aquisition			2,000,000			City	I	ROS - Policy 6C
Holiday Decorations	12,500	12,500	12,500	12,500	12,500	City	-	
Volunteer Monument Repairs	65,000					City	M	ROS- Policy 5A
Parks Signage Upgrade - City Wide			40,000			City	-	

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Downtown Central Bark (Contributions)	50,000					City	I	ROS- Policy 1C
<b>TOTAL PARKS</b>	<b>3,954,845</b>	<b>3,801,204</b>	<b>10,570,573</b>	<b>4,523,951</b>	<b>4,452,198</b>			

**RECREATION:**

<b>Kelly Recreation Complex:</b>								
Gandy & Simpson Pools- Shade Awnings	10,000					City	-	
Gandy Pool Resurfacing					300,000	City	M	ROS- Policy 5A
Annual Pool Contingency	8,000	8,000	8,000	8,000	8,000	City	M	ROS- Obj. 5
Kelly Rec - Weightroom Equipment			100,000			City	M	ROS - Policy 5A
<b>Lake Mirror Center:</b>								
Replace Fire and Stage Curtains		115,000				City	M	ROS- Policy 5A
Furniture Replacement					100,000	City	M	ROS- Policy 5A
<b>Lake Crago Park:</b>								
Lake Crago Park Complex Construction	3,900,000					Impact Fees	I	ROS - Policy 5A
Debt Service on Internal Loan (City share paid FY'20)	60,000	1,400,000				City	I	ROS- Policy 1B
<b>Simpson Park:</b>								
Facility Improvements				75,000		City	M	ROS- Obj. 5
Shade Covers - Seating					50,000	City	I	ROS- Policy 1B
Simpson Park Pool Repairs	25,000	450,000				City	-	
Simpson Park Pool - Debt Service	261,290					City	-	
Simpson Park - Weightroom Equipment			100,000			City	M	ROS - Policy 5A
Annual Pool Contingency	8,000	8,000	8,000	8,000	8,000	City	M	ROS- Obj. 5
<b>Miscellaneous Recreation Projects:</b>								
Renovate Buildings and Playgrounds	200,000	206,000	212,000	218,000	225,000	City	M	ROS - Policy 5A
D/S- Energy Projects @Magnolia & Simpson	350,668					City	-	
<b>TOTAL RECREATION</b>	<b>4,822,958</b>	<b>2,187,000</b>	<b>428,000</b>	<b>309,000</b>	<b>691,000</b>			

**P&R IMPACT FEE PROJECTS:**

<b>District 1:</b>								
Lake Crago Park Complex	2,950,000					Impact Fees	I	ROS - Policy 5A
Debt Service on Internal Loan		780,000	525,000			NA	-	ROS- Policy 1B
Downtown Central Bark	250,000					Impact Fees	I	ROS- Policy 1C
Tigertown Multi-purpose Field Lighting	500,000					Impact Fees	I	ROS- Objective 5
<b>District 2:</b>								
Cypress Youth Complex - Field Lighting	250,000					Impact Fees	I	ROS - Objective 5
Cypress Youth Complex (D/S Paid in '20)	99,102	79,206				Impact Fees	I	ROS - Policy 5A
Peterson Park Concession/Restroom ADA Expansion				300,000		Impact Fees	I	ROS - Policy 5B
<b>TOTAL P&amp;R IMPACT FEE PROJECTS</b>	<b>4,049,102</b>	<b>859,206</b>	<b>525,000</b>	<b>300,000</b>				

**LIBRARY:**

<b>Co-op Funded Projects:</b>								

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Future Expansion Reserve	16,960	10,000	15,000	65,000	10,000	Library Coop	-	
Library Furniture			100,000			Library Coop	-	
Lobby Restroom Renovation (Branch)					40,000	Library Coop	I	ROS- Policy 1B
Lobby Restroom Renovation (Main)	10,000				40,000	Library Coop	-	
Computer Equipment Upgrade	15,000	20,000	75,000	20,000	10,000	Library Coop	-	
Carpet (Northside Branch)	80,000					Library Coop	-	
Carpet (Main)	20,000	75,000				Library Coop	-	
Closed Circuit Camera System Upgrade	5,000		10,000			Library Coop	-	
Interior Ceiling and Lighting	10,000					Library Coop	-	
Sound System Upgrade- Main Meeting Room	5,000			15,000		Library Coop	-	
Fixture Replacement (Northside Branch)				100,000	100,000	Library Coop	-	
Interior Finishes or Improvements	15,000					Library Coop	I	ROS- Policy 5A
<b>City Funded Projects:</b>								
A/C Ductwork Maintenance	750,000					Library Coop	-	
<b>TOTAL LIBRARY</b>	<b>926,960</b>	<b>105,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>			

**OAK HILL CEMETERY:**

Routine Maintenance	29,200	30,700	32,200	33,800	35,500	NA	-	
Resurface Roadways	18,700			20,570		NA	-	
Oak Hill Expansion - VII	25,000	25,000				NA	-	
Roadway Construction	75,000	75,000				NA	-	
Lowering Devices	10,000					NA	-	
Columbarium				28,000		NA	-	
<b>TOTAL OAKHILL CEMETERY</b>	<b>157,900</b>	<b>130,700</b>	<b>32,200</b>	<b>82,370</b>	<b>35,500</b>			

**POLICE DEPARTMENT:**

Comm Center Expansion (Impact Fees)	600,000					Impact Fee	-	
CAD/Reporting System Replacement	1,500,000					NA	-	
CAD/Reporting System Replacement (Debt Service)	44,877	60,164	60,000	1,515,123				
Ballistic Helment Replacement				79,530		NA	-	
Station Expansion (Impact Fees)					600,000	Impact Fee	-	H - Policy 3D
<b>TOTAL POLICE DEPARTMENT</b>	<b>2,144,877</b>	<b>60,164</b>	<b>60,000</b>	<b>1,594,653</b>	<b>600,000</b>			

**FIRE DEPARTMENT:**

Thermal Imaging Camera	5,000	5,000	6,000	6,000	12,000	NA	-	
Motor Pool Purchases	1,343,000	1,081,660	800,000	900,000	900,000	NA	-	
FDOT- ARFF Station/Station #7 (Debt Service)	60,000	60,000	60,000	45,515		NA	-	
Fire Station #7- Debt Service (Impact Fee)	100,000	100,000	100,000	100,000		Impact Fee	-	
Fire Station #7- (City Share)	135,173	135,173	135,173	135,417		NA	-	
Hurst Hydraulic Tool / Saws	33,000	34,000		36,000	37,000	NA	-	
Portable Electronic/Gas			2,000			NA	-	
Refurbish Training Facility (D/S Paid in 2028)	369,873	369,873	369,873	369,873	369,873	NA	-	

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Commercial Washer and Dryer Replacement					24,000			ROS- Policy 5A
Exercise Equipment Replacement	25,000	25,000	25,000					ROS- Policy 5A
Refurbish Training Facility	2,650,000					NA	-	
<b>TOTAL FIRE DEPARTMENT</b>	<b>4,721,046</b>	<b>1,810,706</b>	<b>1,498,046</b>	<b>1,592,805</b>	<b>1,342,873</b>			

**NON-DEPARTMENTAL PROJECTS:**

<b>Neighborhood Projects:</b>								
Neighborhood Preservation	100,000	100,000	100,000	100,000	100,000	NA	-	
Neighborhood Matching Grants Program	65,000	65,000	65,000	65,000	65,000	NA	-	
<b>City Hall:</b>								
Southside Security Enhancements	110,000					NA	-	
<b>All Other General Fund Buildings:</b>								
Roof Replacements	373,448	391,448	409,448	427,448	445,448	NA	-	
City Roof Audit		15,000				NA	-	
Fire Panels Replacements	75,000	75,000	60,000	60,000	60,000	NA	-	
Air Conditioner Replacements	266,086	271,086	276,086	281,086	286,086	NA	-	
Ice Machine Replacements	9,000	9,000	9,000	9,000	9,000	NA	-	
Carpet Replacements	80,000	83,000	86,000	89,000	92,000	NA	-	
Recoating / Sealing	401,498	406,498	411,498	416,498	421,498	NA	-	
<b>Federal Building:</b>								
Renovation Debt Service	510,823					NA	-	
<b>Miscellaneous Non-Departmental Projects:</b>								
ADA Compliance	100,000	103,000	106,000	109,000	112,000	NA	-	
Contingency	250,000	250,000	250,000	250,000	250,000	NA	-	
D/S USF (FI Poly) Contribution/Loan - LEDC	574,750					NA	-	
Community & Economic Development Office Renovation	5,000					NA	-	
SurfLakeland Contributions to the Community	20,000	20,000	20,000	20,000	20,000	NA	-	
Backup Generator	75,000					NA	-	
<b>TOTAL NON DEPARTMENTAL</b>	<b>3,015,605</b>	<b>1,789,032</b>	<b>1,793,032</b>	<b>1,827,032</b>	<b>1,861,032</b>			

**CONTRIBUTIONS TO OTHER FUNDS:**

<b>General Fund:</b>								
Operating Contribution	5,000,000	5,100,000	5,200,000	5,300,000	5,400,000			
Detroit Tigers- Naming Rights revenue passthrough	50,000	50,000	50,000	50,000	50,000			
Detroit Tigers/ City Joint Stadium Reserve Contribution	96,547	96,547	96,547	96,547	106,747			
<b>RP Funding Center Fund:</b>								
Capital Transfer	400,000	400,000	400,000	400,000	400,000			
Operating Transfer (D/S on Remodel in '18)	954,891	1,154,656	654,415	654,169	653,916			

Level of Service code:  
M = Maintain I = Improve - = not applicable

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
Operating Subsidy Loan	474,248							
L/T Capital	600,000	1,100,000	600,000	2,000,000	4,000,000			
<b>Cleveland Heights Golf Course- Misc. Capital</b>								
Cleveland Heights Golf Course	56,329	56,329	56,329	56,329	56,329			
Debt Service- Irrigation Upgrade	197,266	197,266	197,266	197,266	197,266			
<b>TOTAL CONTRIBUTIONS TO OTHER FUNDS</b>	<b>7,829,281</b>	<b>8,154,798</b>	<b>7,254,557</b>	<b>8,754,311</b>	<b>10,864,258</b>			
<b>TOTAL EXPENSES</b>	<b>31,622,574</b>	<b>18,897,810</b>	<b>22,361,408</b>	<b>19,184,122</b>	<b>20,046,861</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable

**TABLE IX-ONE(H)  
STORMWATER FUND**

TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>REVENUES:</b>								
Stormwater Utility Revenues- Commercial	2,781,000	2,920,000	3,066,000	3,219,000	3,251,000			
Stormwater Utility Revenues- Residential	3,440,000	3,612,000	3,793,000	3,983,000	4,023,000			
Stormwater Fees - Interfund	178,000	187,000	196,000	206,000	208,000			
SWFWMD Grants:								
Lake Hunter BMP	406,990							
Investments & Earnings	249,679	262,199	280,968	284,964	282,844			
Unappropriated Surplus	(121,773)	(298,644)	209,826	142,660	(57,052)			
<b>TOTAL REVENUES</b>	<b>6,933,896</b>	<b>6,682,555</b>	<b>7,545,794</b>	<b>7,835,624</b>	<b>7,707,792</b>			
<b>EXPENSES:</b>								
Stormwater Projects	3,609,815	3,134,958	3,455,016	3,977,736	3,943,692			
Drainage Projects	2,355,601	2,547,578	2,614,157	2,599,602	2,699,084			
Lakes and Environmental Projects	968,480	1,000,019	1,476,620	1,258,285	1,065,016			
<b>TOTAL EXPENSES</b>	<b>6,933,896</b>	<b>6,682,555</b>	<b>7,545,794</b>	<b>7,835,624</b>	<b>7,707,792</b>			
<b>UNAPPROPRIATED SURPLUS:</b>								
Beginning Balance	2,086,646	2,208,419	2,507,064	2,297,238	2,154,579			
Sources / (Uses)	121,773	298,644	(209,826)	(142,660)	57,052			
Ending Balance	2,208,419	2,507,064	2,297,238	2,154,579	2,211,631			
<b>STORMWATER PROJECTS:</b>								
<b>Hunter/Beulah/Wire Watershed:</b>								
Lake Hunter TMDL Program		100,000	150,000	150,000	100,000	St Ut	I	IF - Objective 4.2
<b>Lake Bonny:</b>								
Lake Bonny TMDL Program	50,000	150,000	150,000	500,000	100,000	St Ut	I	IF - Objective 4.2
<b>Lake Hollingsworth:</b>								
Lake Hollingsworth TMDL Program	50,000	150,000	300,000	300,000	500,000	St Ut	M	IF - Objective 4.2
<b>Crystal Lake:</b>								
Crystal Lake TMDL Program	50,000	150,000	150,000	100,000	200,000	St Ut	I	IF - Objective 4.2
<b>Lake Parker:</b>								
Lake Parker TMDL Program	150,000	150,000	150,000	300,000	300,000	St Ut	I	IF - Objective 4.2
<b>Miscellaneous:</b>								
Stormwater O&M	1,345,156	1,365,333	1,385,813	1,406,600	1,427,699	St Ut	-	
Install / Maintain Pollution Control Devices	104,500	109,725	115,211	120,972	127,020	St Ut	M	IF - Objective 4.2
Flood Control Automation Retrofit	50,000	50,000	100,000	100,000	100,000	St Ut	I	IF - Objective 4.2
Radio Replacement Project	2,251	2,251	2,251	2,251	2,251	St Ut	-	

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TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
DoIT Switch Replacement	220	220				St Ut	-	
Virtual Server Platform	333	333	333			St Ut	-	
CLMP- Update	50,000					St Ut	I	IF - Objective 1.2
Drainage Maintenance Operations	802,654	842,787	884,926	929,172	975,631	St Ut	M	IF - Objective 4.2
Transfer to Fleet Reserve	28,500					St Ut	M	IF - Objective 4.2
Environmental Code Enforcement Officer	52,220	54,309	56,482	58,741	61,091	St Ut	-	CON - Policy 2.A
Southern Landings Repairs	10,000	10,000	10,000	10,000	50,000	St Ut	M	IF- Objective 4.2
Upgrades to C&M/L&S Facility	50,000					St Ut	I	IF- Objective 4.2
SWFWMD Cooperative Lake Hunter BMP Program	813,980					St Ut	I	IF- Objective 1.1
<b>TOTAL STORMWATER PROJECTS</b>	<b>3,609,814</b>	<b>3,134,958</b>	<b>3,455,016</b>	<b>3,977,736</b>	<b>3,943,692</b>			

**DRAINAGE PROJECTS:**

GIS Storm Sewer Inventory	60,000	60,000	60,000	60,000	60,000	St Ut	-	
TV & Clean Storm Drain Structures	395,000	414,750	435,488	457,262	480,125	St Ut	M	IF - Objective 4.2
Maint. Retrofit of Drainage Facilities	611,050	672,155	705,763	741,051	778,103	St Ut	M	IF - Objective 4.2
GIS Technician- Engineering	73,510	76,451	79,509	82,689	85,997	St Ut	-	
<b>Drainage Study:</b>								
Street Sweeping Operations	1,106,041	1,139,222	1,173,398	1,208,600	1,244,858	St Ut	-	CON - Policy 2.G
TV Truck Lease	60,000	60,000	60,000			St Ut	-	
Lake Bonnet Drainage		25,000	50,000	50,000		St Ut	M	IF - Objective 4.2
Lake Bonny Drainage Project	50,000	100,000	50,000		50,000	St Ut	M	IF - Objective 4.2
<b>TOTAL DRAINAGE PROJECTS</b>	<b>2,355,601</b>	<b>2,547,578</b>	<b>2,614,157</b>	<b>2,599,602</b>	<b>2,699,084</b>			

**LAKES AND ENVIRONMENTAL PROJECTS:**

Contribution to LEAD	10,000	10,000	10,000	10,000	10,000	St Ut	-	
Lake Improvements Projects	400,000	400,000	500,000	500,000	500,000	St Ut	M	IF - Objective 4.2
Public Education Programs	90,000	90,000	90,000	95,000	95,000	St Ut	-	CON - Policy 2.A
Lake Beulah Shoreline Restoration	20,000	20,000	20,000	20,000		St Ut	I	IF - Objective 4.2
Lake Wire Hydrilla Removal & Reveg.	5,000	5,000	5,000	5,000	5,000	St Ut	-	CON - Policy 2.G
Lake Morton Shoreline Stabilization	10,000	10,000	10,000	10,000	10,000	St Ut	-	IF - Objective 4.2
Contribution to Florida Friendly Landscaping	10,000	10,000	10,000	10,000	10,000	St Ut	-	CON - Policy 2.D
Lake Hollingsworth Shoreline Stabilization	20,000					St Ut	M	CON- Objective 2
Contribution to Polk County Water Atlas	5,000	5,000	5,000	5,000	5,000	St Ut	-	CON - Policy 2.G
Bathymetric Mapping Project	150,000					St Ut	-	CON - Policy 2.G
Aquatic Plant Management Plans	10,000	10,000	10,000	10,000	10,000	St Ut	-	CON - Policy 2.G
Lake Bonnet Water Quality Improvement	100,000	300,000	250,000	250,000	250,000	St Ut	-	CON - Policy 2.G
Lake Morton Water Quality Improvement	50,000	50,000	300,000	150,000	50,000	St Ut	-	CON - Policy 2.G
Lake Mirror Water Quality Improvement	50,000	50,000	150,000	100,000		St Ut	-	CON - Policy 2.G
Lake Beulah Water Quality Improvement			75,000	50,000	25,000	St Ut	I	CON- Policy 2.G
Lake Gibson Water Quality Improvement					50,000	St Ut	I	CON- Policy 2.G
NPDES Permitting	38,480	40,019	41,620	43,285	45,016	St Ut	-	

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TYPE OF FUND	BUDGET YEAR					FUNDING SOURCE	LEVEL OF SERVICE (M, I or -)	GOPs CONSISTENCY
	2018-2019	2019-2020	2020-2021	2021- 2022	2022-2023			
<b>TOTAL LAKES AND ENVIRONMENTAL PROJECTS</b>	<b>968,480</b>	<b>1,000,019</b>	<b>1,476,620</b>	<b>1,258,285</b>	<b>1,065,016</b>			
<b>TOTAL EXPENSES</b>	<b>6,933,895</b>	<b>6,682,555</b>	<b>7,545,794</b>	<b>7,835,624</b>	<b>7,707,792</b>			

Level of Service code:  
M = Maintain I = Improve - = not applicable



**APPENDIX IX-TWO**  
**PROGRAMMED ROADWAY CAPACITY AND**  
**INTERSECTION IMPROVEMENT PHASES**

**TABLE IX-TWO  
PROGRAMMED ROADWAY CAPACITY AND INTERSECTION IMPROVEMENT PHASES (\$1,000)**

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
<b>CITY OF LAKELAND CAPITAL IMPROVEMENT PLAN – FISCAL YEARS 2019-2023 (OCTOBER 1, 2018)</b>									
C	State Road 33	Parkview Place	Granada Street	TSM	1,000 MISC (IF)				
C	N. Wabash Avenue Extension	Tenth Street	Fairbanks Street @ Bella Vista Street	New 2	3,950 CST (IF)				
C	Lakeland Park Drive Connector (fka Crevasse Street)	Carpenters Way	Current western terminus of Lakeland Park Drive	New 2	6,892 CST (IF)				
C	US 92 (New Tampa Highway)	@ Wabash Avenue		TSM	500 CST				
C	County Line Road	@ US 92		TSM	1,368 CST				
C	S. Wabash Avenue Extension Land Acquisition	Beaker Boulevard	Ariana Street	New 2		2,500 ROW			
C	S. Wabash Avenue Extension Mitigation	Beaker Boulevard	Ariana Street	New 2		500 CST			
C	SR 572 (Drane Field Road Corridor)	Don Emerson Drive/Publix Entrance	Waring Road	TSM		1,500 MISC			
C/MM	Collector Street Sidewalks								400 (IF)
C/MM	Tradeport Boulevard (Bridgewater Collector Road)	State Road 33	Walt Loop Road	New 2/BP	450 STUDY (IF)				
C/MM	Main Street	Lake Bonny Drive West	Longfellow Boulevard	BP		855 CST			
C/MM	Medulla Road Extension	West Pipkin Road	S. of White Egret Drive	New 2	170 ROW				
MM	North Florida Avenue	Robson Street	Carpenters Way	S		170 CST (IF)			
MM	Lincoln Avenue	SW Middle School	Beacon Road	S	175 CST 48 CST				
MM	Luce Road	Hallam Drive	Lake Miriam Drive	S	322 CST				
MM	South Edgewood Drive	Taft Street	US 98 (Bartow Road)	S		34 PE	99 CST		
MM	Chestnut Road	US 92 (New Tampa Highway)	Cochran Avenue	S	50 PE	100 CST			
MM	Ariana Street	@ Dixieland Elementary		S	116 CST				

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
MM	Lakeland Highlands Road	SR 570 (Polk Parkway)	Lowe's Driveway	S	205 CST				
* C = Concurrency Project    O = Operational/Safety Project    R = Interstate 4 Reliever    MM = Multi-Modal									
MM	Olive Street	Central Avenue	Cornelia Avenue	S		26 PE	76 CST		
MM	Three Parks Trail East	Glendale Street	S. of Turtle Rock Drive	BP		471 CST			
MM	Plateau Avenue	Hickory Street	Olive Street	S	72 CST				
MM	Lakehurst Street	Gilmore Avenue	West Lake Parker Drive	S				85 PE	242 CST
MM	Sylvester Avenue II	Fredericksburg Avenue	New Jersey Road	S			103 PE	296 CST	
MM	Main Street Streetscape	At Catapult 2.0		S	98 CST				
O	"Five Points" Roundabout	@ Sloan/Main/Lake Beulah Drive Intersection		TSM		175 CST			
MM	West Lake Parker/Lakeshore Trail (CRA)	S. of US 92 (Memorial Boulevard)	Bella Vista Street	BP	350 CST				
MM	Providence Rd (CRA)	Tenth Street	Griffin Rd	S/BP	400 CST	400 CST			
MM	Citrus Connection Services (LAMTD Agreement)	Route #3 (Lakeland Hills Boulevard)		TR	155 OPS				
MM	US 92 (Memorial Boulevard – CRA)	Corridor Enhancements		Misc.	550 MISC	50 MISC	50 MISC	100 MISC	100 MISC
MM	Gilmore Avenue	Parkview Place	Bella Vista Street	S		79 PE	228 CST		
MM	SR 37 (S. Florida Ave. Improvements - CRA)	Dixieland District		Misc.	350 MISC	350 MISC	150 MISC	150 MISC	150 MISC
MM	Parkview Place (CRA)	Pedestrian Improvements		S					300 CST
<b>POLK COUNTY CAPITAL IMPROVEMENT PROGRAM – FISCAL YEARS 2019-2023</b>									
C	Wabash Avenue	US 92 (Memorial Boulevard)	Tenth Street	Imp. 2L	10 PE 50 ROW 491 CST				
C	West Pipkin Road	Medulla Road	Harden Boulevard	2 to 4	494 PE 12,410 ROW	3,000 ROW 16,000 CST	16,000 CST		

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
C	Reynolds Road	@ US 92		TSM	35 PE 30 ROW 200 CST	100 CST			
MM	Campbell Road	Banana Road	D.R. Bryant Road	S	150 CST				
MM	Clubhouse Road	E. of Maryknoll Drive	Dismuke Drive	S	219 CST				
MM	Clubhouse Road	Vintage View Drive	Creekmur Lane	S	424 CST				
MM	Hardin Combee Road	Jere Circle	Fish Hatchery Road	S	403 CST				
MM	Augusta Street	Maine Avenue	Ellis Avenue	S	15 CST				
MM	Hutchins Avenue	Maine Avenue	Ellis Avenue	S	15 CST				
MM	South Crystal Lake Drive	Hummingbird Lane	SR 659 (Combee Road)	S	29 CST				
MM	Chestnut Road	SR 546 (Memorial Boulevard)	US 92 (New Tampa Hwy.)	S	799 CST				
MM	Idlewild Street	East Lake Parker Road	SR 659 (Combee Road)	S	253 CST				
MM	Banana Road	Park Byrd Road	Campbell Road	S	261 CST				
MM	Palmetto Avenue SE (Highland City)	Crews Lake Road	US 98	S	170 CST				
MM	North Galloway Road	Swindell Road (E-W)	Doreen Drive	S	150 CST				
MM	Clubhouse Road (S)	Lakeland Highlands Road	Live Oak Road	S	300 CST				

**FLORIDA DEPARTMENT OF TRANSPORTATION ADOPTED WORK PROGRAM – FISCAL YEARS 2018/19-2022/23 (JULY 1, 2018)**

C	Interstate 4	@ State Road 33 (Exit 38)		Int.	1,747 ROW 1,760 RRU	1,400 ENV	50 ENV		
C	Interstate 4	@ CSX Railroad (Bridge Replacement; CIE addition due to Kathleen Off-Ramp Improvements)		Int.	65 PE	2,000 RRU	6,000 RRU 25,585 CST 50 ENV	1,500 MISC	
C	FGT Interstate 4	@ State Road 33 (Exit 38)		Int.	5,000 RRU	5 CST	10,000 RRU		
C	State Road 33	Old Combee Road	S. of Firstpark Boulevard South	2 to 4				370 ENV	
C	State Road 33	Old Combee Road	N. of Tomkow Road	2 to 4	548 PE				
C/MM	State Road 33 (Lakeland Hills Boulevard) Complete Street	Parkview Place	Granada Street	TSM	6 PE 15 ENV	5,398 CST 50 ENV			

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
C/MM	SR 659 (Combee Road)	US 98	Skyview Drive	TSM	143 PDE				
C	US 98 (Bartow Road)	Edgewood Drive	East Main Street	4 to 6	3 PE	1,241 PE		1,290 ROW	5,432 ROW
C	US 98	West Daughtery Road	West Socrum Loop Road	4 to 6		1,550 PDE			
C	US 92 (New Tampa Highway)	@ Wabash Avenue		TSM	819 CST				
C	US 92 (New Tampa Highway)	County Line Road	Wabash Avenue	2 to 4	6,425 PE			40 ENV	3,412 ROW
C	SR 570 (Polk Parkway) – Turnpike Enterprise	N. of CR 546 (Old Dixie Highway)	Pace Road	2 to 4	5,519 ROW	912 PE 405 ROW 65,027 DSB	3,000 DSB		
C	Central Polk Parkway	SR 570 (Polk Parkway)	State Road 60	New 4	10 PDE 2 PE	5,000 PE 100 RRU			
C	Central Polk Parkway	SR 570 (Polk Parkway)	US 17	New 4	7,009 PE 2,817 ROW	20,023 ROW	675 ROW		
O	State Road 33 (Lakeland Hills Boulevard)	Victoria Boulevard	North Florida Avenue	TSM	4 PE			369 CST	
MM	Polk Rail Study – New York Avenue Pedestrian Underpass	Main Street	Lake Wire Drive	BP/S	4 PDE 51 ROW 10 CST				
MM	Ariana Street	South Wabash Avenue	Lotus Avenue	S		1,584 CST			
MM	North Crystal Lake Drive	Willow Point Drive	Longfellow Boulevard	S	46 PE		260 CST		
MM	Crystal Lake Elementary	Safe Routes to Schools – Sidewalks and Lighting		S	70 PE			490 CST	
MM	Three Parks Trail East	Turtle Rock Drive	Glendale Street	BP		472 CST			
MM	Three Parks Trail West	W. of Cleveland Heights Boulevard Near Robin Road	Westover Street @ Peterson Park	BP		43 PE		306 CST	
MM	Wabash Avenue	Ariana Street	Hickory Street	BP/TR	330 PE		2,177 CST		
MM	Main Street	Interlachen Parkway	Longfellow Boulevard	BP		856 CST			
MM	Fort Fraser Trail Ext.	SR 540 (Winter Lake Road)	SR 659 (Combee Road)	BP			2,000 CST		

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
MM	US 92 (New Tampa Highway)	Galloway Road	Chestnut Road	S	13 PE 50 RRU 50 ENV 998 CST				
MM	LAMTD Transit Pads and/or Shelters	@ Various Locations		TR	137 CST				
* C = Concurrency Project    O = Operational/Safety Project    R = Interstate 4 Reliever    MM = Multi-Modal									
MM	Central Lakeland Transit Signal Prioritization	SR 37 (Florida Avenue) from SR 570 (Polk Parkway) to US 92 (Memorial Boulevard); SR 33 (Lakeland Hills Boulevard) at US 92 (Memorial Boulevard).		TR				402 CST <i>(Deferred from 2018)</i>	
MM	Old Combee Road Bus Pull-Off	@ Plantation Square Shopping Center		TR	13 PE				
<b>DEVELOPER-FUNDED TRANSPORTATION IMPROVEMENTS</b>									
<b>LAKELAND CENTRAL PARK DRI – DRI DEVELOPMENT ORDER AND DEVELOPMENT AGREEMENT (EXECUTED JULY 21, 2008)</b>									
C	County Line Road	@ US 92 (New Tampa Highway)		TSM	183 PE 1,422 CST 613 PCST*				
C	US 92 (New Tampa Highway)**	@ Wabash Avenue		TSM	20 ENV	819 CST/CEI 30 ENV			
C	SR 572 (Airport Road)	SR 570 (Polk Parkway)	Northern DRI Boundary	2 to 4/S/BL			TBD		
<b>BRIDGEWATER DRI</b>									
C	State Road 33	@ Interstate 4 (Exit 38)		TSM	125 MISC				
C/MM	State Road 33	In vicinity of Bridgewater DRI		TR	30 CST				
<b>WILLIAMS DRI</b>									
MM	Williams Commuter Assistance Program	@ Williams DRI		TS		TBD			
<b>MALL HILL CENTER DEVELOPMENT AGREEMENT</b>									
C	Griffin Road	@ US 98		TSM	197 CST				
C/MM	Mall Hill Drive and Griffin Road	Mall Hill Center Frontage		TR	60 CST				
C/MM	Mall Hill Drive	500' sidewalk section east of Kathleen Road		S	30 CST				

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
<b>UNIVERSITY OF SOUTH FLORIDA POLYTECHNIC (CURRENTLY KNOWN AS: FLORIDA POLYTECHNIC UNIVERSITY) – CAMPUS DEVELOPMENT AGREEMENT</b>									
C	State Road 33	Old Combee/Deeson Pointe Blvd.	Interstate 4 @ Exit 38	2 to 4 TSM	1,009 MISC				
<b>LAKELAND PARK CENTER DEVELOPMENT AGREEMENT (EXECUTED MAY 16, 2011)</b>									
C/MM	Lakeland Park Center Drive Transit Circulator Route	Downtown Lakeland to Lakeland Park Center		TR	94 OPS	94 OPS			
<b>RIVERSTONE PUD DEVELOPMENT AGREEMENT (EXECUTED MARCH 8, 2018)</b>									
C/MM	Southwestern Lakeland Transit Service Enhancements	Transit Service to PUD; Improved Frequencies to Address Concurrency Deficiencies on Waring and West Pipkin Roads		TR			100 MISC	100 MISC	100 MISC
A/C	Medulla Road Extension	Riverstone/Hawthorne Mill Boundary	West Pipkin Road	New 2	TBD				
A/C	Medulla Road Extension	@ West Pipkin Road		TSM	TBD				
C	SR 572 (Drane Field Road)/Waring Road	Proportionate-Share payment in advance of site plan/plat containing 824 <sup>th</sup> single-family dwelling unit		TSM				TBD	
C	Waring Road	Proportionate-Share payment in advance of site plan/plat containing 895 <sup>th</sup> single-family dwelling unit		2 to 4					TBD
<b>MISCELLANEOUS – REQUIREMENTS THROUGH ZONING CONDITIONS AND SITE PLAN REVIEW</b>									
C	SR 33 (Park of Commerce Phase I)	@ Interstate 4 (Exit 38)		TSM	345 MISC				
C	SR 33 (Park of Commerce Phase II)	@ Interstate 4 (Exit 38)		TSM	143 MISC				
C	SR 33 (Lakeland Commerce Center – fka Cabot)	@ Interstate 4 (Exit 38)		TSM	TBD				
O/A	Gateway Boulevard Extension (Publix Distribution Center)	Whitten Road	Approx. 600' east of Whitten Road	New 2	117 PE	484 CST			
A/C	Gresham Village County Line Road Backage Road	West Pipkin Road	Ralston Road	New 2	383 CST				
A/C	Lakes at Laurel Highlands (aka Winston Park Boulevard)	SR 572 (Airport Road)	North Parkway Frontage Road (W. of Blue Highlands Drive is complete)	New 2	502 CST TBD CST				

TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
A/C	Ruthven Hamilton Road Right-of-Way Dedication	South of Drane Field Road		Imp. 2	6 ROW				
MM	Eagles Landing Park-and-Ride Lot	SE quadrant of County Line Road/Swindell Road intersection		ROW	TBD				
C/MM	Audi Lakeland Transit Shelter Installation	Griffin Road Project Impact Area		TR	17 CST				
C/MM	Audi Lakeland Transit Shelter Payment	Griffin Road Project Impact Area		TR	17 CST				
C/MM	Starbucks/US 98 North Lakeland Payment	US 98 North Near Development Site		TR	18 CST				
C/MM	Lakeland Housing Authority – Williamstown Cottages (Shelter Relocation)	US 98 @ Williamstown Boulevard		TR	2 CST				
C/MM	Lake Gibson Village Transit Shelter and Bus Bay	Carpenters Way Development Frontage			TBD				
C/MM	Reserve at Lakeland Square Transit Shelter	Griffin Road @ Development Site (west of Mall Hill Road)		TR	18				
MM	CR 542 Sidewalk	Rooms to Go Parcel Boundary to Location 1,000 Feet West			TBD				
C/MM	Tradeport Boulevard Corridor	West of State Road 33 - Bridgewater		ROW	TBD				
C/MM	Snow Property – SR 33 @ Old Combee Road	Multi-use trail along site's SR 33 frontage; transit shelter on frontage		BP/TR		100 CST			
C/MM	Oakbridge - Lincoln Avenue Multi-Use Trail Right-of-Way			ROW	TBD				
C/MM	Oakbridge Transit Shelters	North Village, South Village and South Village SuperShelter		TR	150 CST				
C/MM	Oakbridge Proportionate-Share Calculation	Multi-Modal Improvements in DRI Impact Area		TSM/ TR/BP/ S	111 MISC				
C/MM	Mall Hill Road Ext.	CR 35A (Kathleen Road)	CSX Right-of-Way (complete to point approx. 300 feet west of Kathleen Road)	New 2	TBD				



TYPE*	STREET	FROM	TO	IMP.	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
C/MM	Lakeland-Linder Regional Airport (Staybridge Suites)	Don Emerson Drive, south of Drane Field Road		TR	25 CST				
C/MM	Project Marlin - Transit Shelter and Bus Bay	West Pipkin Road	Project Marlin Main Entrance	Imp. TR	TBD				
C/MM	Airpark PUD	Old Medulla Road @ Waring Road		TSM	TBD				
C/MM	Airpark PUD	Peak Hour Transit Service and Two Transit Shelters		TR	TBD				
C/MM	Airport Commerce Park (Transit Shelter)	Drane Field Road west of SR 572 (Airport Road)		TR	25 CST				
C/MM	Airpark Business Center/Lakeland Airside Center	Development of commercial connector road network and reconstruction of Airside Center Drive (north of West Pipkin Road, west of Old Medulla Road)		New 2					
MM	Providence Reserve II Transit Stop Improvements	Providence Road at Providence Reserve		TR	15 CST				
MM	Various Transit Stop (Bench & Deployment Pad) Improvements	@ 7- Eleven (NW Quad Memorial/Lakeland Hills), Bridgewater Commerce Center (Firstpark Boulevard South), Lakes at Laurel Highlands (Winston Park Blvd.), Lakeland Commerce Center (SR 33)		TR	TBD				

\* C = Concurrency Project      O = Operational/Safety Project      R = Interstate 4 Reliever      MM = Multi-Modal

IMP: IMPROVEMENT  
IF: IMPACT FEE FUNDING  
STUDY: ALIGNMENT STUDY  
PDE: PROJECT DEVELOPMENT AND ENVIRONMENTAL STUDY  
PE: PRELIMINARY ENGINEERING OR DESIGN  
ROW: RIGHT-OF-WAY ACQUISITION  
RRU: RAILROAD AND UTILITY  
DSB: DESIGN-BUILD (DESIGN AND CONSTRUCTION PHASES AWARDED UNDER ONE CONTRACT)  
CST: CONSTRUCTION  
INC: CONTRACT INCENTIVES  
SUP: CONSTRUCTION SUPPORT  
PCST: PARTIAL CONSTRUCTION (FULL CONSTRUCTION FUNDING BEYOND CIE IS DEPENDENT UPON OTHER PRIVATE FUNDING SOURCES, OR IS BEING COMBINED WITH OTHER PUBLIC FUNDING SOURCES)  
ENV: ENVIRONMENTAL  
ENH: ENHANCEMENT TO CAPACITY PROJECT  
CEI: CONSTRUCTION ENGINEERING AND INSPECTION  
CAP: CAPITAL  
TSM: TRANSPORTATION SYSTEM MANAGEMENT (INTERSECTION/OPERATIONS/SAFETY)  
GRT: GRANT  
TF: TRANSPORTATION FUND  
CRA: COMMUNITY REDEVELOPMENT AGENCY  
JPA: JOINT PARTICIPATION AGREEMENT WITH FDOT TO ADVANCE-FUND PROJECT IMPLEMENTATION PHASES  
S: SIDEWALK  
BP: BICYCLE LANE/PATH  
TR: TRANSIT

RDSN & RCST: REIMBURSEMENT OF FUNDING PROVIDED BY CITY TO ADVANCE DESIGN AND CONSTRUCTION PHASES TO EARLIER FISCAL YEAR

OPS: TRANSIT OPERATION COSTS

MISC: FUNDING ALLOCATION FOR IMPROVEMENT OR IMPROVEMENT PHASE TO BE IDENTIFIED IN THE FUTURE

RSV: RIGHT-OF-WAY RESERVATION AGREEMENT



Includes amount of non-City funding programmed in FDOT Five-Year Work Program.



Potential developer funding to address any shortfalls that are identified during design.

**Source:** Adopted *City of Lakeland CIP, Polk County CIP, FDOT Five-Year Work Program*; (all FY 2015-2019) and relevant DRI Development Orders, Development Agreements, and Zoning Ordinances.

**APPENDIX IX-THREE  
CONNECTIVITY PLAN**

## CONNECTIVITY PLAN

### INTRODUCTION

The Lakeland Metro Area is the largest urban area in Polk County and the largest city between Tampa and Orlando. Lakeland's central location to major urban areas and surrounding smaller cities makes it easily accessible via a network of established corridors that radiate out from its urban core. As a consequence of the increased reliance on the automobile, the growth and development of the second half of the 20<sup>th</sup> Century, brought with it bigger, wider, and faster roads and auto centric land development standards. While the automobile is expected to remain the predominate means of transportation for the foreseeable future, the City of Lakeland has taken steps for more than two decades to balance the transportation equation by planning for a diversity of transportation modes in coordination with the City's existing land use pattern and future land use plan.

### PURPOSE

The Connectivity Plan responds to the community vision established between 2007 and 2010 as part of the Lakeland Vision, the Evaluation and Appraisal Report (EAR) process and the TPO 2035 Mobility Vision Plan (Long-Range Transportation Plan). All three of these vision efforts are discussed below. The explicit planning purpose of the City's Connectivity Plan is to layout the land use and transportation strategies to support the Transportation Concurrency Exception Area (TCEA).

The City's 2010 EAR Based Comprehensive Plan Amendments adopted complementary land use and transportation strategies that reflect the City and region's shared vision for its future. Thus, the connectivity plan reiterates these complementary land use and transportation strategies found throughout the updated Comprehensive Plan 2010-2020 and directly connects them to the diverse and collaborative funding mechanisms that implement Lakeland's multi-modal transportation system.

As stated in the Comprehensive Plan Future Land Use Element the top three principles of the City's land use planning program are:

1. Promote the development of a sustainable, compact, energy efficient urban land form in which the density, intensity, and proximity of complimentary land uses helps maximize access to and efficiency in the provision of public facilities and services including recreation, utilities and transportation;
2. Enhance and support the viability of central city and other older commercial and residential neighborhoods including those designated as redevelopment areas, employing strategies that result in new investment, infill, urban redevelopment and neighborhood stability;
3. Promote connectivity within the urban form to achieve a safe, efficient and attractive walkable environment that supports use of alternative transportation systems including transit (rail and bus) and bicycle systems.

Two of the primary land use mechanisms to achieve the key principles of promoting sustainable, compact urban form, enhancing the viability of the central city and encouraging connectivity are the Central City Transit Supportive Area (CCTSA) and the Transit Oriented Corridor (TOC) Overlay. These land use areas are supported by objectives and policies that allow and require higher densities and a greater mix of uses, in appropriate corridors, to encourage the use of transit and bicycle-pedestrian facilities. The CCTSA future land use intensity area is supported by a grid street network, existing transit services including express bus services, lake-to-lake greenway/bike system, pedestrian network, extensive park system, central utility services, multiple Community Redevelopment Areas, and incentives for development such as the Core Improvement Area for impact fee exemptions. The TOC overlay designates key existing and future transit routes to promote a wide range of uses and higher intensities within  $\frac{1}{4}$  mile of transit corridors and  $\frac{1}{2}$  mile of transit activity centers. The TOC creates incentives and minimum development requirements for new and re-development projects within its boundaries.

As per the Comprehensive Plan Transportation Element, analysis of the existing and future traffic circulation system indicates that several constrained and backlogged facilities are, or are expected to be, operating at or in excess of minimum levels of service within or just beyond the planning period. These facilities will be close to failing, or will fail, even with planned improvements as per the Adopted Long Range Transportation Plan. The issue then becomes whether to limit new development within these areas to prevent future degradation of existing transportation facilities, or to allow lower levels of service on roadway segments within these areas while promoting use of alternative modes of transportation, encouraging urban density infill development, and maximizing existing infrastructure. To address this issue the City adopted the city-wide Transportation Concurrency Exception Area (TCEA) to shift the focus from conventional road widening improvements, where constrained facilities make it infeasible to widen roads further, and instead to focus upon building a community that is supportive of transit use and safe, comfortable and convenient pedestrian and bicycle travel. The Transportation Element's goal, objectives and policies actively promote and support transit use, access management, transportation demand management, land use strategies, and pathway planning. Furthermore, the Transportation Element continues to implement a multi-modal level of service standard consistent with the statewide priority to reduce sprawl by allowing additional roadway congestion as an incentive to develop or redevelop within urban centers where most required public services and facilities have been made available.

Another important component of the Connectivity Plan strategy found in the Transportation Element is the Citywide Pathways Plan. While significant progress has been made in implementing the Lake-to-Lake Bikeway/Greenway Network, significant gaps still remain. These gaps prevent the network from achieving its full potential as a system that encourages residents and visitors to use alternative forms of transportation such as bicycles, walking or transit for intra-city trips. Thus, the Citywide Pathways Plan identifies gaps that exist in the Lake-to-Lake Bikeway/Greenway Network, deficiencies and obstacles such as critical

crossings and right-of-way constraints; and prioritizes improvements in the pathway network. The projects to be implemented through the Pathways Vision Plan should include: 12-foot wide multi-use trails, sidewalks, designated bicycle lanes, and unpaved trails.

Development of a comprehensive land use plan in conjunction with the development of a detailed five-year Capital Improvements Program gives the City of Lakeland the opportunity to ensure that efficient land development is supported by the timing and location of capital improvements necessary to serve anticipated development and implement the Connectivity Plan. The Capital Improvements Program focuses on meeting needs and trends necessary to implement the desired land use pattern and maintain adopted levels of service. It serves as a development guidance tool and is intended to guide the need for services, not just demand. The Capital Improvements Program becomes, in essence, a primary tool to shape the conditions conducive to achieving the desired land use pattern and multi-modal environment. Therefore, the Connectivity Plan will become a subcomponent of the CIE and is intended to be updated annually with the CIE annual update.

## **COMMUNITY VISION**

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The 2010-2020 Comprehensive Plan update is guided by the local and regional visioning efforts of the Lakeland Vision, the Pathway Vision Plan and the TPO 2035 Mobility Vision Plan. All three visions took significant steps in reaching out to the community for input and feedback from the residents, business owners, institutions and other stakeholders. The common thread to each of the goals of each vision is a more balanced, safe, and convenient multi-modal transportation system that encourages the livability of urban areas and its neighborhoods. The following is a brief description of each visioning effort:

The Lakeland Vision: The community of Lakeland developed a vision document through the work of many individual stakeholders and citizens. This work was spear-headed in the late 1980's by an organization known as "Lakeland Vision", a non-profit organization that works to improve various facets of the physical, social, economic and cultural community in the metro Lakeland area. The end result of the work was production of a narrative document with various goals and strategies intended to address many community issues such as arts and culture, diversity, education, economic development and growth & infrastructure. Lakeland Vision's summary vision document was updated in the 2008-09 period through a renewed process of community meetings for idea gathering, categorization of the ideas and prioritization of implementing strategies.

The updated Lakeland Vision document has been adopted by reference into the City's Comprehensive Plan as a means to strengthen the link between the strategies of the two documents. The following goals were adopted for growth management and transportation:

## **Growth Management Goal**

*Lakeland's growth is well planned and managed to preserve green space, create vibrant mixed-use neighborhoods, encourage infill and redevelopment, and ensure that public infrastructure can keep up with the needs of a growing population.*

## **Transportation Goals**

The transportation goal has been divided into the following three sub goals:

### **1. Public Transit Goal**

*Public transportation improvements in Lakeland provide convenient, modern, safe, and efficient alternatives to driving that enhance livability and improve connections throughout the region.*

### **2. Walking and Biking Goal**

*Lakeland citizens walk and bike throughout their city using a comprehensive, expansive, and well-connected network of sidewalks, bike lanes, and trails that integrate safety with roadways.*

### **3. Roadways and Traffic Movement Goal**

*Excellent street conditions, traffic management, and a highly connected road system help to increase roadway capacity and improve overall mobility throughout Lakeland.*

Pathway Vision Plan: Beginning in 2007, City staff and its project consultant (Renaissance Planning Group) embarked on an effort to identify key gaps in the Lake-to-Lake Bikeway/Greenway Network and other corridors to connect the City with nearby regional trail facilities. Focus group meetings and a day-long charrette were conducted to obtain input on existing barriers and pathway opportunities that should be addressed during the Pathways Plan Update. The project consultant conducted a “handlebar” survey in the field to identify other additional barriers, critical crossings and right-of-way constraints in the Central City area. Additional input was also solicited from the Lakeland Citizen Advisory Committee and the Neighborhood Advisory Council comprised of neighborhood association officers.

Potential pathway corridors throughout the Lakeland Planning Area were prioritized using stakeholder input and the handlebar survey; other considerations in the prioritization process were corridors identified through the Polk Urban Greenways (PUGS) planning effort, the Lakeland Southwest Sector Plan, the Lakeland Parks and Recreation Master Plan and Polk Transportation Planning Organization Long-Range Transportation Plans.

TPO 2035 Mobility Vision Plan: The Polk Transportation Planning Organization (TPO) is responsible for planning the transportation system for Polk County and its municipalities, as well as establishing priorities and policies for the use of federal and state funding. The Polk TPO began updating its Long-Range Transportation Plan in 2009 to identify needs and cost-feasible projects through the year 2035. The *2035 Mobility Vision Plan* (Long-Range Transportation Plan) was adopted in December 2010 and its draft version was used by the

City as a reference for its 2010-2020 update of the City's Comprehensive Plan Transportation Element.

The *2035 Mobility Vision Plan* anticipates growth over the next 25 years as envisioned in locally adopted land use and comprehensive plans. It also considers larger regional and statewide transportation needs over this period. The *2035 Mobility Vision Plan* is multi-modal meaning that it addresses the need for highway, transit, and non-motorized transportation improvements. Last, but certainly not least, the *2035 Mobility Vision Plan* is constrained, which means that not every need will be satisfied due to environmental and physical constraints as well as funding limitations.

The *2035 Mobility Vision Plan* development processes included significant public involvement and outreach components that allowed the TPO and City staff to receive feedback on transportation-related issues of concern to Lakeland area residents. In the *2035 Mobility Vision Plan*, the Polk TPO determined those transportation "needs" that were deemed "cost feasible" based on anticipated federal, state or local revenue projections and those transportation projects that are unfunded.

Other Regional Visioning Efforts: During the period from 2005 to 2010, a number of long-range "visioning" initiatives were undertaken to engage the public and civic leaders within the Tampa Bay ("OneBay"), East Central Florida ("How Shall We Grow?") and Central Florida Regional Planning Council areas ("Heartland 2060") in discussions about how those regions should develop over the next fifty years. This input was provided through a wide range of methods following extensive data collection and analysis to demonstrate environmental, transportation and social impacts of continuing the current development trends through Year 2060, compared to concentrating future growth into denser centers around the county to preserve open space and reduce inefficiencies associated with sprawl development. Polk County is unique in that it is located within each of those regions studied and is playing a pivotal role in the planning of the Interstate 4 super-region and the construction of the Tampa to Orlando High Speed Rail corridor.

## **SUPPORTING GOALS, OBJECTIVES AND POLICIES**

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The adoption of Lakeland's Comprehensive Plan 2010-2020 established the strategic framework for the City's Connectivity Plan. Beginning with the goals of the Future Land Use Element, the Transportation Element, and the Capital Improvement Element each goal states the importance of creating conditions that foster increased mobility. The following goals are excerpted from each of the three Comprehensive Plan Elements:

**Future Land Use Goal B:** To ensure a more walkable community and limit greenhouse gases, promote a high degree of mix of land uses and a well integrated transportation system with a high level of connectivity within the Central City and Urban Development Areas.



**Transportation Goal:** To provide a safe, efficient, financially feasible, multi-modal transportation system which is responsive to community needs, is consistent with future land use policies, is environmentally sound, and fosters economic vitality.

**Capital Improvement Goal:** The City of Lakeland will take actions necessary to adequately provide needed public facilities and services concurrent with the impacts of development. This will be done in a manner which protects investments in and maximizes the use of existing facilities, while promoting orderly, compact urban growth.

The three goals are then supported by a comprehensive series of objectives and policies for implementation that are categorized into the Connectivity Plan’s six complementary land use and transportation strategies. These six strategies will guide the connectivity planning process. **Table IX-5** lists the six Connectivity Plan strategies and cross references each strategy with the Comprehensive Plan’s goals, objectives, and policies from the key elements that support them.

**TABLE IX-5**

<b>CONNECTIVITY PLAN SUPPORTING COMPREHENSIVE PLAN GOALS, OBJECTIVES &amp; POLICIES</b>			
<b>Complementary Land Use &amp; Transportation Strategies</b>	<b>COMPREHENSIVE PLAN ELEMENTS</b>		
	<b>FUTURE LAND USE</b>	<b>TRANSPORTATION</b>	<b>CAPITAL IMPROVEMENT</b>
1. Encourage appropriate intensity, density, and mix of land uses	Goal B; Policy 1A1; Policy 1A2; Obj. 2; Obj. 3, Policy 3A, Policy 3B, Policy 3C, Policy 3D, Policy 3E, Policy 3F, Policy 3G; Obj. 5, Policy 5A, Policy 5C; Policy 6C; Policy 10A; Policy 10B; Policy 10F; Obj. 14, Policy 14A	Obj. 4, Policy 4A1, Policy 4A6; Policy 7D; Obj. 9; Obj. 16	Obj. 2, Policy 2A
2. Promote transit supportive development	Goal B; Policy 1A1; Policy 1A2; Obj. 2; Obj. 3; Policy 3A; Policy 3B; Policy 3C; Policy 3D; Policy 3E; Policy 3F; Policy 3G; Policy 10F; Obj. 14, Policy 14A	Obj. 4, Policy 4A1, Policy 4A2, Policy 4A7, Policy 4A8, Policy 4C; Obj. 6, Policies 6A-G; Policy 7D; Policy 7E; Obj. 9, Policy 9F, Policy 9H, Policy 9J; Obj. 13, Policy 13A	Obj. 2, Policy 2A
3. Coordinate planning and development with transit authority	Obj. 3; Policy 3A; Policy 3B; Policy 3C; Policy 3D; Policy 3E; Policy 3F; Policy 3G; Policy 10F	Obj. 6, Policy 6A, Policy 6B, Policy 6D, Policy 6F, Policy 6G; Obj. 13, Policies 13A-F	Obj. 2, Policy 2A, Policy 2C
4. Support and fund the development of alternative modes of transportation	Goal B; Policy 1A1; Policy 1A2; Obj. 2; Obj. 3; Policy 3A; Policy 3B; Policy 3C; Policy 3D; Policy 3E; Policy 3F; Policy 3G; Policy 5C; Policy 6C; Obj. 14, Policy 14A, Policy 14B	Obj. 3, Policy 3A, Policy 3C; Obj. 4, Policy 4A1, Policy 4A2, Policy 4A7, Policy 4A8, Policy 4B, Policy 4C; Obj. 5, Policies 5A-L; Policy 6B; Policy 6C; Policy 6D; Obj. 7, Policy 7D, Policy 7E; Obj. 9, Policy 9F, Policy 9H, Policy 9J; Policy 13B; Policy 13C;	Obj. 2, Policy 2A; Obj. 3, Policy 3A, Policy 3B;

CONNECTIVITY PLAN SUPPORTING COMPREHENSIVE PLAN GOALS, OBJECTIVES & POLICIES			
Complementary Land Use & Transportation Strategies	COMPREHENSIVE PLAN ELEMENTS		
	FUTURE LAND USE	TRANSPORTATION	CAPITAL IMPROVEMENT
		Policy 13D; Policy 16B; Policy 16E; Policy 16F; Policy 5N	
5. Improve the connectivity of all modes of transportation	Goal B; Policy 3D; Policy 3G; Policy 10D; Policy 14B	Policy 5F; Policy 5G; Policy 5H; Obj.7, Policy 7C, Policy 7E; Policy 9F; Policy 14C; Obj. 16, Policy 16B, Policy 16C; Policy 5N	Obj. 2, Policy 2A
6. Promote infill, redevelopment and revitalization of downtown and the urban area	Policy 1A1; Obj. 7, Policy 7A; Policy 7B; Policy 7C, Policy 7D; Policy 10A; Policy 10F; Policy 14A	Obj. 4, Policy 4A1, Policy 4A6; Policy 5H; Policy 16A	

Source: Community Development Department, 2010.

## TRANSPORTATION MODES

### ROADS

The road network within the City of Lakeland and Lakeland Planning Area is comprised of the State of Florida highway system, the Polk County collector system and City of Lakeland streets. Each roadway is assigned a functional classification based on the jurisdiction that is responsible for its maintenance (jurisdictional) and the characteristics of the traffic it serves (operational). Most jurisdictions that assign functional classification designations to their roadway network have traditionally focused on the type of traffic using the roadway and destinations served at the end of the route, with little consideration being given to the land development and types of transportation modes along the route. Based on the concepts from the Federal Highway Administration’s publication *Flexibility in Highway Design*, Lakeland adopted roadway typologies that are critical in determining the most appropriate multi-modal roadway cross-sections for a particular roadway segment.

The roadway typologies identified by the City of Lakeland are intended to relate to these development patterns and area types. As a preliminary step to formulating citywide form based design standards, four primary development pattern types were identified, including:

- *Neighborhoods* (concentrated residential uses);
- *Districts* (single-use places such as the medical corridor around Lakeland Regional Medical Center or industrial uses around the Publix Industrial Complex on US 92);
- *Centers* (mixed/multi-use places like Downtown Lakeland and Lakeside Village); and
- *Corridors* (linear concentrations of development such as Memorial Boulevard, South Florida Avenue and US 98 North).

In support of the on-going nationwide “complete streets” movement and the move towards multi-modal transportation concurrency requirements in Florida, the roadway typologies adopted by the City of Lakeland recognize the importance of all transportation modes by identifying specific facilities that must be considered for inclusion in the design of all public and private road projects and adjacent development. A description of each typology with associated cross-sections can be found in the Transportation Element Traffic Circulation section; access management classification is enforced by the City’s *Land Development Regulations*.

## TRANSIT

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The City of Lakeland is a part of the Lakeland urbanized area which is one of two urbanized areas within Polk County. As the population and roadway congestion levels increase, transit services will continue to be a viable alternative for meeting future transportation needs. Creative use of transit services and development designs which are transit friendly will further assist in meeting future demand for transit in the Lakeland area. The Lakeland Area Mass Transit District (LAMTD) was created by County ordinance approved in 1980, with service beginning in 1982. LAMTD is a special taxing district, autonomously operated separate from City government, with authority to levy up to a half mil property tax, or 50¢ per \$1,000 of assessed valuation, to fund transit services and administration. The District exceeds the City’s incorporated boundaries in some areas and in other areas is not co-terminus/is not yet caught up with city incorporated limits.

LAMTD maintains a bus terminal located on North Florida Avenue and operates Monday through Saturday services on 21 existing fixed routes and Handy Bus or demand responsive services. The fixed routes include an express service to Bartow and a connector to Winter Haven’s transit service area via Auburndale connecting Lakeland to east and south Polk County. The Winter Haven Area Transit Service (WHAT) was initiated in March of 1999 for fixed route services in that area and has joined LAMTD and Polk County Transit Services in taking the necessary steps to establish the Polk Transit Authority. Additionally, LAMTD operates a park-and-ride facility located beneath the In-Town Bypass at the intersection of Main Street and Rose Street. A second park-and-ride facility was completed in Fall 2014 within the new Lakeland Park Center retail development near the US 98/Interstate 4 interchange with a third facility currently under development by the Citrus Connection at the US 98/Pyramid Parkway intersection.

Adequate bus shelters and transit amenities are being provided through the Citrus Connection’s Community Shelter Program with funding donations from the public. Bus shelters are also required through the City’s development review process. The Polk TPO’s Bus Stop Improvement Program designates a portion of the TPO’s Federal funding allocation to bus stop improvements, improved sidewalk connections and other such “Congestion Management” strategies that support transit usage.

Continued funding of local transit service is uncertain with the recent designation of LAMTD district as a Large Urban Area exceeding a population of 200,000 and may require a City or

County-wide referendum for additional funding (e.g., a sales tax) to support the system and fully integrate into a County-wide Regional Transit Authority. Such referenda failed in 2010 and 2014. Should such a referendum pass in the future, the City's CRAs may lose funding that is currently captured from tax revenues. The estimated impact to the City's CRA budget is a reduction of as much as 5% of total tax increment revenues. In 2009, the City's CRAs' total tax increment revenues were \$5,065,000.

Planning for enhanced bus service in Lakeland is a tenuous effort and requires close coordination with the LAMTD administration. Furthermore, the data on bus routes and facilities provided herein is the best available, however it is subject to change. For example, if LAMTD bus route changes occur bus stop improvements will likely change. Additionally, Federal and state standards may dictate changes to bus stop access facilities (i.e.: ADA and location and construction standards) Costs for these requirements will vary based on unique site constraints and may create challenges for actual implementation.

### **BICYCLE FACILITIES**

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Since the 1990s the City has promoted its Lake-to-Lake Bikeway system, a mostly signed system in which users are encouraged to bike around the city's many lakes in Central Lakeland. The Lake-to-Lake network continues to have gaps that must be addressed in order to attain more complete connectivity to the lakes and recreation areas in the city and to area regional trail systems like Ft. Fraser Trail and the Van Fleet Trail.

Pathways Plan Table III-17 of the Transportation Element lists the corridor needs and relative priority for their development. Analysis conducted for the pathway plan included an inventory and gap analysis of sidewalks, mapping of the existing Lake-to-Lake Greenway Connector, an assessment of pathway project needs to connect the City's parks, as well as mapping the County trail system relative the City's pathway for future connectivity; illustrations of these efforts can be found in the Transportation Element Pathway Plan subsection of the Summary of Findings. In addition to the pathways planning efforts the City regularly conducts roadway audits prior to scheduled resurfacing projects to incorporate bike lanes and/or paved shoulders into existing right-of-ways, where feasible.

### **PEDESTRIAN FACILITIES**

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As of 2010, there approximately 218 miles of sidewalk within the Lakeland Planning Area maintained by the City. As discussed above the City Pathways Plan has conducted significant analysis to identify gaps in the sidewalk system and other non-motorized pathways. A 2004 sidewalk inventory analysis conducted by the City's Construction and Maintenance Division identified approximately 51 miles of gaps in the Central City. The City actively plans and implements new sidewalks projects where gaps exist as part of the annual capital improvement planning process. Additionally, the City CIP transportation fund identifies monies used to upgrade, replace, or maintain sidewalks (including ADA requirements). Priority for improving pedestrian facilities includes connecting residential areas to schools, parks and mass transit. Per the multi-modal level of service standard and the City's Land

Development Regulations all new development is required to provide appropriate pedestrian facilities onsite and along frontage where these facilities do not exist.

## SAFETY

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With significant increases in bicycle and pedestrian travel over the past two decades, safety continues to be a major challenge in metropolitan areas. The “Transportation for America” non-profit policy group released its “Dangerous by Design” report listing of the most dangerous metropolitan areas for pedestrians, based on fatalities, metropolitan area population and percentage of commuters walking to work. The Lakeland-Winter Haven metropolitan area (a.k.a., Polk County) ranked as the sixth most dangerous area in Florida, which was ranked the most dangerous state in the nation. This finding makes it clear that the necessary programs, investments and planning policies must be established to confront this problem and address pedestrian safety.

The Transportation Element Traffic Circulation subsection identified high crash corridors and safety programs and improvements to address them. The City’s Traffic Safety Team collaborated with the Polk County TPO to identify several high-priority pedestrian and bicycle crash corridors eligible for congestion management project funding through the FDOT. Based on input received from the City and TPO staff, FDOT conducted detailed bicycle/pedestrian crash and crossing analyses in the following corridors:

- US 92 (Memorial Boulevard): CSX Overpass @ Kathleen Road to Gary Road.
- SR 35/37 (Florida Avenue): US 92 (Memorial Boulevard) to West Highland Drive.
- Wabash Avenue: US 92 (Memorial Boulevard) to Ariana Street.
- Massachusetts Avenue/SR 33 (Lakeland Hills Boulevard): Peachtree Street to Parkview Street. (Potential CRA funding is available for pedestrian crossings)

## IMPLEMENTATION STRATEGY

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As per the City’s Transportation Element, the City’s Connectivity Plan will include various on-going efforts to promote and enhance the City’s multi-modal transportation network. The City’s Transportation policies include the following key policy 4A.1:

**Policy 4A.1:** Upon plan adoption, the City of Lakeland will use the following multi-modal transportation level of service standards in reviewing the impacts of new development and redevelopment upon facilities. The 2009 Florida Legislature approved the Community Renewal Act (more commonly known as “Senate Bill 360”); this same legislation provided for and 2010 legislation re-affirmed Lakeland’s ability to declare a citywide Transportation Concurrency Exception Area (TCEA) in which traditional concurrency standards would no longer apply should the City decide it no longer wanted to apply such standards and instead adopt a connectivity plan containing alternative measures and standards to meet future travel demand in lieu of primarily traditional roadway widening projects. The City of Lakeland’s Connectivity Plan is focused upon what transportation projects are planned and funded and

therefore the Connectivity Plan is contained in the City's Capital Improvements Element; however, we note here the Connectivity Plan includes the following strategies:

- Continued annual City funding for sidewalk improvements (see adopted City 5 year CIP);
- Continued annual City funding (including CRA funding) for brick street program, re-paving maintenance program and where economically feasible, incorporation of striping to add bike lane demarcation, and/or to enhance pedestrian crossings and other multi-modal improvements;
- Continued funding of City roadway inventory maintenance and updates to identify extent of gaps for pedestrian and bicycle pathways and target opportunities to address enhanced connectivity in all roadway maintenance projects;
- Continued requirements for new or re-development to fund and implement on and off site bicycle parking, pedestrian ways, transit shelters and/or transit transfer stops as per the City's adopted multi-modal level of service standards;
- Increased residential densities along key transit corridors per the Future Land Use Element's policies for Transit Oriented Corridors (TOCs);
- Improved multi-modal mobility along network roadways through private and public funding of roadway typologies outlined in this Element and transit friendly building and site design for new/re-development through requirements of the Future Land Use Element for the Central City Transit Supportive Area;
- Access Management per Article 26 of the City's LDRs, and Corridor Management Planning, including where needed, multi-jurisdictional inter-local agreements to establish common standards in a corridor;
- Provisions for expanded transit service through a Polk Transit Authority and Charter County Transit Surtax referendum and/or subsequent transit related revenue initiatives including grants;
- Transportation Demand Management Strategies;
- Implementation of future land use strategies that promote compact, complimentary/mixed use, contiguous and transit-friendly land use patterns within the Central City Transit Supportive Area (CCTSA) and Transit Oriented Corridors (TOC);
- Implementation of Citywide Pathways Plan, including completion of Lake-to-Lake Bikeway Network; and
- Further development of parking strategies that support improved utilization of transit, bicycle and pedestrian transportation modes.

The City of Lakeland has coordinated with the Polk TPO and Polk County to modify its multi-modal level-of-service standards to incorporate these connectivity plan strategies.

## FUNDING SOURCES

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A variety of local, state and federal funds are available to implement different components of the City's connectivity plan:

1. CRA TIF Funds,
2. City Transportation & Public Improvement Funds,
3. Local Option Gas Tax,
4. State and Federal Funds,
5. Impact Fees and Developer Contributions.

CRA revenues may be limited by falling property values and/or other factors discussed above. Some projects are dependent upon tentative grant funding and developer contributions. All funding sources, including Federal, State and City funds, are expected to fluctuate during the horizon of this plan. Added to this there may be limits placed upon local revenues due to new State legislation. In this environment, private-public partnerships will be critical to help leverage dollars available from traditional funding sources along with the city's focus on critical economic development initiatives to bring new jobs and tax base to the city.

**Multi-Modal Fees:** One source that the State had discussed in 2008-09 was a Mobility Fee. Essentially, the concept of a mobility fee was an attempt to consider how something akin to a transportation impact fee could be used to fund other transportation modes, i.e., beyond roadway improvements.

Transportation impact fees for many years charged by the City of Lakeland and Polk County have funded numerous city, county and state roadway and intersection improvements. However, as the City has migrated toward a multi-modal level of service standard for transportation in which the existing transit system, bike lanes and sidewalk system are all recognized, the idea of charging a fee to help fund those other systems has been considered. While the State sponsored (FDCA & FDOT) Mobility Fee Study examined many of the issues, the City of Lakeland helped fund a closer examination of the implementation issues as developed by Tindale Oliver Associates, Inc., through a series of white papers. That private analysis confirmed that there are some key options and issues to consider. One option is to simply convert the existing transportation impact fee to a multi-modal transportation fee; the fee revenues would be eligible to be spent on capital costs for roads, transit (such as buses and shelters), sidewalks, and bicycle facilities (lanes, racks, lockers etc). Another option is to allow geographic variability to the transportation fee, i.e., where the fee is lower in the more urbanized area where the multi-modal system facilities and network system assets are the greatest, versus in the suburban areas where assets are fewer. A remaining challenge despite the options chosen or the name assigned to the fee (e.g., mobility fee versus multi-modal transportation impact fee) is that such fees do not typically address the key funding need for transit, which is sustainable revenues to fund operational costs to run the buses, pay

the labor and fuel costs and so forth that are incurred everyday versus the one-time cost of a capital improvement such as in purchasing a bus or transit shelter.

In 2014, the City commissioned a transportation impact fee study to address multi-modal expenditures. Polk County is also updating its transportation impact fee study; City and County staff are working together to ensure maximum coordination between the two studies and conclusions/recommendations that result from both efforts.

## **MULTI-MODAL LEVEL OF SERVICE STANDARDS**

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The multi-modal level of service standard seeks to recognize that in Lakeland there are several areas where transit service is provided, usually with bicycle facilities on the buses and at transit stops, and that transit is connected to the sidewalk (or bike path) networks in the community. If the frequency of bus service is 30-minutes or less and an extensive sidewalk and bicycle path system are present, the multi-modal level of service (LOS) concept indicated that the roadway LOS could be lowered in an appropriate corresponding manner. The concept of multi-modal level of service standards is consistent with the statewide priority over the last 10 years (2000-2010) to reduce urban sprawl by allowing some additional roadway congestion as an incentive to develop or redevelop within urban centers where most required public services and facilities have been made available. This approach would then maximize the public investment made in the development of those urban services and facilities. Lakeland has some areas with 30 minute transit service and an extensive sidewalk network and other areas with 60 minute service and fewer sidewalks. **Table IX-6** outlines the multi-modal level of service standards and **Illustration IX-2** generally depicts where the standards would apply.



**TABLE IX-6  
MULTI-MODAL TRANSPORTATION LEVEL OF SERVICE STANDARDS – LOCALLY PREFERRED WITH TCEA<sup>5</sup>**

Geographic Area	Multi-Modal Standard	Roadway Standard <sup>1</sup>	Mobility & Connectivity Requirements <sup>6&amp;7</sup>
	All standard size transit buses to have bike racks on bus.		Meet COL Access/Site Circulation, Maximum Parking & Sidewalk Land Development Regulations (LDRs); Target: Implement Roadway Typology
Transit Oriented Corridors Overlay (TOC) & Activity Centers within TOC	<p>Transit Service (≤ 30 min in peak times)                      Bus Rapid Transit (BRT) Service, Where Feasible                      Premium or Circulator Service (≤ 15 min headways), Where Feasible</p> <p>Sidewalk/Bike Lane Network: Direct Access to Site &amp; Within Corridor</p> <p>Rail Service, As Applicable</p>	"E" <sup>2&amp;3</sup>	<p>All: Transit shelter or bench &amp; bike parking                      Address sidewalk or bike route gap, as applicable in corridor                      Employment &amp; Retail Centers: superstop (=larger or multiple shelters);                      Mixed Use Commercial Centers: transit transfer center &amp;/or park &amp; ride lot                      Bus Pull Out Lane, where recommended;                      TDM Strategy, if applicable                      Grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users.                      Connections to multiple streets as per City LDRs. Where connections to multiple streets are not feasible, auto/bike and pedestrian cross-access between adjacent properties required.                      Direct connections required to adjacent uses within master planned developments.</p>
Central City Transit Supportive Area (CCTSA)	<p>Transit Service (≤30 min. in peak times)                      Sidewalk/Bike Lane Network Access</p>	"E" <sup>3</sup>	<p>Transit Shelter/bench &amp; Bike Parking; superstop, transfer center and/or park &amp; ride facilities required where appropriate.                      Address Sidewalk &amp; Bike Path Gaps within ¼ mile, as applicable                      TDM strategy, if applicable                      Required maximum block length as per LDRs. Grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Connections to multiple streets as per City LDRs. Where connections to multiple streets are not feasible, auto/bike and pedestrian cross-access between adjacent properties required. Direct connections required to adjacent uses within master planned developments.</p>
Urban Development Area (UDA) UDA Continued	<p>Transit Service (≤ 60 minutes in peak times)                      Sidewalk/Bike Network Access in ½ mile</p>	"E"	<p>Transit Shelter/bench &amp; Bike Parking; superstop, transfer center and/or park &amp; ride facilities required where appropriate.                      Provide Multi-Use Sidepaths as appropriate                      Provide Bike/Trail linkages                      Transit transfer or superstop, as applicable, for activity center &amp; interchange land uses</p>

Geographic Area	Multi-Modal Standard	Roadway Standard <sup>1</sup>	Mobility & Connectivity Requirements <sup>6&amp;7</sup>
			Internal grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Direct connections required to adjacent uses within master planned developments. Where applicable, developments must be configured to accommodate publicly-privately funded connector roads in the Transportation Element that relieve nearby collector or arterial roads.
Suburban & Rural Development Areas <sup>4</sup>	Transit Service Where Feasible Sidewalk / Bike Network Connections if within ½ mile	“D”	On-site trails/sidepaths, as appropriate Shelters for Active Transit Route Internal grid network with multiple on- and off-site access routes to reduce travel distances to transit routes and facilities for bike/ped users. Direct connections required to adjacent uses within master planned developments. Where applicable, developments must be configured to accommodate publicly-privately funded connector roads in the Transportation Element that relieve nearby collector or arterial roads.

<sup>1</sup> LOS is measured for the peak hour/peak direction using the average of the two highest peak hours

<sup>2</sup> COL mobility strategies as per above chart shall be required in TOCs; in addition, the roadway Volume/Capacity ratio may have a cap per other policies in the Transportation Element; Roadway Standards based on service volumes and adopted highway LOS standard as given in the Polk TPO’s Roadway Network Database or service volumes obtained through more detailed roadway segment analyses required through the City’s development review process.

<sup>3</sup> LOS may be measured on an averaged corridor basis for facilities with common trip ends.

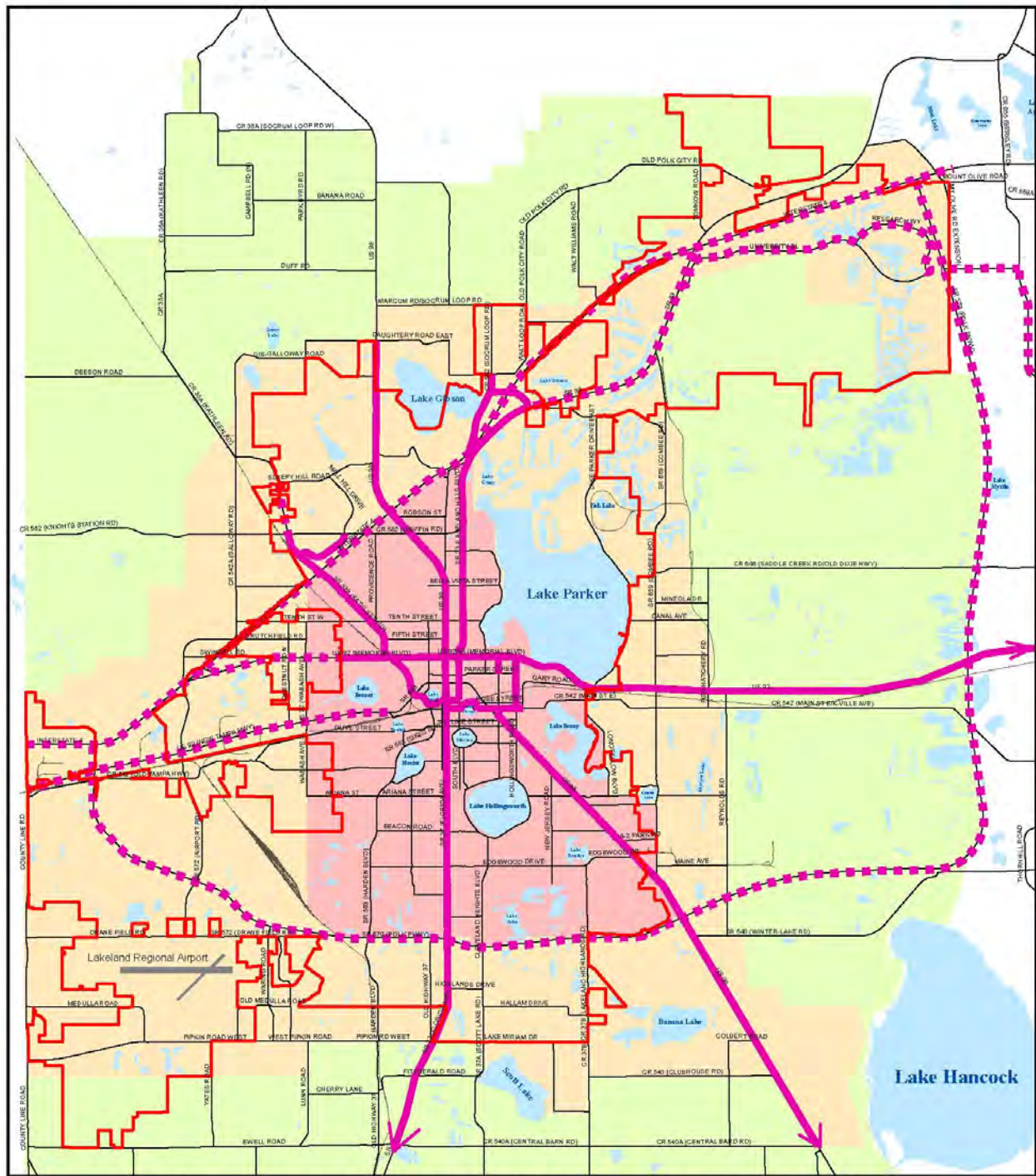
<sup>4</sup> Major Developments, e.g., large PUDs and DRIs or their equivalents may have specific transportation standards and requirements applied through a development order.

<sup>5</sup> Improvements funded by the Transportation Regional or County Incentive Grant Programs are restricted to State LOS standards. The City will work with the Florida DOT regarding mobility issues for Strategic Intermodal (or FIHS) system facilities within the TCEA (TCEA does not require FDOT approval.)

<sup>6</sup> Grid network also includes modified design and layout configurations that provide multiple efficient routes for access and circulation.

<sup>7</sup> These are examples of Mobility & Connectivity Requirements intended to help meet the above Multi-Modal Standards; it is not an all inclusive list, i.e., other improvements, including enhanced transit services, may be necessary to meet the City’s standards (see also Policy 4A.7).

**Source:** Lakeland Community Development Department, 2010.



**LAKELAND AREA MULTI-MODAL LEVEL-OF-SERVICE STANDARDS**  
ILLUSTRATION IX-2

- TCEA
- Central City Transit Supportive Area = LOS "E Average"
- Urban Development Area = LOS "E"
- Suburban Area = LOS "D"

- Transit Oriented Corridors - LOS is N.A. (Multi-Modal)
- Long Term Potential Transit Oriented Corridors

Ordinance  
#5549 & 5551  
Adopted  
12/21/15



Date: 7/20/2015

Source: Lakeland Community Development Department, 2015 and Renaissance Planning Group, 2007

Path: Z:\Comp\_Plan\Transportation\2015\IX-2\_MultiModal\_LOS\_mxd\_15.mxd

## PHASED APPROACH

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Building a community that provides a diversity of modes for people to travel seamlessly to, from, and within requires a strong commitment to a long term strategy to make a plan into a reality. The City of Lakeland's strategy is a phased approach that accounts for all modes and jurisdictions within the City's planning area over a period of 15 years. The advantages of a phased approach are:

- Flexibility to adapt a long term funding strategy that capitalizes on private sector contributions, tax increment financing, and the potential development of new revenue sources.
- Time to nurture public-private partnerships
- Opportunity to solicit future grant funding;
- Ability to extend the cost of implementation over three 5-year phases.

Furthermore, the long-term phased strategy provides an opportunity to monitor performance and identify new needs over time and make periodic updates to the plan.

The following tables and illustrations indicate the type, timing, location, responsible agency, and cost of the connectivity plan projects for Phase I. Phase II and Phase III can be found in the Technical Support Document.

**TABLE IX-7  
CONNECTIVITY PLAN PROJECTS PHASE I – FISCAL YEARS 2018-2022 (\$1,000)**

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
<b>CITY OF LAKELAND CAPITAL IMPROVEMENT PLAN – FISCAL YEARS 2019-2023</b>									
C	State Road 33	Parkview Place	Granada Street	TSM/ S/BP	1,000 (IF)				
C	N. Wabash Extension	Tenth Street	Fairbanks Street @ Bella Vista Street	New 2/S/BL	3,950 (IF)				
C	Lakeland Park Drive Connector (fka Crevasse Street)	Carpenters Way	Current western terminus of Lakeland Park Drive	New 2/BP	6,892 (IF)				
C	US 92 (New Tampa Highway)	@ Wabash Avenue		TSM	500				
C	County Line Road	@ US 92		TSM	1,368 CST				
C	S. Wabash Avenue Extension Land Acquisition	Beaker Boulevard	Ariana Street	New 2/S/BP		2,500			
C	S. Wabash Avenue Extension Mitigation	Beaker Boulevard	Ariana Street	New 2/S/BP		500			
C	SR 572 (Drane Field Road Corridor)	Don Emerson Drive/Publix Entrance	Waring Road	TSM		1,500			
C/MM	Collector Street Sidewalks			S					400 (IF)
C/MM	Tradeport Boulevard (Bridgewater Collector Road)	State Road 33	Walt Loop Road	New 2/BP	450 (IF)				
C/MM	Main Street	Lake Bonny Drive West	Longfellow Boulevard	BL		855			
C/MM	Medulla Road Extension	West Pipkin Road	S. of White Egret Drive	New 2 S/BL	170				
MM	North Florida Avenue	Robson Street	Carpenters Way	S		170 (IF)			
MM	Lincoln Avenue	SW Middle School	Beacon Road	S	223				
MM	Luce Road	Hallam Drive	Lake Miriam Drive	S	322				
MM	South Edgewood Drive	Taft Street	US 98 (Bartow Road)	S		34	99		
MM	Chestnut Road	US 92 (New Tampa Highway)	Cochran Avenue	S	50	100			

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
MM	Ariana Street	@ Dixieland Elementary		S	116				
MM	Lakeland Highlands Rd.	SR 570 (Polk Parkway)	Lowe's Driveway	S	205				
MM	Olive Street	Central Avenue	Cornelia Avenue	S		26	76		
MM	Three Parks Trail East	Turtle Rock Drive	Glendale Street	BP		471			
MM	Plateau Avenue	Hickory Street	Olive Street	S	72				
MM	Lakehurst Avenue	Gilmore Avenue	West Lake Parker Drive	S				85	242
MM	Sylvester Avenue II	Fredericksburg Avenue	New Jersey Road	S			103	296	
MM	Main Street Streetscape	At Catapult 2.0		S	98				
O	"Five Points" Roundabout	@ Sloan/Main/Lake Beulah Drive Intersection		TSM		175			
MM	Providence Road (CRA)	Tenth Street	Griffin Road	S/BP/TR	400	400			
MM	Citrus Connection Services (LAMTD Agreement)	Route #3 (Lakeland Hills Boulevard)		TR	155				
MM	West Lake Parker/Lakeshore Trail (CRA)	S. of US 92 (Memorial Boulevard)	Bella Vista Street	BP	350				
MM	US 92 (Memorial Boulevard – CRA)	Corridor Enhancements		Misc.	550	50	50	100	100
O	"Five Points" Roundabout - CRA	@ Sloan/Main/Lake Beulah Drive Intersection		TSM		175			
MM	Parkview Place	Pedestrian Improvements		S					300
MM	Gilmore Avenue	Parkview Place	Bella Vista Street	S		79	228		
MM	SR 37 (S. Florida Ave. Improvements - CRA)	Dixieland District		Misc.	350	350	150	150	150
MM <sup>2</sup>	Providence Road	Tenth Street	Griffin Road	BL	***				
MM <sup>2</sup>	Edgewood Drive	Troy Avenue	New Jersey Road	Misc.				***	
MM <sup>2</sup>	North Socrum Loop Road	Interstate 4	East Daughtery Road	TSM/BL					***

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
<b>POLK COUNTY CAPITAL IMPROVEMENT PROGRAM – FISCAL YEARS 2019-2023</b>									
C	Wabash Avenue	US 92 (Memorial Boulevard)	Tenth Street	Imp. 2/S/BL	551				
C	West Pipkin Road	Medulla Road	Harden Boulevard	2 to 4/S/BL	12,904	19,000	16,000		
C	Reynolds Road	@ US 92		TSM	265	100			
MM	Campbell Road N.	Banana Road	D.R. Bryant Road	S	150				
MM	Clubhouse Road	E. of Maryknoll Drive	Dismuke Drive	S	219				
MM	Clubhouse Road	Vintage View Boulevard	Creekmur Lane	S	424				
MM	Hardin Combee Road	Jere Circle	Fish Hatchery Road	S	403				
MM	Augusta Street	Maine Avenue	Ellis Avenue	S	15				
MM	Hutchins Avenue	Maine Avenue	Ellis Avenue	S	15				
MM	South Crystal Lake Drive	Hummingbird Lane	SR 659 (Combee Road)	S	29				
MM	Chestnut Road	SR 546 (Memorial Boulevard)	US 92 (New Tampa Highway)	S	799				
MM	Idlewild Street	East Lake Parker Road	SR 659 (Combee Road)	S	253				
MM	Banana Road	Park Byrd Road	Campbell Road	S	261				
MM	Palmetto Avenue SE (Highland City)	Crews Lake Road	US 98	S	170				
MM	North Galloway Road	Swindell Road (E-W)	Doreen Drive	S	150				
MM	Clubhouse Road (S)	Lakeland Highlands Road	Live Oak Road	S	300				
<b>FLORIDA DEPARTMENT OF TRANSPORTATION ADOPTED WORK PROGRAM – FISCAL YEARS 2018/19-2022/23 (JULY 1, 2018)</b>									
C	Interstate 4	@ State Road 33 (Exit 38)		Int.	3,507	1,400	50		
C	Interstate 4	@ CSX Railroad (Bridge Replacement; CIE addition due to Kathleen Road Off-Ramp Improvements)		Int.	65	2,000	31,635	1,500	
C	FGT Interstate 4	@ State Road 33 (Exit 38)		Int.	5,000	5	10,000		
C	State Road 33	Old Combee Road	S. of Firstpark Boulevard South	2 to 4/S/BP/TR				370	
C	State Road 33	Old Combee Road	N. of Tomkow Road	2 to 4/S/BP/TR	548				

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
C	US 98 (Bartow Road)	Edgewood Drive	East Main Street	4 to 6/S/BP/TR	3	1,241		1,290	5,432
C	US 92 (New Tampa Highway)	County Line Road	Wabash Avenue	2 to 4/S/BL/TR	6,425			40	3,412
C	US 98	West Daughtery Road	N. of West Socrum Loop Rd.	4 to 6		1,550			
C	SR 570 (Polk Parkway)	N. of CR 546 (Old Dixie Hwy.)	Pace Road	2 to 4	5,519	66,344	3,000		
C	Central Polk Parkway	SR 570 (Polk Parkway)	State Road 60	New 4	12	5,100			
C	Central Polk Parkway	SR 570 (Polk Parkway)	US 17	New 4	9,826	20,023	675		
MM	Ariana Street	South Wabash Avenue	Lotus Avenue	S		1,584			
MM	North Crystal Lake Drive	Willow Point Drive	Longfellow Boulevard	S	46		260		
MM	Crystal Lake Elementary	Safe Routes to Schools – Sidewalks and Lighting		S	70			490	
MM	Wabash Avenue	Ariana Street	Hickory Street	BP/TR	330		2,177		
MM	Fort Fraser Trail Ext.	SR 540 (Winter Lake Road)	SR 659 (Combee Road)	BP			2,000		
MM	Main Street	Interlachen Parkway	Longfellow Boulevard	BP		856			
MM	Three Parks Trail East	Turtle Rock Drive	Glendale Street	BP		472			
MM	Three Parks Trail West	W. of Cleveland Heights Boulevard Near Robin Road	Westover Street @ Peterson Park	BP		43		306	
MM	Polk Rail Study – New York Avenue Pedestrian Underpass	Main Street	Lake Wire Drive	BP/S	65				
C	US 92 (New Tampa Hwy)	@ Wabash Avenue		TSM	819				
MM	US 92 (New Tampa Highway)	Galloway Road	Chestnut Road	S	1,111				
MM	Central Lakeland Transit Signal Prioritization	SR 37 (Florida Avenue) from SR 570 (Polk Parkway) to US 92 (Memorial Boulevard); SR 33 (Lakeland Hills Boulevard) at US 92 (Memorial Boulevard)		TR				402 (Deferred from FY 2018)	
MM	LAMTD Transit Pads and/or Shelters	@ Various Locations		TR	137				
MM	Old Combee Road Bus Pull-Off	@ Plantation Square Shopping Center		TR	13				



TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
C/MM	SR 659 (Combee Road)	US 98	Skyview Drive	TSM/S/BL/TR	143				
C/MM	SR 33 (Lakeland Hills Boulevard)	Parkview Place	Granada Street	TSM/S	21		5,448		
MM	SR 33 (Lakeland Hills Boulevard)	Victoria Boulevard	N. Florida Avenue	TSM	4			369	
MM <sup>1</sup>	SR 563 (Sikes Boulevard)	Lime Street	SR 539 @ MLK Avenue	BL	8	1,329			
MM <sup>1</sup>	SR 572 (Airport Road)	North of Rooms to Go Entrance	Drane Field Road	BL	6,000				
MM <sup>1</sup>	SR 572 (Drane Field Road)	Airport Road	Pipkin Creek Road	BL	50	10	6,050		
MM <sup>1</sup>	SR 563 (Harden Boulevard)	Beaker Boulevard	Forest Park Street	BL/TR/S		100	40	11,230	
MM <sup>1</sup>	SR 37 (Florida Avenue)	Imperial Boulevard	Glendale Street	S/TR/TSM	35	20	3,077		
MM <sup>1</sup>	US 92 (Wabash Avenue)	US 92 (New Tampa Highway)	SR 546 (Memorial Boulevard)	S/TR/TSM	9			4,223	
<b>DEVELOPER-FUNDED TRANSPORTATION IMPROVEMENTS</b>									
<b>LAKELAND CENTRAL PARK DRI – DRI DEVELOPMENT ORDER AND DEVELOPMENT AGREEMENT</b>									
C	County Line Road**	@ US 92 (New Tampa Highway)		TSM	1,605				
					613				
C	US 92 (New Tampa Highway)**	@ Wabash Avenue		TSM/S	20	849			
C/A	Winston Park Boulevard (Lkld Central Park)	SR 572 (Airport Road)	CR 542 (Old Tampa Highway)	New 4/S/BP/TR	TBD				
A	CR 542 (Old Tampa Highway)	W. of Flagler Park Boulevard	W. of Browning Road	2 to 3/S/TR		2,381			
C	SR 572 (Airport Road)	SR 570 (Polk Parkway)	Northern DRI Boundary	2 to 4/S/BL			TBD		
<b>BRIDGEWATER DRI</b>									
MM	State Road 33	In vicinity of Bridgewater DRI		TR	30				
C	State Road 33	@ Interstate 4 (Exit 38)		TSM	125				

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
<b>FLORIDA POLYTECHNIC UNIVERSITY (FKA UNIVERSITY OF SOUTH FLORIDA POLYTECHNIC) – CAMPUS DEVELOPMENT AGREEMENT</b>									
C	State Road 33	Interstate 4 @ Exit 33	Interstate 4 @ Exit 38	2 to 4/TSM S/BP	1,009				
<b>WILLIAMS DRI</b>									
MM	Williams Commuter Assistance Program	Williams DRI		TS		TBD			
<b>MALL HILL CENTER DEVELOPMENT AGREEMENT</b>									
C	Griffin Road	@ US 98		TSM	197				
MM	Mall Hill Center Transit Shelters	Along Project Frontages		TR	60				
MM	Mall Hill Drive	500' sidewalk section east of Kathleen Road		S	30				
<b>RIVERSTONE PUD DEVELOPMENT AGREEMENT</b>									
C/MM	Southwestern Lakeland Transit Service Enhancements	Transit Service to PUD; Improved frequencies to address concurrency deficiencies on Waring and West Pipkin Roads		TR			100	100	100
A/C	Medulla Road Extension	Riverstone/Hawthorne Mill Boundary	West Pipkin Road	New 2	TBD				
A/C	Medulla Road Extension	@ West Pipkin Road		TSM	TBD				
C	SR 572 (Drane Field Road)/Waring Road	Proportionate-Share payment in advance of site plan/plat containing 824 <sup>th</sup> single-family dwelling unit		TSM				TBD	
C	Waring Road	Proportionate-Share payment in advance of site plan/plat containing 895 <sup>th</sup> single-family dwelling unit		2 to 4					TBD
<b>MISCELLANEOUS – REQUIREMENTS THROUGH ZONING CONDITIONS AND SITE PLAN REVIEW</b>									
MM	Lakeland Park Center Circulator Route	Downtown Lakeland	Lakeland Park Center Shopping Center	TS	94	94			
C/O	Gateway Boulevard Extension	Whitten Road	Approximately 600' east of Whitten Road	New 2	117	484			
C	State Road 33	@ Interstate 4 (Exit 38) (Park of Commerce I)		TSM	345				
C	State Road 33	@ Interstate 4 (Exit 38) (Park of Commerce II)		TSM	143				
C	State Road 33	@ Interstate 4 (Exit 38) (Lakeland Commerce Center – Cabot)		TSM	TBD				

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
C/MM	Oakbridge DRI Transit Shelters	North Village, South Village and South Village SuperShelter		TR	150				
C/MM	Oakbridge Proportionate-Share Calculation	Multi-Modal Improvements in DRI Impact Area		TSM/TR/BP/S	111				
A/C	Gresham Village County Line Road Backage Road	West Pipkin Road	Ralston Road	New 2	383				
A/C	Lakes at Laurel Highlands (Winston Park Blvd)	SR 572 (Airport Road)	North Parkway Frontage Road (W. of Blue Highlands Drive is complete)	New 2	TBD				
A/C	Ruthven Hamilton Road Right-of-Way Dedication	South of Drane Field Road		Imp. 2	6				
MM	Eagles Landing Park-and-Ride Lot	SE Quadrant of County Line/Swindell Road Intersection		ROW	TBD				
C/MM	Snow Property – SR 33 @ Old Combee Road	Multi-use trail along site's SR 33 frontage; transit shelter on frontage		BP/TR		100			
C/MM	Oakbridge – Lincoln Avenue Multi-Use Trail Right-of-Way			ROW	TBD				
C/MM	Audi Lakeland Transit Shelter Installation	Griffin Road Project Impact Area		TR	17				
C/MM	Audi Lakeland Transit Shelter Payment	Griffin Road Project Impact Area		TR	17				
C/MM	Starbucks/US 98 North Transit Shelter	US 98 North Near Development Site		TR	18				
C/MM	Reserve at Lakeland Square Transit Shelter	Griffin Road @ Development Site (west of Mall Hill Road)		TR	18				
C/MM	Lakeland Housing Authority – Williamstown Cottages (Shelter Relocation)	US 98 @ Williamstown Boulevard		TR	2				
C/MM	Lake Gibson Village Transit Shelter and Bus Bay	Carpenters Way Development Frontage		TR	TBD				

TYPE *	STREET	FROM	TO	IMP. **	2019	2020	2021	2022	2023
MM	CR 542 Sidewalk	Rooms to Go Parcel Boundary to Location 1,000 Feet West		S	TBD				
C/MM	Tradeport Boulevard	West of State Road 33 - Bridgewater		ROW	TBD				
C/MM	Mall Hill Road Extension	CR 35A (Kathleen Road)	CSX Right-of-Way (complete to point approx. 300 feet west of Kathleen Road)	New 2	TBD				
C/MM	Lakeland-Linder Regional Airport (Staybridge Suites)	Don Emerson Drive, south of Drane Field Road		TR	25				
C/MM	Project Marlin-Transit Shelter and Bus Bay	West Pipkin Road	Project Marlin Main Entrance	Imp. TR	TBD				
C/MM	Airpark PUD	Old Medulla Road @ Waring Road		TSM	TBD				
C/MM	Airpark PUD	Peak Hour Transit Service and Two Transit Shelters		TS/TR	TBD				
C/MM	Airport Commerce Park (Transit Shelter)	Drane Field Road west of SR 572 (Airport Road)		TR	25				
C/MM	Airpark Business Center/Lakeland Airside Center	Development of commercial connector road network and reconstruction of Airside Center Drive (north of West Pipkin Road, west of Old Medulla Road)		New 2	TBD				
C/MM	Providence Reserve II Transit Stop Improvements	Providence Road at Providence Reserve		TR	15				
MM	Various Transit Stop (Bench & Deployment Pad) Improvements	@ 7-Eleven (NW Quad Memorial/Lakeland Hills), Bridgewater Commerce Center (Firstpark Boulevard South), Lakes at Laurel Highlands (Winston Park Boulevard), Lakeland Commerce Center (SR 33)		TR	TBD				

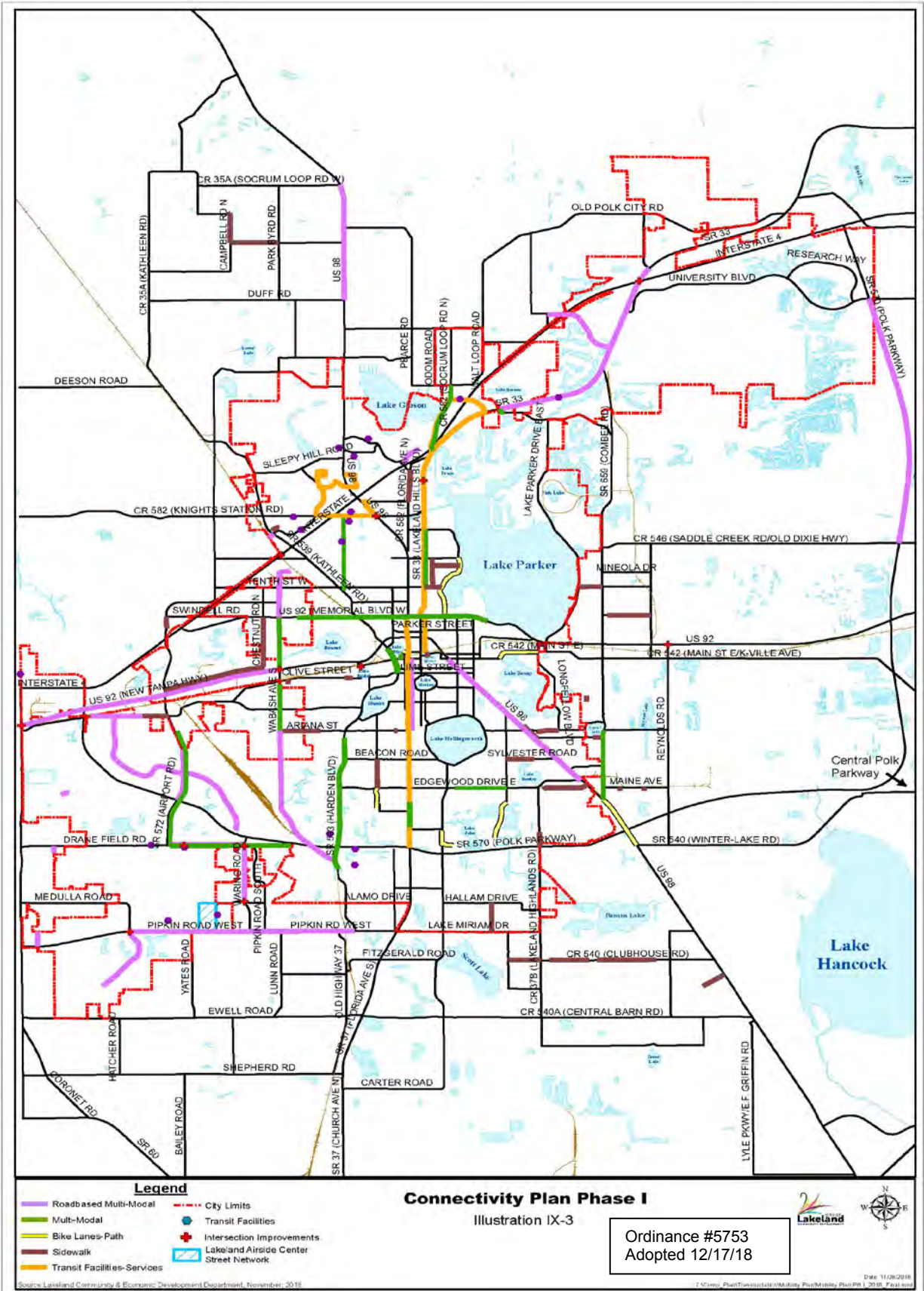
\* C = Concurrency Project MM = Multi-Modal O = Operational/Safety Project A= Access IF = Impact Fee Funding  
 \*\*S= Sidewalk BL= Bike Lane BP= Bike Path TR = Transit Facility/Amenity TS= Transit Service with Developer Funding AM = Access Management TSM= Transportation Systems Management

\*\*\* = Incorporated into already funded City resurfacing project.

<sup>1</sup> The Florida Department of Transportation and Polk Transportation Planning Organization have established a process through which multi-modal enhancements are evaluated for all resurfacing projects on the State Highway System, with supplemental funding for implementation being made available with Congestion Management Program annual set-aside of Federal funds allocated to the Polk TPO.

<sup>2</sup> These projects are a result of collaborative cost saving measures incorporated into the City's regularly scheduled road maintenance and resurfacing program.

 Potential developer funding to address any shortfalls that are identified during design.



# PUBLIC SCHOOL FACILITIES ELEMENT

## INTRODUCTION

Planning for school facilities is one of the responsibilities of the local School Board. It was historically done in an isolated manner separate from the local government planning process. In order to facilitate better planning for the optimal distribution of schools, school planning should be coordinated within the context of the local government comprehensive planning process.

In 2005, the Florida Legislature amended s.163.3180, F.S., which ordered the implementation of public school concurrency. The new legislation requires that each local government adopt a Public School Facilities Element (PSFE) as part of its Comprehensive Plan and amend its Capital Improvement Element and Intergovernmental Coordination Element. The PSFE must address school level of service; school utilization; school proximity and compatibility with residential development; availability of public infrastructure; co-location opportunities; and financial feasibility. The intent of the legislation is to encourage counties, municipalities, and school boards throughout the state to work together to achieve concurrency.

The City of Lakeland in cooperation with the Polk County School Board, Polk County Government, and the 14 non-exempt cities in the Polk County School District coordinated the adoption of the Public School Facilities Element (PSFE) and associated amendments to the Intergovernmental Coordination and Capital Improvements Elements to ensure all local government comprehensive plan elements within the County are consistent with each other.

Education was identified as one of the 11 strategic community priorities by the 2009 Lakeland Vision Update. Key to this element is Lakeland Vision's goal for educational facilities. The goal states "A better use of resources creates an improved learning environment for Lakeland students." This goal sets forth the principles that this element should validate and support in order to create the community envisioned by the City's residents and stakeholders.

The following section presents a summarization of the district-wide data and analysis, found in the TSD X-Five of the *Technical Support Document*, which evaluates the existing and future condition of school facilities and includes the School Board's 5 year capital program for school facility improvements. The subsequent section discusses issues and opportunities related to the provision of public school facilities and the final section presents the goal, objective, and policy statements.

## SUMMARY OF FINDINGS

Essential to the preparation of the Public Schools Facilities Element is the inventory and analysis of existing school facilities. The Polk County School Board maintains an extensive inventory and analysis of school district's existing school facilities up to date through periodic revisions of the inventory. The primary purpose for the inventory of school facilities is to analyze how the existing facilities meet present needs and how it can be expected to meet future needs. This analysis examines the historic and current utilization of school facilities and level of service, projected student enrollment, funding for capital improvements, and 15 year capital outlay costs.

The following is a summary of the Polk County Public Schools Facilities Element Data and Analysis found in TSD X-Five of the *Technical Support Document*.

### EXISTING CONDITIONS

According to population estimates from the Bureau of Economic and Business Research at the University of Florida (BEBR), Polk County had grown by 12 percent between 2001 and 2006. During the same time school enrollment in Polk County increased commensurately with total population growth. Since 2006 growth had steadily declined much the same as the rest of the State due to the economy. As recently as 2009 Polk County and most of its municipalities lost population for the first time since World War II. Lakeland was one of only 6 municipalities in the school district that experienced an increase in population.

As a result of this stagnation in growth occurring throughout Polk County, the School Board has registered a decrease in student enrollment growth. In 2009 the total student enrollment for the school district increased by only 4 students over last year. At the beginning of the 2009-10 school year, Polk County had 72 elementary schools, 17 middle schools, 12 high schools, 9 charter schools and 14 special education schools serving a total of 92,520 students.

District level analysis of the three different school levels (elementary, middle, and high) reveals that there is sufficient capacity at the elementary level. According to Department of Education's standards for capacity on a district-wide basis, as of 2013 Polk County high schools were operating at 78 percent, middle schools were operating at 79 percent and elementary schools were operating at 83 percent of their respective total permanent capacity per the Florida Inventory of School Housing or FISH methodology for measuring capacity.

### FUTURE CONDITIONS

According to the Polk County School Board (PSCB), student enrollment based on 2009 levels is projected to remain flat until 2015. This projection is a result of the current economic conditions that have slowed home sales and residential housing development throughout the county. The School Board's 5-Year Work Plan addresses long range

facilities objectives based on anticipated funding. This plan projects a budget of \$44.9 million for capital costs to ensure sufficient classrooms. In addition to the School Board's capital facilities improvements, school concurrency mitigation measures are expected to help meet needs for additional capacity created by future residential development.

## **CAPACITY, UTILIZATION AND LEVEL OF SERVICE**

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According to the PCSB Educational Plant Survey, a school site should be adequate to address existing needs based on school programs and enrollment and to allow economical future expansion and development. The choice of sites for new schools is of critical concern in the overall development of a school facilities program. New sites should be located to minimize transportation and infrastructure costs and should be sized so that they provide adequate space for school buildings, stormwater retention, off street parking, queuing for parent and bus loading and unloading, and playground areas.

The Educational Plan Survey presents minimum space requirements based on program needs, pursuant to the Florida Administrative Code. The minimum space requirements include student capacity, student stations, gross square footage of buildings, and facilities utilization. Student capacity is the maximum number of students a school facility is designed to accommodate. A student station is the area necessary for a student to engage in learning activities and varies with particular types of activities.

According to State criteria, student capacity in elementary schools can be equated to the number of student stations, since elementary school students are assigned to one classroom throughout the day. In secondary schools, however, students move from classroom to classroom depending on their subjects. Scheduling then becomes a factor in calculating capacity as well as the number of students and student stations. Therefore, 90% of total permanent student stations in middle schools and 95% in high schools are said to be available for purposes of determining permanent capacity at the post-elementary level.

According to the Educational Plant Survey, the typical or standard size for new elementary schools is 850 students. This standard is educationally and economically desirable for an elementary school to be large enough to justify a full time principal, a librarian, and instructional and clerical services. In Polk County, the standard for middle schools is 1,200 student stations and the standard for high schools is 1,900 student stations. The School Board will consider the optimum number of student stations for all schools that do not fall within one of the above categories of schools.

The School Board has adopted the following minimum space requirements which are within or higher than those recommended by the State:



**TABLE X-1  
POLK COUNTY STANDARDS  
SCHOOL CAPACITY, BY SCHOOL LEVEL**

SCHOOL LEVEL	TYPE OF USE	SPACE REQUIREMENT
Elementary Schools (Grades Pre-K – 5)	Student Capacity	850 (State: 600 – 800)
	Student Stations	850 (State: 600 – 800)
	Gross sq. ft.	123,006
	Utilization	100%
Middle Schools (Grades 6 – 8)	Student Capacity	1,080 (State: 900 – 1,080)
	Student Stations	1,200 (State: 1,000 – 1,200)
	Gross sq. ft.	188, 356
	Utilization	90%
High Schools (Grades 9 – 12)	Student Capacity	1,805 (State: 1,620 – 1,800)
	Student Stations	1,900 (State: 1,800 – 2,000)
	Gross sq. ft.	303,419
	Utilization	95%

**Source:** Polk County School Board, 2007.

The Polk County School District reports capacity to the Department of Education using the Florida Inventory of School Houses (FISH) standard. FISH capacity is reported in a variety of ways including: permanent satisfactory student stations, satisfactory student stations assigned to relocatables (portables) and total capacity from permanent facilities and from portables.

To implement school concurrency, the Polk County School Board uses permanent capacity as the principle method for measuring the capacity of schools. Program capacity is based on the actual use of a school’s space, taking into account special needs students and special programs that may or may not be counted as capacity (for example ESOL or English for Speakers of Other Languages class or computer labs). In some instances, specialized programs may be recognized as legitimate classroom uses and therefore may add capacity to FISH. In other instances, program capacity may reduce FISH capacity. If these factors are not considered when discussing capacity, the result may be a mistaken impression that classrooms are being under or over utilized. Thus while the analysis of school capacity and its impact on adopted LOS standards is ideally determined based on permanent capacity, program capacity would be a more conservative indicator of a school’s ability to house students.

Where the Department of Education’s FISH capacity is determined by formulas applied to each school’s design, program capacity is a District-determined measure based upon the actual use of the school. However, program capacity measurement is a more accurate method of determining the true capacity of a school. Major capacity issues are constitutional class size limits, student educational needs, and staff scheduling. Finally, the capacity of schools was adjusted based on the planned addition of permanent and

relocatable spaces over the five or ten year period corresponding to the long term concurrency program. Please see PSFE tables 6-17 in the supporting data and analysis found in the *Technical Support Document*.

## ISSUES AND OPPORTUNITIES

There are several issues which must be considered in assuring the overall availability of public school facilities. Among the key issues to be considered are:

1. The implementation of a district-wide school concurrency management system requires extensive intergovernmental coordination between the School Board, County, and the 15 non-exempt cities within the district;
2. School concurrency mitigation will play an essential role in the ability to accommodate future residential development;
3. The provision of services and necessary infrastructure must be taken into consideration when planning and siting new school facilities;
4. The siting of new schools presents opportunities for the co-location and shared use of facilities that can meet the needs of different local agencies and benefit the community in an efficient manner.

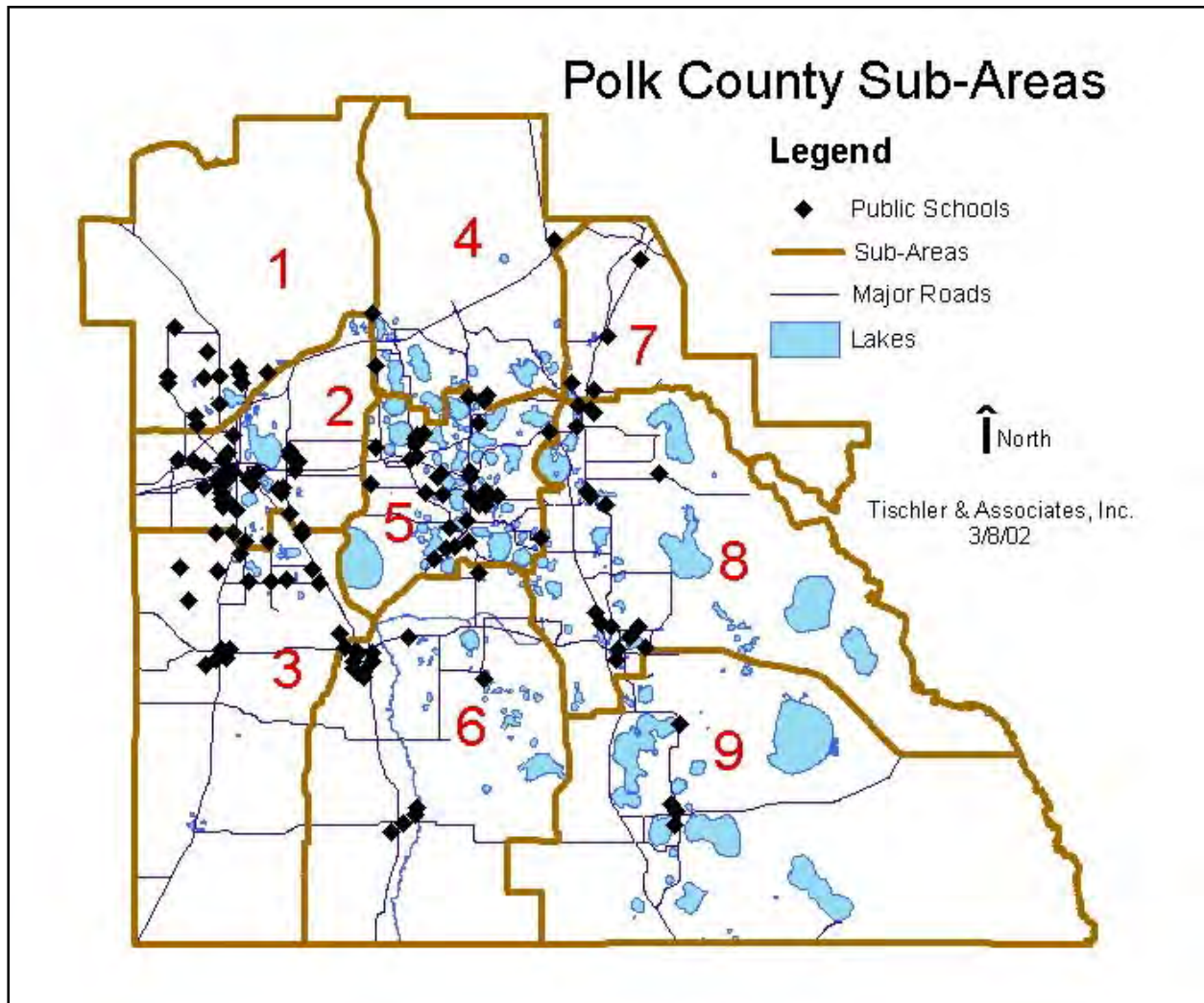
Giving consideration to each of these issues will help to ensure the maximum and efficient use of the School District's public school facilities.

## INTERGOVERNMENTAL COORDINATION

Though the primary mission of any school district is education, the delivery of this service is tied to the planning profession through the need for and sharing of the analysis of population projections, school site selections, transportation and other infrastructure needs. Coordinating the planning for schools with City planning activity is important to ensure that not only are sufficient school facilities available, but that they function well within a given community. While the City of Lakeland has an extensive history of collaboration and coordination with the Polk County School Board, new challenges and opportunities will present themselves as limited resources are allocated to address the demand for schools in Polk County's rapidly growing urban areas.

To plan for the efficient distribution of school facilities based on the student populations disbursed throughout the County and its 17 municipal governments, nine planning areas were identified within the School District as shown in Illustration X-1. The boundaries depicted represent aggregations of Census tracts and are intended to link population and housing projections with school enrollment. The Metro Lakeland Planning Area is within areas 1 and 3 and encompasses the entirety of area 2.

**ILLUSTRATION X-1  
SCHOOL DISTRICT AND PLANNING SUB-AREAS**



The implementation of a district-wide school concurrency management system requires an unprecedented level of intergovernmental coordination between the School Board, County, and the 15 non-exempt cities within the district. Per Florida Statute, the level of service standard through which concurrency is determined must be applied uniformly throughout the School District at a sub-district level within five years of the adoption of the Public School Facilities Element. The School Board, County and participating cities have agreed to apply concurrency at a sub-district level upon adoption of the Public School Facilities Element (PSFE). The PSFE will identify concurrency services areas (CSAs) that coincide with the school attendance zones. School attendance zones are geographic areas surrounding a school and are used to assign students living within them to a specific school. The school concurrency service areas often cross jurisdictional limits.

While local governments retain the authority to make land use decisions, the School Board will determine if schools have adequate capacity for proposed residential projects that must

meet school standards in order to be eligible to proceed to final development approval. At the time of residential development plan review the City will need to coordinate with the School Board to ensure adequate school capacity exists at the elementary, middle, and high school levels. Challenges are likely to present themselves when two neighboring local governments have separate residential projects that are competing for the same student space in a given concurrency service area. Conversely, where there are multiple development proposals that will impact a school facility the opportunity exists for collaborative mitigation of the impact in a cost feasible manner. As some areas grow faster than others rezoning of attendance zones may become an issue requiring coordination between the City, the School Board and other local governments. The Planners Working Group consisting of staff from Polk County, the Polk County School Board, Cities and the Central Florida Regional Planning Council was established pursuant to the Interlocal Agreement for Public School Facilities Planning to meet regularly in order to coordinate school facility planning issues including school concurrency.

## **SCHOOL CONCURRENCY MITIGATION OPTIONS**

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The concept of “concurrency” in Florida is associated with the provision of adequate facilities that will be available at the same time as, or concurrent with, new development. Its earliest application occurred in the context of Developments of Regional Impact (DRI’s) and through the use of regulatory concurrency established by the Growth Management Act of 1985. The City of Lakeland also adopted a proportionate share program for transportation facilities in late 2006. The concept of concurrency and mitigation for facility impacts will now be applied to schools to address the school capacity demand created by rapid residential development.

School concurrency and mitigation must be financially feasible to proceed with development. Where residential growth outstrips the School Board’s ability to construct sufficient school facilities for new students, school facility mitigation agreements will begin to play a greater role in the City’s concurrency review process.

School facility concurrency mitigation allows for the donation, construction, or funding of school facilities sufficient to offset the demand created by the proposed development. A proposed developer contribution must result in a capacity enhancement included in the School Board’s 5-Year Program of Work, which will result in sufficient school capacity to accommodate the new development. In the event that a current 5-Year Program of Work does not include improvements, the developer(s) may petition the school district and affected local governments to include necessary school facilities within an update to the 5-Year Program of Work. Notably, mitigation for school concurrency may assist in advancing school facility capacity projects identified in the fourth and fifth year of the program of work. School concurrency mitigation will entail a three way agreement between the School Board, the developer, and the relevant local government(s).

## **SCHOOL FACILITIES SITING AND THE PROVISION OF SERVICES AND INFRASTRUCTURE TO NEW FACILITIES**

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The City has actively participated as a member of the Polk County School Site Selection Committee for the purpose of siting future schools in the Lakeland Planning Area. A site selection process was established in the Interlocal Agreement for School Facilities Planning outlining criteria for the selection of a school site. All applicable cities in the Polk County School District have the opportunity to submit a candidate site for selection when the need for new school sites occurs. The City's Community Development Department will have the opportunity to consider potential sites and the need for future sites as part of its land use and development review process. When a land contribution for a school site is considered for concurrency, and mitigation is involved in a new residential development proposal, the City may assist developers in identifying the appropriate school sites and potential co-located uses.

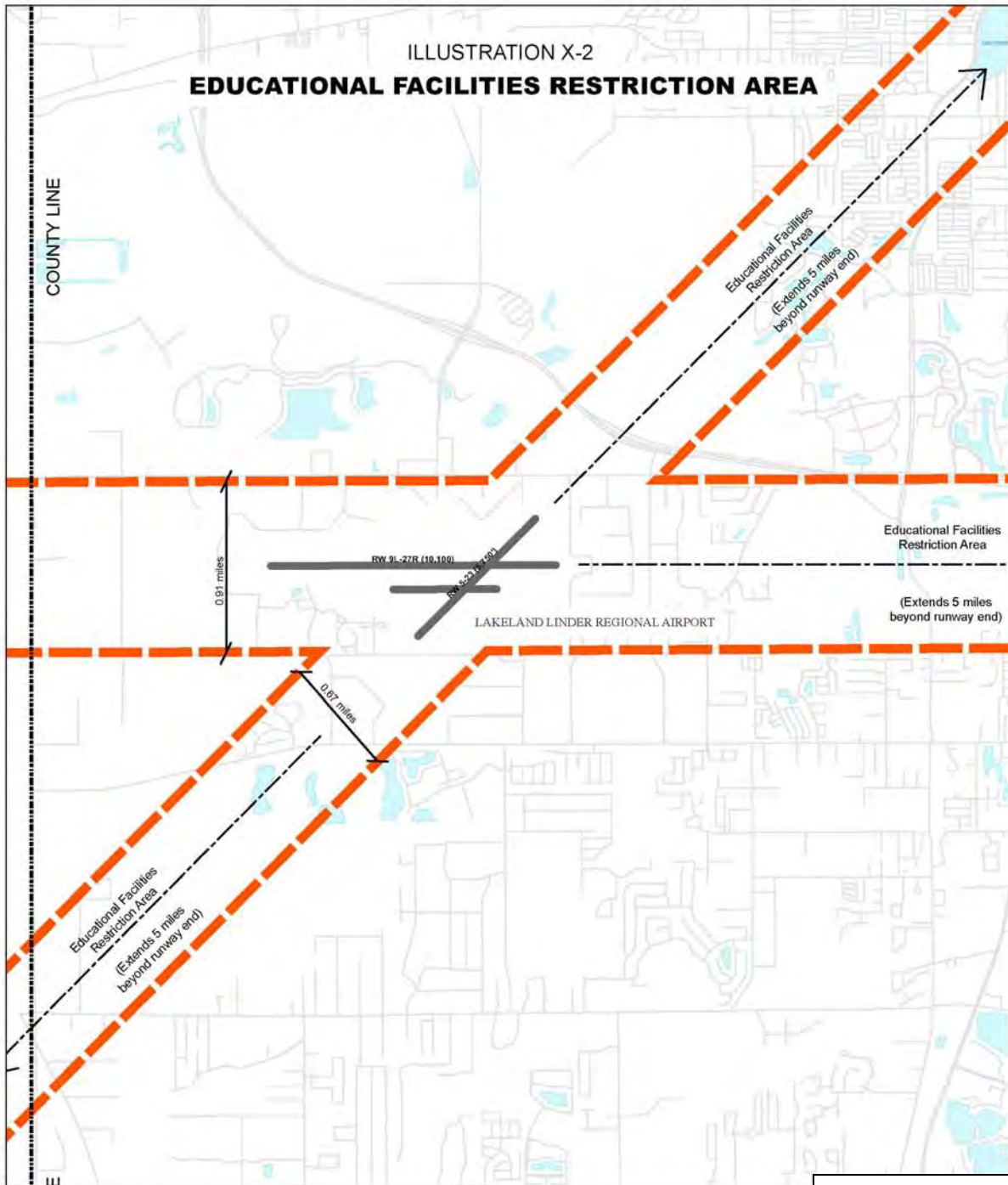
The provision of services and infrastructure such as water, sewer, sidewalks and roads to new facilities where they do not already exist must be considered during the school site selection and planning process. The expense of providing these services and infrastructure can be an obstacle to siting new facilities. When possible the City should encourage the School Board to locate school facilities near urban residential areas where public infrastructure and services exist through its participation on the School Siting Committee. At the same time, the City's planning of utility line extensions, new roads or road improvements, and sidewalks should take into consideration the proximity and relation to existing and planned school facilities.

## **AIRPORT EDUCATIONAL FACILITIES RESTRICTION AREA**

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In regard to aviation activities at the Lakeland Linder Regional Airport, federal restrictions prohibit the construction of any public or private school in proximity to the airport. This area of restriction extends five miles out from either end of any of the airport's runways, along the extended runway centerline, at a width measuring one-half the length of the runway. The boundary of the restricted area is subject to change as necessary to reflect documented and approved modifications of the airport's runway configuration that may occur in the future.


Illustration X-2 depicts the area restricting educational facilities.



Source: Lakeland Community Development Department, 2011

**Ordinance # 5313**  
**Adopted 05/21/12**



 Educational Facilities Restriction Area



k:\cd\maps\esr\comp\_plan\cie\X-2 Educational Facilities Restriction Area.mxd

## **CO-LOCATION & SHARED USE FACILITIES**

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An important issue in planning public facilities is cooperation with other entities responsible for the provision and planning of similar facilities. The City of Lakeland should continue to work closely with the School Board to maximize opportunities for co-location and shared use. Opportunities may exist to co-locate schools with compatible community-oriented facilities. For example, opportunities for co-location and shared use should be considered for libraries, parks, recreation facilities, community centers, stadiums, health centers, and various cultural, social, civic or institutional uses. Schools can likewise benefit from adjacent parks, health centers or other civic uses. In addition, where applicable, opportunities for co-location and shared use of school and governmental facilities for health care and social services should also be considered. Co-location and joint use of the School Board and local government facilities of community based programs with school facilities can benefit the quality of life of a community, while also providing a cost effective way to make public services available. Successful neighborhoods often include schools, parks and other civic uses within their boundaries bringing parents and other residents together in common activities or for a common purpose.

The development of Lake Bonny Park is an example of the City's past efforts to co-locate facilities with the School Board. This park serves Lakeland Senior High School (LHS), but primarily serves the public. Lake Bonny Park includes a concessions building and three athletic field areas, one each for soccer/football, baseball and softball. A boardwalk near the wetlands and lakeshore are also provided, as well as picnic and playground area. A joint-use agricultural center/greenhouse was constructed to teach students plant nursery and animal husbandry skills. Special arrangements for use of the athletic field areas for LHS sports allow the park to function as an expanded athletic field for a school campus that is otherwise constrained.

In addition, the School Board uses other City facilities for football, swimming and other activities at the two City pool and recreation complexes, Bryant Stadium, Henley Field and several neighborhood parks. The City also uses school facilities for its summer recreation program for local youth. The use of formal or informal joint use agreements will help to offset the increased recreation demand of the area's growing population. These efforts should be continued and expanded to assist in meeting future needs of the community.

Identifying opportunities for co-location and shared use of school and civic facilities will require cooperation between the City and School Board when annually updating the School Board's Five Year Program of Work and the City's comprehensive plan schedule of capital improvements. Such cooperation will also require planning and designing new, or renovating existing schools and community facilities. Typically agreements between the City and School Board must address legal liability, operating and maintenance costs, scheduling of use, and facility supervision for each instance of co-location and shared use.



## GOALS, OBJECTIVES AND POLICIES

The following goal, objective, and policy statements have been developed for the use of local policy makers in guiding and directing the decision making process as it relates to public school facilities issues. For purposes of definition, the goal is a generalized statement of a desired end state toward which objectives and policies are directed. The objectives provide the attainable and measurable ends toward which specific efforts are directed. The policy statements are the specific recommended actions that the City of Lakeland will follow in order to achieve the stated goal.

The goal, objective, and policy statements in the Public School Facilities Element of the *Lakeland Comprehensive Plan* are consistent with the requirements of Chapter 163, Florida Statutes and the other elements of this plan and with the goals and policies of the *Central Florida Comprehensive Regional Policy Plan*.

**GOAL 1: Coordinate with the Polk County School Board ("School Board") and other jurisdictions to ensure quality educational facilities and superior educational opportunities which in turn encourages economic growth for individuals, families and communities in Lakeland and Polk County.**

**Objective 1-A:** The City of Lakeland shall implement the approved Interlocal Agreement for Public School Facility Planning (hereafter referred to as the Interlocal Agreement) as amended to maximize opportunities to share information.

**Policy 1-A1:** The City of Lakeland shall meet at least annually with the School Board and other jurisdictions to review issues related to the Public School Facilities Element and the Interlocal Agreement and to determine the need to revise these documents.

**Policy 1-A2:** The Planners Working Group as established in the Interlocal Agreement shall meet at least twice a year to set direction, plan for the annual meeting as described in Policy 1-A1, formulate recommendations and discuss issues related to this element and the Interlocal Agreement as well as ancillary infrastructure improvements needed to support schools and ensure safe access to school facilities.

**Policy 1-A3:** The City of Lakeland shall coordinate with the School Board and other jurisdictions to base plans on consistent projections, including population projections that are developed in coordination with the School Board, and student enrollment projections district-wide and by planning areas which are agreed upon by the Planners Working Group. The School Board's student enrollment projections shall consider the impacts of development trends and data required to be reported in accordance with the Interlocal Agreement.

**Policy 1-A4:** The City of Lakeland shall at least annually report on growth and development trends within its jurisdiction to the School Board. The City shall provide the

information as specified in the Interlocal Agreement. The School Board will use the information to distribute student enrollment by concurrency service area to make the most efficient use of public school facilities.

**Policy 1-A5:** Support School Board efforts to identify long-range school site needs and select sites based on the criteria established in this element and the Interlocal Agreement.

**Policy 1-A6:** The City of Lakeland shall seek and consider School Board comments on relevant comprehensive plan amendments and other land use decisions which may impact schools, as provided for in Florida Statutes.

**Policy 1-A7:** The City of Lakeland shall review their annually updated copy of the Polk County School Board's Five Year Program of Work and other reports from the School Board including a general educational facilities report with information outlined in the Interlocal Agreement.

**Policy 1-A8:** The City of Lakeland shall appoint a representative selected by the School Board to serve at a minimum as an ex-officio member of their local planning agency.

**Objective 1-B:** Encourage partnerships that will ensure adequate educational facilities which in turn will encourage economic growth and provide for a trained and stable labor force, resulting in a higher quality of life.

**Policy 1-B1:** Support and encourage community and business partnerships for educational support services, to include, but not be limited to, magnet programs, work training, and job placement in order to improve productivity, earning potential, standard of living, and retention of labor force.

**Policy 1-B2:** Consider the economic impact of school locations on neighborhoods such as, but not limited to the following factors: infrastructure, property and housing values, as well as surrounding land uses.

**Policy 1-B3:** Encourage public/private partnerships between schools, business community, and other employers through mentoring programs, and Adopt-A-School programs with employees.

**Objective 1-C:** The City shall establish new and review existing coordination mechanisms relating to school facility planning that evaluate and address the comprehensive plan's effects on adjacent local governments, the school board, the State, and other units of local government providing services but not having regulatory authority over use of land.

**Policy 1-C1:** The City shall cooperate with the School Board and other local jurisdictions to implement the Interlocal Agreement, as required by Section 1013.33, Florida Statutes, which includes procedures for:

- (a) Coordination and Sharing of Information
- (b) Planning Processes
- (c) School Siting Procedures
- (d) Site Design and Development Plan Review
- (e) School Concurrency Implementation
- (f) Implementation and Amendments
- (g) Resolution of Disputes

**Policy 1-C2:** The coordination of school siting shall be conducted in accordance with the Interlocal Agreement taking into consideration the needs identified in the current School Board Five Year Program of Work and the annual general education facilities report.

**Policy 1-C3:** In order to coordinate the effective and efficient provision and siting of public educational facilities with associated infrastructure and services within the Polk County School District, the City, the School Board and all local governments within Polk County shall meet jointly to develop mechanisms for coordination. Such efforts may include:

- (a) Coordinated submittal and review of the annual capital improvement program of the City, the annual educational facilities report and Five Year Program of Work of the School Board.
- (b) Coordinated review and assessment of the associated costs and expenditures of siting and developing schools with needed public infrastructure.
- (c) Coordinated review of residential planned developments or mixed use planned developments involving residential development.
- (d) Use of a unified data base including population (forecasts of student population), land use and facilities.
- (e) Assistance from Polk Leisure Services (with representatives from each of the entities) to review coordinated siting of schools with parks for multi-functional use. Directives resulting from the joint meeting shall be incorporated into the Comprehensive Plan, *Land Development Regulations*, if applicable, or other appropriate mechanisms as deemed necessary.

**GOAL 2:**     **The City will implement public school facilities concurrency uniformly with other local jurisdictions in order to ensure the availability of public school facilities consistent with an adopted level of service providing adequate school capacity and eliminating overcrowded conditions in existing and future schools.**

**Objective 2-A:** Establish a minimum level of service for schools and consider school capacity within development impact reviews, e.g. for Planned Developments, re-zoning requests, site plans, or where there are specific development plans proposed.

**Policy 2-A1:** The long term target for Polk County Schools shall be 100% of permanent student stations capacity (PSSC) based upon the State Requirements for Education Facilities (SREF).

**Policy 2-A2:** The City shall collaborate with the School Board to identify methods to achieve targeted utilization that include:

- (a) Improvements to existing school facilities (shared facilities, redistricting, expansion or remodeling, etc.)
- (b) Retrofitting of existing structures
- (c) New school construction
- (d) Encouraging multi-story school facilities in an urban environment
- (e) Exploring re-use of former non-residential centers as potential urban school sites.

**Objective 2-B:** Through its review of proposed development, the City shall ensure that the capacity of schools is sufficient to support students at the adopted level of service (LOS) standards within the period covered by the Five Year Program of Work. These standards shall be consistent with the Interlocal Agreement.

**Policy 2-B1:** The City shall apply the LOS standards set forth herein consistently with all local jurisdictions and the School Board on a district-wide basis within the adopted concurrency service areas for each school type.

**Policy 2-B2:** The uniform, district-wide level-of service standards for elementary, middle and high schools are established as 100 percent of Florida Inventory of School Houses (FISH) capacity. Capacity from relocatables acquired after 1998 and planned for continued long-term use for the first three years of implementation must be included. The LOS standards are set as follows for special school types:

- (a) **Magnet and School of Choice:** One hundred percent (100%) of enrollment quota as established by the School Board or court ordered agreements and as adjusted by the school board annually.
- (b) **Other:** K-8, 6th grade centers, 9th grade centers, 6-12 are at one hundred percent (100%) of DOE FISH capacity.
- (c) **Special Facilities:** Including alternative education or special programmatic facilities are designed to serve the specific population on a countywide basis or for temporary need and are not zoned to any specific area. Therefore, they are not available or used for concurrency determinations.
- (d) **Conversion Charter Schools:** The capacity is set during contract negotiations and the School Board has limited or no control over how many students the schools enroll.

**Policy 2-B3:** Where schools operate below their respective LOS standard, their facility needs should be addressed in the School Board's Five Year Program of Work. Facility needs which cannot be addressed by the Five Year Program of Work would require a long-term concurrency management program to be adopted by the School Board.

**Policy 2-B4:** The City shall coordinate with the School Board to achieve an acceptable LOS at all applicable schools as part of the School Board's financially feasible Five Year Program of Work concurrency management program. The student population should not exceed the core dining capacity.

**Objective 2-C:** The City, in coordination with other jurisdictions and the School Board, shall establish School Concurrency Service Areas within which a determination is made of whether adequate school capacity is available based on the adopted level of service standards.

**Policy 2-C1:** The School Concurrency Service Areas (CSAs) for the Polk County School District shall be school attendance zones (excluding attendance “spot zones”). When a proposed adjustment to the established school attendance zones is to be considered by the School Board, the City shall coordinate with the School Board to provide technical and public input prior to an official public hearing. The school attendance CSAs are hereby adopted by reference and included in the Public Schools Facility Element data and analysis (found in the *Technical Support Document*).

**Policy 2-C2:** Concurrency service areas shall be modified, as needed, to maximize available school capacity and make efficient use of new and existing public schools in accordance with the level of service standards, taking into account minimizing transportation costs, limiting maximum student travel times, the effect of desegregation plans, achieving socioeconomic and diversity objectives as required by the Florida Department of Education, and recognizing the capacity commitments resulting from the local governments’ development approvals for the CSA and for contiguous CSAs.

**Policy 2-C3:** Concurrency service areas shall be designed so that the adopted level of service can be achieved and maintained within the bounds of the School Board’s requirement for a financially feasible five year capital facilities plan.

**Objective 2-D:** In coordination with the School Board, the City will establish a process for implementation of school concurrency which includes capacity determinations and availability standards. The City shall manage the timing of residential subdivision approvals and site plans to ensure adequate school capacity is available consistent with adopted level of service standards for public school concurrency.

**Policy 2-D1:** Final subdivision and site plan approvals for residential development shall be conditioned upon the availability of adequate school capacity as per the adopted level of service standards (LOS) of this element and as required by Section 163.3180(13) F.S.

**Policy 2-D2:** School concurrency shall apply only to residential development or a phase of residential development that generates students requiring a final development

approval including subdivision plat approval, site plan, or its functional equivalent, proposed or established after the effective date of this element.

**Policy 2-D3:** The City will continue to work with Polk County School Board staff to ensure that application procedures and processes for evaluating school capacity and making concurrency determinations are practical, feasible and consistent with the Interlocal Agreement.

**Policy 2-D3(a):** The City may provide a non-binding schools concurrency decision earlier in the approval process, such as at the time of preliminary plan approvals, if requested by the applicant. The School Board must approve the concurrency determination, allocations of capacity, and proportionate share mitigation commitments, as provided herein.

**Policy 2-D3(b):** School concurrency decisions should support and not be in conflict with the goals and objectives of all elements of the comprehensive plan regarding growth management including neighborhood preservation and stability.

**Policy 2-D4:** The City will issue a concurrency determination based on the School Board's concurrency review findings and recommendations consistent with the Interlocal Agreement. The School Board's findings and recommendations shall address whether adequate capacity exists for elementary, middle, and high schools, based on the level of service standards, or if adequate capacity does not exist, whether appropriate mitigation can be accepted, and if so, acceptable options for mitigation consistent with the policies set forth herein.

**Policy 2-D5:** The City shall only issue a concurrency approval for a subdivision plat or site plan for residential development where:

- (a) The School Board's findings indicate adequate school facilities will be in place or under actual construction within three (3) years after the issuance of the subdivision plat or site plan for each level of school;
- (b) Adequate school facilities are available in the relevant CSA or adjacent CSA where the impacts of development can be shifted to that area; or
- (c) The developer executes a legally binding commitment to provide mitigation proportionate to the demand for public school facilities to be created by the actual development of the property subject to the final plat or site plan.

**Policy 2-D6:** In the event that there is not sufficient capacity in the affected concurrency service areas based on the adopted level of service standard to address the impacts of a proposed development, and the availability standard for school concurrency cannot be met, one of the following shall apply:

- (a) The project shall provide capacity enhancement(s) sufficient to meet its impact through school board approved mitigation; or,

- (b) The project shall be delayed to a date when the level of service can be ensured through capital enhancement(s) or planned capacity increases; or,
- (c) A condition of approval of the subdivision or site plan shall be that the project's impact shall be phased and each phase shall be delayed to a time when capacity enhancement and level of service can be ensured; or,
- (d) The project shall not be approved.

**Policy 2-D7:** If the impact of the project will not occur until years 2 or 3 of the School Board's financially feasible Five Year Program of Work, then any relevant programmed improvements in those years shall be considered available capacity for the project and factored into the level of service analysis. If the impact of the project will not be felt until years 4 or 5 of the Five Year Program of Work, then any relevant programmed improvements shall not be considered available capacity for the project unless funding of the improvement is ensured through School Board funding to accelerate the project, through proportionate share mitigation, or some other means.

**Objective 2-E:** The City shall allow for mitigation alternatives that are financially feasible and will achieve and maintain the adopted level of service standard consistent with the adopted School Board's financially feasible Five Year Program of Work.

**Policy 2-E1:** Mitigation shall be allowed where the adopted level of service standards cannot be met. Mitigation options shall include options listed below for which the School District assumes operational responsibility through incorporation in the adopted School Board's financially feasible Five Year Program of Work and which will maintain adopted level of service standards.

- (a) The donation, construction, or funding of school facilities sufficient to offset the demand for public school facilities created by the proposed development; and,
- (b) The creation of mitigation banking based on the construction of a public school facility in exchange for the right to sell capacity credits.

**Policy 2-E2:** Mitigation shall not be required if the needed capacity for the development is available in one or more contiguous concurrency service areas and the impacts of the development can be shifted to that concurrency service area and where such is consistent with the other provisions of this Element.

**Policy 2-E3:** Mitigation shall be directed to permanent capacity improvement projects on the School Board's financially feasible Five Year Program of Work that will satisfy the demand created by that development approval consistent with the adopted level of service standards, and shall be assured by a legally binding development agreement between the School Board, the City, and the applicant executed prior to the issuance of the subdivision plat or the site plan as required by the local government. If the School Board agrees to the mitigation, the School Board must commit in the agreement to placing the improvement required for mitigation in its Five Year Program of Work in a timely manner. However, if a new development triggers the need for additional capacity which can only be

met by a new school and such new school would not otherwise be needed for more than five years, the mitigation agreement shall not trigger concurrency nor a change to the Five Year Program of Work Plan until the time at which conditions for the agreement are acceptable to the School Board. The development agreement shall include the landowner's commitment to continuing renewal of the development agreement upon its expiration. Relocatable classrooms will not be accepted as mitigation.

**Policy 2-E4:** The amount of mitigation required for each school level shall be determined by multiplying the number of new student stations required to serve the new development by the average costs per student station applicable to the Polk County School District. The average cost per student station shall include school facility development costs and land costs.

**Policy 2-E5:** As provided in the Interlocal Agreement, the student generation rates used by the School Board to determine the impact of a particular development application on public schools, shall be reviewed and updated as apparent and necessary in accordance with professionally accepted methodologies at a minimum of five (5) years.

**Objective 2-F:** The City, in coordination with the School Board and other jurisdictions, shall ensure existing deficiencies and future needs are addressed consistent with the adopted level of service standards for public schools.

**Policy 2-F1:** The City, in coordination with other jurisdictions, shall ensure that future development pays a proportionate share of the costs of the capital facility capacity needed to accommodate new development and to assist in maintaining adopted level of service standards, via impact fees and other legally available and appropriate methods in development conditions.

**Policy 2-F2:** The City hereby incorporates by reference the School Board's financially feasible Five Year Program of Work.

**Policy 2-F3:** Where feasible, the City shall work with developers and others to investigate the feasibility of new or alternative funding sources for additional public schools.

**GOAL 3: Partner with the school board and other jurisdictions to promote schools as focal points of existing and future neighborhoods through siting for new schools, redevelopment of existing school facilities, and co-location and shared use of facilities and services.**

**Objective 3-A:** The City, in collaboration with the School Board and other jurisdictions, shall provide for the location and expansion of existing schools in a coordinated manner ensuring the planning, construction, and opening of educational facilities are coordinated in time and place, concurrent with necessary services and infrastructure, and compatible and consistent with the Comprehensive Plan.



**Policy 3-A1:** The City will provide the School Board with potential sites for consideration when notified by the School Board of the need for new school facilities in accordance with the Interlocal Agreement.

**Policy 3-A2:** The City will coordinate with the School Board to ensure that proposed public school facility sites are consistent with the applicable land use categories and policies of the comprehensive plan and will consider each site as it relates to environmental, health, safety and welfare concerns, effects on adjacent property and other guidelines as outlined in the Interlocal Agreement.

**Policy 3-A3:** The City shall coordinate with the School Board and other jurisdictions on the planning and siting of new schools facilities to ensure appropriate timing of necessary services and infrastructure and that such sites are compatible and consistent with the Comprehensive Plan.

**Policy 3-A4:** The City will include sufficient allowable land use designations for schools approximate to residential development to meet the projected needs for schools. Schools are an allowable land use in all future land use plan categories, except heavy industrial and conservation or preservation type land uses designating environmentally sensitive areas. The City shall clearly identify in the Future Land Use Element and *Land Development Regulations* the land use and zoning categories in which schools are allowable uses.

**Policy 3-A5:** The siting of new schools within the Green Swamp Area of Critical State Concern (ACSC), by definition an environmentally sensitive area for all of Central Florida, shall be prohibited within the City and unincorporated Polk County except in what the County refers to as the Urban Development and Urban Growth Areas (UDA and UGA respectively) within the Polk City and the Ridge Special Protection Areas.

**Policy 3-A6:** The City will collaborate with the School Board and other jurisdictions to jointly determine the need for and timing of on-site and off-site improvements necessary to support each new school or the proposed renovation, expansion or closure of an existing school, and will enter into a written agreement, if necessary, as to the timing, location, and the party or parties responsible for constructing, operating and maintaining the required improvements.

**Policy 3-A7:** The City shall protect schools from the intrusion of incompatible land uses by providing the School Board representatives the opportunity to participate in the review process for all proposed developments adjacent and in proximity to schools.

**Policy 3-A8:** The preferred locations for public schools, whether elementary, middle or high schools are within the Urban Service Areas for utility services and expansions.

**Policy 3-A9:** The City shall automatically process amendments to the Future Land Use Map upon the approval of a new school site, where necessary. The processing of any amendments shall be at no cost to the School Board.

**Policy 3-A10:** The City shall participate in the School Site Selection process following the terms and limitations established in the Interlocal Agreement.

**Policy 3-A11:** The City shall collaborate with the School Board and other jurisdictions to ensure the provision of supporting infrastructure as required by the Interlocal Agreement and applicable Florida Statutes.

**Policy 3-A12:** The City shall establish an effective process for reserving, with conceptual School Board staff approval, school sites which could include:

- (a) Consideration of school siting during the completion of area wide studies,
- (b) Developer contribution towards the provision of school facilities.

**Objective 3-B:** Enhance community and neighborhood design through effective school educational facility design, school siting standards, compatibility with surrounding land uses, schools as focal points for community planning, and making schools a central component, geographically or otherwise, to neighborhood-level planning.

**Policy 3-B1:** Work with the School Board to identify new school sites that would be in locations to provide logical focal points for community activities and serve as the cornerstone for innovative urban design standards.

**Policy 3-B2:** Provide school sites and facilities within planned neighborhoods, unless precluded by existing development patterns.

**Policy 3-B3:** Support and encourage the location of new elementary and middle schools internal to residential neighborhoods and/or near other civic land uses, within the limits of School Board mandated desegregation.

**Policy 3-B4:** Coordinate with the School Board to identify locations for new high schools based upon need and availability of viable properties within the search area identified by the School Board.

**Policy 3-B5:** Support and coordinate with School Board efforts to locate new elementary schools within reasonable walking distance to residential neighborhoods.

**Policy 3-B6:** In cooperation with the School Board, and where necessary, develop and adopt design standards for school bus stops and turnarounds in new developments.

**Policy 3-B7:** Support the School Board in its efforts to locate appropriate school services, such as administrative offices, night classes and adult education on-site or in

alternative locations, such as but not limited to commercial plazas, shopping malls, and community centers.

**Policy 3-B8:** The City shall coordinate closely with School Board staff on preliminary design plans for new schools, generally seeking to maximize land via multi-story facilities, incorporating design elements which are community-friendly such as allowing for a shared media and/or meeting center and/or play fields on campus, respecting environmental features of a site, respecting the need to provide noise or visual buffers from adjacent owners, providing connectivity for pedestrians at multi-school properties, and providing pedestrian, bicycle and other connectivity to the surrounding residential community.

**Policy 3-B9:** Reduce capital expenditures for the City and the School Board via cost-effective design criteria and shared facilities.

**Objective 3-C:** Plan for the expansion and/or rehabilitation of existing school facilities to maintain and improve neighborhoods and communities.

**Policy 3-C1:** Where existing schools are proposed to be expanded, substantially renovated or new schools are proposed to be built, the City shall request that school board staff, local school-based faculty, and advisory councils coordinate with County staff and relevant neighborhood groups/leaders, and residents to integrate school facilities and activities with neighborhood planning and community development activities.

**Policy 3-C2:** Coordinate with the School Board, Florida Department of Transportation (FDOT), the Transportation Planning Organization (TPO), and other jurisdictions to ensure that both existing educational facilities and proposed public school sites are accessible from, and integrated into, a planned system of sidewalks, trails, and bikeways and observe adopted local access management principles. Seek or assist the School Board in pursuing grant funding to enhance access and intermodal connectivity to and between schools, their co-located facilities, neighborhoods, and proximate community facilities such as parks.

**Objective 3-D:** Implement provisions of the Interlocal Agreement by coordinating the location of educational facilities and the co-location of other public facilities.

**Policy 3-D1:** The City will review future school and ancillary facility plans and identify opportunities for future co-location or joint use projects. The School Board will be notified of potential projects in a timely manner.

**Policy 3-D2:** Encourage the location of parks, recreation and community or civic facilities in new and existing communities in conjunction with school sites. Seek out other co-location and joint use opportunities as outlined in the Interlocal Agreement that will benefit existing neighborhoods or redevelopment efforts.

**Policy 3-D3:** Where financially feasible, the City will provide funding within its Capital Improvements Element to allow for identified and potential co-location projects.

**Objective 3-E:** Strengthen existing neighborhoods and enhance community and neighborhood design through the co-location and joint use of educational facilities.

**Policy 3-E1:** The City, in cooperation with the School Board and other jurisdictions, shall whenever possible coordinate the co-location and shared use of school facilities, parks, community facilities, and other facilities compatible with schools.

**Policy 3-E2:** The City and other jurisdictions in cooperation with the School Board shall jointly plan jurisdictional co-location or joint use projects which overlap boundaries within areas defined for civic purposes. Civic uses near or adjacent to schools shall be a preferred land use in regard to land use decision making.

**Policy 3-E3:** Continue to exercise joint use agreements between the School Board, the City, and other relevant agencies regarding shared use of facilities, including schools, community centers, libraries, parks, and other compatible facilities. Agreements shall include shared costs where feasible.

**Policy 3-E4:** Support and encourage community-based programs for children's athletics, performing arts, and after-school enrichment in conjunction with school facilities. This may include exploring and supporting economically feasible multi-modal transportation system options that will enhance such opportunities.

**Policy 3-E5:** Upon adoption of the School Board's Five Year Program of Work, and as coordinated by Polk County and the School Board, the City will participate in meetings of relevant agencies to discuss planning and budgeting for possible co-located facilities. This coordination may include staff from the affected local government's planning, parks and recreation, library, law enforcement, civic groups, and other agencies as necessary. The coordination will focus upon financially feasible co-location opportunities which may exist prior to commencement of school construction.

**Policy 3-E6:** Encourage the business community, developers, and other private organizations to coordinate with the City and the School Board to jointly fund and design community-based services and facilities in conjunction with existing and proposed school sites.

**GOAL 4: Maintain and enhance intergovernmental coordination and joint planning efforts with the school board and other jurisdictions to ensure public infrastructure and other necessary services are available in a multi-jurisdictional environment for public school facilities.**

**Objective 4-A:** Integrate land use and school facility planning in Lakeland through a series of planning, coordination and implementation activities which ensure capital facilities and infrastructure necessary for school facilities are available to public schools.

**Policy 4-A1:** Through development review processes, consider the possible need for expansion of existing school facilities or the provision of new facilities with land use planning.

**Policy 4-A2:** Develop a process for an annual joint review of the capital plans for the school board and the local government.

**Policy 4-A3:** Plan and locate new school facilities in areas where student population growth is expected due to new development approvals and/or agreed-upon area specific population projections.

**Policy 4-A4:** The County, in conjunction with the School District and the municipalities within the County, shall identify issues relating to public school emergency preparedness, such as:

- (a) The determination of evacuation zones, evacuation routes, and shelter locations.
- (b) The design and use of public schools as emergency shelters.
- (c) The designation of sites other than public schools as long-term shelters, to allow schools to resume normal operations following emergency events.

**Objective 4-B:** Support School Board programs to effectively and efficiently manage existing capital and operational funds and resources.

**Policy 4-B1:** The City shall cooperate with the School Board and other local jurisdictions and agencies to address and resolve multi-jurisdictional public school issues.

**Policy 4-B2:** Support School Board efforts to ensure sufficient capacity and operational resources for current and future school enrollment by partnering in the identification of capital needs, operational needs, and available funding sources for various campuses and school programs.

**Policy 4-B3:** Support the School Board and encourage the State Legislature to allow flexibility in state, local and private sector participation in capital and operational funding of public school facilities.

**Policy 4-B4:** Give priority in scheduling County programs and capital improvements which are consistent with and which meet the capital needs identified in the school facility planning program(s).

**Policy 4-B5:** Coordinate with the School Board to ensure the appropriate methodology (i.e. student generation rates) is utilized to evaluate the impact of different

types of residential units on student populations, school facilities, and fiscal impacts to schools.

**Policy 4-B6:** Consider joint funding for expanding appropriate school facilities to function as community service centers.

**Policy 4-B7:** Encourage the private sector to identify and implement creative solutions in developing adequate school facilities in residential developments. Creative solutions may include combining mitigation needs of several developments, creating or enhancing co-location opportunities, and/or conversion of structures to a school setting as long as they meet State Requirements for Educational Standards (SREF).

**Policy 4-B8:** The City in consultation with the School Board on a case-by-case basis shall consider incentives such as, but not limited to, density bonus points, tax credits, waiver of fees or other innovative means to encourage developers to contribute to the provision of school facilities by:

- (a) donating school site(s),
- (b) reserving or selling sites at pre-development prices,
- (c) constructing new facilities or renovating existing facilities, and
- (d) providing access to public transit.

**Policy 4-B9:** Support School Board efforts to allow the private sector to construct school facilities and/or lease land or facilities to the School Board.

**Policy 4-B10:** The City shall identify infrastructure projects within the City's Capital Improvement Program which will permanently or temporarily impact an existing campus due to proximity or serviceability to a campus.

## **GOAL 5:     Monitoring, evaluation, and implementation**

**Objective 5-A:** The City shall implement the objectives and policies of the Public School Facilities Element in coordination with the School Board and other local governments.

**Policy 5-A1:** The City Administrator, or designee, shall be responsible for implementing the educational facilities objectives and policies included in the City Comprehensive Plan.

**Policy 5-A2:** The City shall adopt development regulations as necessary to implement the objectives and policies of the Public School Facilities Element.

**Policy 5-A3:** The City shall maintain intergovernmental agreements with other local governments in order to attain common objectives within the Public School Facilities Element.

**Policy 5-A4:** The City shall establish contact with other governmental agencies and private organizations, as needed, to carry out Public School Facilities Element objectives and policies.

**Policy 5-A5:** The City shall revise permitting or permit-related procedures, as necessary, to carry out the objectives and policies of the Public School Facilities Element.

**Policy 5-A6:** The City shall develop and implement programs or methodology, and conduct any studies required by the Public School Facilities Element.

**Policy 5-A7:** The City shall determine from the School Board the inventories required by the Public School Facilities Element.

**Policy 5-A8:** The City shall continue to enforce existing regulations where specified within the Public School Facilities Element.

**Policy 5-A9:** Any conflicts related to issues covered by the Public School Facilities Element and Interlocal Agreement shall be resolved in accordance with governmental conflict resolution procedures specified in Florida Statute.

## MONITORING AND IMPLEMENTATION

Section 9J-5.005 (7), Florida Administrative Code requires that the Comprehensive Plan contain a section identifying ongoing monitoring, updating and evaluation procedures to be followed over the planning period. This section is required to address:

- a.** A description of the public participation process used by the local government in preparing the report;
- b.** Updating appropriate baseline data and measurable objectives to be accomplished in the first five-year period of the plan, and for the long-term period;
- c.** Accomplishments during the planning horizon, identifying the goals, objectives and policies that have been successfully reached;
- d.** Obstacles or problems which resulted in underachievement of goals, objectives, or policies;
- e.** New or modified and reformulated goals, objectives, or policies needed to correct discovered problems;
- f.** A means of ensuring continuous monitoring and evaluation of the plan during the five-year period;
- g.** The extent to which unanticipated and unforeseen problems and opportunities occurred between the date of adoption and the date of the report;
- h.** The effect on the comprehensive plan of changes to: Chapter 187, F.S., the state comprehensive plan Chapter 163, Pt. II, F.S.; the minimum criteria contained in Chapter 9J-5, F.A.C.; and the appropriate strategic regional policy plan;
- i.** The major problems of development, physical deterioration, and the location of land uses and the social and economic effects of such uses in the area;
- j.** The identification of any actions that are taken or need to be taken to address the planning issues identified in the report; and
- k.** Proposed or anticipated plan amendments necessary to address or implement the identified changes.

Items C-K were addressed in the City's 2009 adopted Evaluation & Appraisal Report (EAR). The capacity to monitor depends upon what is being monitored and staff resources. If the item is already something the City staff tracks on an annual or some periodic basis, the monitoring is more "continual". Funding of capital projects is adjusted annually in the CIE and 5-year Capital Improvements Program. Building permit records are tracked at least annually. If the item or task is very labor intensive, it will occur less often, such as an update to the existing land use map or the survey of the condition of the City's housing stock. With the advent of GIS



mapping and computerization of data inventories, more frequent tracking/monitoring is possible for some types of data.

This monitoring, updating and evaluation procedure should prove an effective tool in measuring plan implementation. In addition, it should provide ongoing documentation useful in preparation of the City's next required Evaluation and Appraisal Report, due to be adopted in 2018.

## **CITIZEN PARTICIPATION**

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Both State law and good planning practice call for effective citizen participation in the development or updating of a comprehensive plan. The City of Lakeland has a long and successful history of citizen involvement in planning, as well as other local government issues. Since 1988, Lakeland has implemented a formal Public Involvement Process to assure that the Comprehensive Plan reflects the desires of the citizens of Lakeland. The process allowed citizens the opportunity to have input through:

1. The Citizens Advisory Committee (CAC);
2. Public neighborhood meetings;
3. Public workshops and hearings before the City Commission;
4. Public workshops and hearings before the Planning and Zoning Board;
5. Questionnaires distributed to the public by planning staff;
6. Written comments; and,
7. Staff meetings with interested groups and individuals.
8. Lakeland Vision (Recently incorporated in to the process in 2008)

## **THE EAR PROCESS**

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The Community Development Department employed a broad-based public involvement strategy. The community was actively engaged to identify significant local issues and to identify strategies to address these issues. The following is a brief description of each of the major steps carried out to involve the public in the EAR process:

### **EAR Scoping Meeting**

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On April 24, 2008 government and agency stakeholders were invited to a “Scoping Meeting” to help identify local issues that should be addressed as part of the process. This provided an opportunity for the representatives to provide early guidance on relevant issues, and it provided a platform for future public involvement efforts. The meeting input was combined with information gathered in September 2008 including early results of the City’s growth survey and the Lakeland Vision Idea Gathering meetings. All of the above helped the City formulate a proposed list of “major” local issues to discuss in the EAR. This list was proposed to the Department of Community Affairs in mid September and a Letter of Understanding, dated October 8, 2008, was received from the DCA confirming the City’s list of local “major issues” to be discussed in the EAR.

## **Lakeland Metro Area Growth Management Issues Survey**

During the month of September 2008, the City of Lakeland Community Development Department conducted an on-line survey for the entire Lakeland Metro Area to poll stakeholders on their opinion of how best to address specific local growth management issues within the subject areas of Quality of Life, Water Conservation, Alternative Transportation, Housing Affordability, Density as a Growth Management Tool, Rate of Growth & Development. The results of the survey are interpreted herein. The Survey was complemented by a raffle, the winner of which was announced in early December just prior to the “Mapping the Future” event to maximize publicity for that event.

## **Regional and Local Visioning Efforts**

In recent years, the City of Lakeland has been a sponsor and active participant in regional and local visioning efforts. These efforts include myregion.org’s “How Shall We Grow?” originating out of Orlando, One Bay’s “Reality Check” originating out of Tampa, and the Polk County Vision. The City of Lakeland was also a funding partner and participant in the Lakeland Vision Update. These visioning efforts have provided important information on regional and local growth issues, and as such, the resulting vision documents were used as part of the EAR process.

## **Lakeland’s “Mapping the Future” Public Workshop**

As co-sponsor to the Lakeland Vision Update, the Community Development Department funded the *Mapping the Future* public workshop to accompany the Update as a mutual collaboration to seek input from the community on the physical vision of Lakeland. The public workshop invited stakeholders from the community to map their “preferred” future development pattern for Lakeland over the next twenty years by allocating chips representing new residential and non-residential development and preserved green space on a scaled map of the City’s metro planning area. The workshop held on December 9<sup>th</sup>, 2008 was attended by approximately 90 people, not including table facilitators or other workshop staff. Participants worked at tables in small groups to produce 14 “preferred” future development pattern maps. The maps were then analyzed by the Community Development Department to identify common themes and potential future land use scenarios.

## **EAR Issues Identification**

The Community Development Department initially identified general topic areas and presented these for discussion with the participants of the Scoping Meeting held in April 2008. Staff evaluated the general topics against the results of the Lakeland Metro Area Growth Management Issues Online Survey to weigh the relevance and importance of general topics. Finally, Lakeland Vision, a non-profit community visioning organization, used several types of community outreach to help update the local visioning plan. The City partnered in the entire visioning update process. Early results of the visioning update provided a sounding board through the *Idea Gathering* and *Goal Setting* sessions for the

City to identify common themes and priorities for the metro Lakeland community. The Lakeland Vision Update culminated its efforts with the *Mapping the Future* public workshop to engage the public in determining where future growth should occur and how best to manage our natural resources in order to identify “preferred” development patterns.

Citizens will continue to play an active role in the monitoring, updating and evaluation of the *Lakeland Comprehensive Plan* through the Citizens Advisory Committee. In addition, all relevant legal requirements for public notice regarding plan amendments, land use changes, zoning changes, etc. will continue to be met.

## ■ UPDATING BASELINE DATA

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An initial step undertaken by the City of Lakeland in preparing its 1991 Comprehensive Plan was the development of a fairly extensive data base for most of the required elements; these were the “technical” or “support” documents containing data and analysis to support the *Lakeland Comprehensive Plan* and developed in the period between 1987 to 1990.

Much of the data was then updated by the adopted EARs in 1998 and 2009. Further updates of some data was included during the drafting of the subsequent Comprehensive Plans. To ensure that the data base of the 2010-20 Comprehensive Plan is kept current, the City of Lakeland must target the following:

- **Land Use Data:** In 2007-2008, Community Development staff evaluated existing land uses for the City and the Lakeland Planning Area through GIS analysis of property information and aerial photography and windshield surveys/field checks. Another survey and/or update through the property information database as linked to a GIS mapping system should be conducted in 2016 for execution in coordination with data updates for the next EAR. However, after the next survey, ideally all changes in land use would then be tracked through either permit or occupancy certificate databases to allow continual updates.
- **Traffic Circulation Data:** The City of Lakeland has an ongoing traffic count program at specific count locations, normally done on an annual basis. The State Dept. of Transportation and Polk Transportation Planning Organization also annually update traffic counts. As a result, City traffic circulation data should be updated annually where it relates to new traffic counts. Existing levels of service will be updated where necessary to reflect changes resulting from the new counts. These updates will also include changes or amendments to any adopted interim or long-range transportation plan of the Polk County Transportation Planning Organization or any new road projects completed or proposed by the City of Lakeland.
- **Ports, Aviation and Related Facilities Data:** As the City of Lakeland is located within Polk County, an inland county, ports were not addressed. Aviation data will be updated in coordination with updates to the Master Plan for Lakeland Regional Airport or collection of data for the next EAR. Any new construction of airport

facilities such as terminals or air traffic control towers should be incorporated into an amendment to the text to reflect changes to the physical layout of the airport.

- **Mass Transit Data:** Mass Transit data will be updated in coordination with transit development plan updates prepared by Polk County Transportation Planning Organization for the Lakeland Area Mass Transit District approximately every five years and/or in conjunction with data collection for the next EAR.
- **Housing Data:** The City of Lakeland should target an evaluation of the need to update the statistical data for housing for approximately 2012, i.e., after reports of the 2010 Census are distributed by the U.S. Bureau of the Census in mid-2011.
- **Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Data:** Infrastructure data will be revised in coordination with major updates to any master plans prepared for the Water Utilities Department regarding potable water and wastewater as relates to the schedule for next EAR.
- **Conservation Data:** Conservation data could be updated, once (a) FEMA updated maps are made available on GIS, (b) any other, new and relevant natural resource map data becomes available on GIS, such as topographic information, and (c) if Lakeland begins other major lake clean-up projects such as the one for Lake Hollingsworth.
- **Recreation and Open Space Data:** Recreation and Open Space data will be updated in conjunction with the data collection for the next EAR. In addition, the inventory of recreation sites and facilities should be updated at regular intervals (approximately every three to five years with impact fee study updates.)
- **Intergovernmental Coordination Data:** Community Development staff will update the intergovernmental coordination mechanisms in conjunction with the next EAR. The update will also include an analysis of each coordination mechanism and a rating of effectiveness as "good," "fair," or "poor."
- **Capital Improvements Data:** The capital improvements data will be updated on an annual basis to coincide with the City's budget process. The update will include newly identified needs and any changes in the funding priorities or sources for projects within the five-year Capital Improvements Program.
- **Population Projections:** Population projections will be updated as needed per the release and analysis of the year 2010 U.S. Census counts. In addition, the annual estimates provided by the University of Florida, Bureau of Economic and Business Research will be evaluated against projections. New projections will be required for the next EAR.

Adhering to this schedule will ensure that all data and analyses supporting the comprehensive plan remain current and as accurate as possible given staff resource limitations. It will also

ensure the availability of adequate data and analysis to support changes proposed in the adopted comprehensive plan as part of the periodic evaluation and appraisal report.

### **IDENTIFYING AND CORRECTING PLAN IMPLEMENTATION PROBLEMS**

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The Community Development Department will prepare a matrix of implementation actions by subject area and year in which the action should occur. This matrix will be maintained on a regular basis as a means to measure the extent to which the plan is being implemented as well as to compliment the City's monitoring for its comprehensive plan certification. Problems with implementation will be addressed by Community Development staff during data and plan updates and, under current law, could be corrected through initiation of plan amendments that are allowed up to twice a year with appropriate public hearings. Where redirecting of City efforts and priorities is required, these issues should be reported to the City Commission in the city's annual certification monitoring report or by other means as reasonable and appropriate.

### **CONTINUOUS PLAN MONITORING AND EVALUATION**

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Monitoring and evaluation of the *Lakeland Comprehensive Plan: 2010 - 2020* will be the responsibility of the Community Development Department in conjunction with other City staff input. The procedures outlined above will be adhered to, ensuring continual action throughout the planning horizon. As was the policy throughout preparation of the comprehensive plan, all reports, data updates, or proposed plan amendments will be available for public review at City Hall, the City's website and the Lakeland Library, if possible.

**PUBLIC INVOLVEMENT SCHEDULE FOR PLAN UPDATE TO 2020**

<b>WORKSHOPS, PUBLIC MEETINGS &amp; OTHER FORUMS</b>	<b>TOPIC</b>	<b>DATE OF MEETING</b>
Lakeland Vision Idea Gathering Meetings	Community goal setting and prioritization	09/16-18 & 23-25/2008
Comm. Dev. Dept. Mapping the Future	Community Mapping Exercise	12/20/2008
Citizens Advisory Committee Workshop	Transit Oriented Principles	02/01/2010
Planning & Zoning Board Workshop	Transit Oriented Principles	02/16/2010
Planning & Zoning Board Workshop	Draft 2020 Plan	03/16/10
<b>PUBLIC HEARINGS</b>	<b>Topic</b>	<b>Date of Meeting</b>
P&Z Public Hearing & Final Decision	All elements & other sections of Draft 2020 Plan	04/20/2010
City Commission Workshop	Key changes, all elements, primary focus on land use and transportation	4/30/10
City Commission Transmittal Hearing (preceded by notice in Lakeland Ledger)	All elements & other sections of Draft 2020 Plan	05/17/2010
City Commission Hearing (preceded by notice in Lakeland Ledger)	All elements & other sections of Draft 2020 Plan	Targeted Adoption Date: August 2010