Acknowledgements

Planning Team
Tara McCue, East Central Florida Regional Planning Council
PJ Smith, East Central Florida Regional Planning Council
Luis Nieves-Ruiz, East Central Florida Regional Planning Council
Sara Iman, East Central Florida Regional Planning Council
Eddy Moratin, LIFT Orlando
Natalie Lovero, LIFT Orlando
Lisa Portelli, Winter Park Health Foundation, UCF
Mary-Stewart Droege, City of Orlando
Philip Hissom, the Polis Institute
Jason Reynolds, Orange County Government
Lavon Williams, Orange County Government
Therry Feroldi, Health Council of East Central Florida
David Overfield, Florida Department of Health
Myles O’Keefe, LYNX
Laura Kelley, Central Florida Expressway Authority
Saraya Perry, University of Central Florida Student
Merissa Evans, University of Central Florida Student

Special Acknowledgment
Commissioner Regina Hill, City of Orlando District 5
## Table of Contents

- Executive Summary .......................................................... 6
- Overall Strategy & Findings .................................................. 8
- West Lakes Overview .......................................................... 10
- Study Area Demographics .................................................... 12
- Environmental Factor Analysis ............................................. 15
  - Bike/Ped Access and Mobility ........................................... 16
  - The Built Environment .................................................... 28
  - Access to Goods and Services ........................................... 38
  - Crime ............................................................................. 54
- Recommendations, Evaluation & Monitoring ......................... 62
  - Recommendations .......................................................... 63
  - Evaluation and Monitoring ............................................... 69
- Appendix 1: Sources & Methods ........................................... 71
- Appendix 2: Demographic Data & Maps ................................ 72
- Appendix 3: Source Documentation ....................................... 86
# List of Maps

<table>
<thead>
<tr>
<th>Study Area (Multiple)</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk Scores</td>
<td>15</td>
</tr>
<tr>
<td>Bicycle &amp; Pedestrian Crash Locations</td>
<td>17</td>
</tr>
<tr>
<td>Sidewalk Coverage</td>
<td>19</td>
</tr>
<tr>
<td>Proposed Trails</td>
<td>20</td>
</tr>
<tr>
<td>Bike Lane Plan</td>
<td>21</td>
</tr>
<tr>
<td>Sidewalk Experience</td>
<td>22</td>
</tr>
<tr>
<td>Tree Shading</td>
<td>23</td>
</tr>
<tr>
<td>Street Lighting</td>
<td>24</td>
</tr>
<tr>
<td>Comfort Picture Examples</td>
<td>25</td>
</tr>
<tr>
<td>Current Tree Coverage</td>
<td>25</td>
</tr>
<tr>
<td>West Lakes Business Park Concept</td>
<td>32</td>
</tr>
<tr>
<td>Neighborhood Amenities</td>
<td>33</td>
</tr>
<tr>
<td>Percentage of Adults without Leisure Time for Physical Activity</td>
<td>34</td>
</tr>
<tr>
<td>Parks and Outdoor Gathering Areas</td>
<td>35</td>
</tr>
<tr>
<td>Lake Lorna Doone Master Plan</td>
<td>35</td>
</tr>
<tr>
<td>Exposure to General Public, Particulate Matter</td>
<td>37</td>
</tr>
<tr>
<td>Industrial Typologies</td>
<td>37</td>
</tr>
<tr>
<td>Medical Facilities</td>
<td>41</td>
</tr>
<tr>
<td>Air Quality: Respiratory Index</td>
<td>42</td>
</tr>
<tr>
<td>Primary Care Physician Density</td>
<td>42</td>
</tr>
<tr>
<td>Uninsured Inpatient Hot Spot Density</td>
<td>43</td>
</tr>
<tr>
<td>Uninsured Outpatient Hot Spot Density</td>
<td>43</td>
</tr>
<tr>
<td>Obesity Patient Density</td>
<td>44</td>
</tr>
<tr>
<td>Food Access</td>
<td>45</td>
</tr>
<tr>
<td>Proximity to LYNX Transit Stops</td>
<td>47</td>
</tr>
<tr>
<td>Median Commute Distance</td>
<td>48</td>
</tr>
<tr>
<td>Job Proximity</td>
<td>49</td>
</tr>
<tr>
<td>Traffic Proximity and Volume Index</td>
<td>49</td>
</tr>
<tr>
<td>Public Schools</td>
<td>52</td>
</tr>
<tr>
<td>Violent Crimes</td>
<td>57</td>
</tr>
<tr>
<td>Property Crimes</td>
<td>57</td>
</tr>
<tr>
<td>Approximate Street Light Coverage</td>
<td>59</td>
</tr>
<tr>
<td>Proposed Complete Streets</td>
<td>64</td>
</tr>
<tr>
<td>Tree Placement Plan</td>
<td>66</td>
</tr>
<tr>
<td>Community Plan for Citizen Analysis</td>
<td>67</td>
</tr>
<tr>
<td>Population Density</td>
<td>73</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>74</td>
</tr>
<tr>
<td>Median Age</td>
<td>75</td>
</tr>
<tr>
<td>Families Below Poverty Level</td>
<td>76</td>
</tr>
<tr>
<td>Rent vs. Own</td>
<td>77</td>
</tr>
<tr>
<td>Single Motherhood Rate</td>
<td>78</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>79</td>
</tr>
<tr>
<td>Zero-Vehicle Households</td>
<td>80</td>
</tr>
<tr>
<td>Assessed Property Values</td>
<td>81</td>
</tr>
<tr>
<td>Taxable Property Values</td>
<td>81</td>
</tr>
<tr>
<td>Vacant Parcels</td>
<td>82</td>
</tr>
<tr>
<td>Publicly-Owned and Civic Parcels</td>
<td>82</td>
</tr>
<tr>
<td>Build Year of Parcels</td>
<td>83</td>
</tr>
<tr>
<td>Year over Year Change in Assessed Value</td>
<td>83</td>
</tr>
<tr>
<td>Number of Lanes</td>
<td>84</td>
</tr>
<tr>
<td>Speed Limits</td>
<td>84</td>
</tr>
<tr>
<td>AADT</td>
<td>84</td>
</tr>
<tr>
<td>Zoning</td>
<td>85</td>
</tr>
<tr>
<td>Future Land Use</td>
<td>85</td>
</tr>
<tr>
<td>Approximate Street Light Coverage</td>
<td>59</td>
</tr>
<tr>
<td>Public Schools</td>
<td>52</td>
</tr>
<tr>
<td>Violent Crimes</td>
<td>57</td>
</tr>
<tr>
<td>Property Crimes</td>
<td>57</td>
</tr>
</tbody>
</table>
List of Tables

The HIA Process 6
LIFT Orlando Strategic Plan Potential Impact 7
Overall Strategy 8
LIFT Orlando Strategic Plan Goal Alignment 9
Zip Code Distress Comparison 10
Age Totals 12
Educational Attainment 12
Employment Status 12
Time-lapse: Population 13
Time-lapse: Per Capita Income 13
Time-lapse: Median Home Values 13
Walkability Index 17
Probability of Fatality in an Accident 18
The Heat Island Effect 26
US: Exposure to General Public to Particulate Matter 37
Florida: Exposure to General Public to Particulate Matter 37
Worldwide Air Pollution Deaths by Diagnosis 37
Food Insecurity Rates 39
Health Insurance Coverage (32805) 40
Medicare Coverage (65+) 40
Top 5 Inpatient Diagnoses (32805) 42
Top 5 Outpatient Diagnoses (32805) 42
Commute Types 46
Commute: Mean Travel Time 48
Commute: Mean Travel Distance 48
Average Rates of Walking and Biking to School by SRTS Program 53
Police Calls to Lake Lorna Doone Park 56
Crime Rate Tables 57

Student Safety Perceptions Based on Neighborhood Lighting 58
Likelihood of Criminal Behavior by Educational Attainment 61
Jones High School Graduation Rates 61
Life Expectancy by Income Level 61
Time-lapse: Housing Units in Study Area 73
Household Income 74
Age Totals 75
Income to Poverty Ratio 75
Time Series: Families Below Poverty Level 75
Gross Rent as a Percentage of Income 77
Marital Status 78
Unemployment & Labor Participation Rates 79
Time-lapse: Unemployed Persons in Study Area 79
Time-lapse: No Vehicles Available in Household 80
Vehicles Available for a Housing Unit 80
Executive Summary

Background

A collaborative effort between LIFT Orlando, the East Central Florida Regional Planning Council, and Winter Park Health Foundation began in 2016 to discuss the LIFT Orlando Strategic Plan and its focus on health in the built environment. After an initial planning meeting to discuss LIFT Orlando strategic development plans for the West Lakes communities, it was determined that since LIFT Orlando was in the planning stages to update their strategic plan, there was an opportunity to conduct a Health Impact Assessment (HIA) on the Plan; specifically the Health and Wellness components impact on the health of residents through the programs of LIFT Orlando and the built-environment. The HIA aids in identifying gaps and strengthening the Health & Wellness component of the LIFT Orlando Strategic Plan.

HIA Overview

A Health Impact Assessment (HIA) is defined as "a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population". The main goal of a HIA is to assess potential health impacts of a proposed policy, program or project, in specific social and community contexts, in order to develop evidence-based recommendations that serve to inform decision-makers, protect and improve community health and, in some cases, address health inequalities.

A Health Impact Assessment is comprised of, at a minimum, 5 steps: screening, scoping, assessment, recommendations and reporting. Health impact assessments delve into various aspects which directly and indirectly influence the health of individuals and the community. These aspects include, but are not limited to, health factors, employment, economics, and the built environment. HIAs analyze data and research to provide recommendations concerning conditions and impacts that may have not been previously considered in the original project or policy development.

The West Lakes Communities and LIFT Orlando

The West Lakes communities are rich in African-American history, yet burdened with a high concentration of chronic poverty, unemployment, homelessness, and crime (LIFT Orlando, 2014). As stated in the LIFT Orlando Community Report (2016), the community’s health is challenged by various internal factors. The re-development of the West Lakes communities began as the brain-child of Tom Sittema, CEO of CNL Financial Group. In 2012, Sittema, along with a group of community leaders, began to consider plans to address complex social problems that plague areas such as West Lakes.

Inspired by the vision of Steve Hogan, the CEO of Florida Citrus Sports, the team began to culminate a redevelopment plan for Camping World Stadium and the neighborhood surrounding the area. As a result, LIFT Orlando was founded in 2013 in partnership with Florida Citrus Sports and Purpose Built Communities “in the belief that the reconstruction of the stadium could bring together business and community leaders to create pathways of opportunity for some of our most vulnerable residents” (LIFT Orlando, 2014).
The West Lakes Communities and LIFT Orlando (continued)

LIFT Orlando is focused on a holistic approach to address both the individual needs and the built environment that impact poverty. The mission of LIFT Orlando is to “break the cycle of poverty through holistic neighborhood revitalization” through shared goals focused on mixed income housing, community health and wellness, cradle to career education, and long-term economic viability.

A collaborative effort between LIFT Orlando, the East Central Florida Regional Planning Council, and Winter Park Health Foundation began in 2016 to discuss the LIFT Orlando Strategic Plan and its focus on health in the built environment. After an initial meeting to discuss LIFT Orlando strategic development plans for the West Lakes communities, it was determined that since LIFT Orlando was in the planning stages to update their strategic plan, there was an opportunity to conduct a Health Impact Assessment on the Plan, specifically the Health and Wellness components to explore the impact that the Strategic Plan has on the health of residents through the programs of LIFT Orlando and the built-environment.

“The places where people live, work, and play influence many of the nation’s most pressing public health determinants—such as levels of income and education and exposure to violence—as well as health outcomes, including respiratory illness, cardiovascular disease, injury, and mental health1. The LIFT Orlando Strategic Plan Health and Wellness Goal is to provide “High quality facilities, programs and services that enhance quality of life and increase life expectancy for all, regardless of income” (LIFT Orlando, 2014) and focuses on the following areas: healthcare, nutrition, fitness, and leisure. The impact of the various activities shown below illustrates the connection that LIFT Orlando makes between the health of an individual and the “health” of a community through activity and sense of place and security.

Health and Wellness Focus

The HIA may aid in filling in the gaps and strengthening the Health & Wellness component of the LIFT Orlando Strategic Plan utilizing current programs and policies that have been proven to be successful and also take necessary steps for the improvement of resident health. It is vital to understand personal, social, economic, and environmental factors that play a role in levels of physical activity, such as the built environment. Likewise, it is important to understand the barriers and facilitators of physical activity before attempting to change individual or community health behaviors since the daily lives of Americans are becoming more sedentary with over 60 percent of U.S. adults falling short of the Surgeon General’s recommendations for moderate leisure-time physical activity2. While the analysis conducted through the HIA process focuses on the Health and Wellness component of the LIFT Orlando Strategic plan, it also provides additional context and strategies for the neighborhood development process and the overall strategic plan. This HIA provides context surrounding the built environment and its connection to the elements of nutrition, fitness, leisure, and safety.

The HIA was developed through data collection including GIS maps and walking audits, literature research and the formulation of recommendations for LIFT Orlando to consider for the Strategic Plan update. Recommendations for evaluation and monitoring of the impacts of the Strategic Plan based on data collection and analysis are also provided. To address the current challenges, this HIA assessed current condition of the community as related to LIFT Orlando and provides recommendations for further actions. Community-based initiatives and resident engagement, the focus of the LIFT Orlando Plan, were reviewed in detail to highlight the potential of creating a healthy community for all residents.

It is recommended that LIFT Orlando continue to develop strategic partnerships to develop new and enhance existing programs and policies that increase the health impacts on the community within the City of Orlando (e.g., One Person, One Tree Program), Orange County, and organizations in adjacent communities such as Paramore. This report considers the gaps the LIFT Orlando Strategic Plan as well as in the built environment, lack of required resources and amenities, and recommends possible actions to LIFT Orlando and partners including Orange County and the City of Orlando with respect to programs and policies. Each recommendation is supported by additional literature and successful examples within and outside the U.S.

Investments in Health

The CDC reports that physical inactivity serves as a risk factor for diseases such as diabetes, high blood pressure, and obesity (CDC, 2015). With a built-environment that supports an increase in physical activity through design and access, the risk for these serious diseases may decrease. Access to healthcare facilities is an important factor considered in the LIFT Orlando strategic plan. As health problems become the biggest challenges facing the community, having a socially and physically-viable and economically-sustainable community plays a significant role in addressing the stated issue. As dependency on personal vehicles increases, the tendency for walking and cycling decreases. Consequently, the number of health problems increases due to physical inactivity.

Today, the focus has been geared toward creating places that promote physical activity through the use of active transportation3 such as walking and biking. The degree to which a streetscape supports different transportation modes, especially non-motorized transportation, is of great importance. Thus, creating streets with the required infrastructures (e.g., sidewalks, bike path, light, shade, etc.) result in more active transportation, less automobile dependency, and overall, a healthier community4.

The Urban Land Institute through the efforts of their Building Health Places Initiative published research which included the role of accessible health care facilities in healthy communities. A focus of the report is on innovative healthcare practices such as the expansion of campuses, and an integration of other health-related services outside of clinical care. Healthcare facilities may benefit a community more so if located in a centrally located building, as in the case of Kingwood Medical Center (2013). The reuse of buildings and bringing care facilities that are easily accessible for residents may increase accessibility and overall health outcomes.

<table>
<thead>
<tr>
<th>LIFT Orlando Strategic Plan</th>
<th>Potential Impact Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determinant</td>
<td>Direction of Impact</td>
</tr>
<tr>
<td>Bike/Ped Safety</td>
<td>+/-</td>
</tr>
<tr>
<td>Safety from Crime</td>
<td>+</td>
</tr>
<tr>
<td>Food Access</td>
<td>+</td>
</tr>
<tr>
<td>Transit Access</td>
<td>+</td>
</tr>
<tr>
<td>Healthcare Access</td>
<td>+</td>
</tr>
<tr>
<td>Park Access</td>
<td>+</td>
</tr>
<tr>
<td>Social Cohesion</td>
<td>+</td>
</tr>
<tr>
<td>Air Quality</td>
<td>+/-</td>
</tr>
</tbody>
</table>

---

1. Centers for Disease Control (2013). The report is on innovative healthcare practices such as the expansion of campuses, and an integration of other health-related services outside of clinical care. Healthcare facilities may benefit a community more so if located in a centrally located building, as in the case of Kingwood Medical Center (2013). The reuse of buildings and bringing care facilities that are easily accessible for residents may increase accessibility and overall health outcomes.
OVERALL STRATEGY & FINDINGS

This Health Impact Assessment (HIA) assesses the overall potential impact of the LIFT Orlando Strategic Plan and its relation to plans devised for the area by the City of Orlando and Orange County. This report identifies five “environmental factors” and twenty corresponding “influencing factors” that – with targeted action for improvement – could increase overall wellness within the West Lakes communities. The goal of this report is to utilize five “wellness indicators” as a gauging point to determine the current and potential effectiveness of the LIFT Orlando Strategic Plan and supporting plans by the City of Orlando and Orange County within the West Lakes communities. The table below depicts the connections between the environmental health factors, influencing factors and wellness indicators discussed.

<table>
<thead>
<tr>
<th>ENVIRONMENTAL FACTORS</th>
<th>INFLUENCING FACTORS</th>
<th>INDICATORS</th>
<th>WELLNESS INDICATORS COLORED LISTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike/Ped Access &amp; Mobility</td>
<td>Safety of the Bike/Ped Network</td>
<td>![Yellow]</td>
<td>Crime Rates</td>
</tr>
<tr>
<td>The Built Environment</td>
<td>Effectiveness of the Bike/Ped Network</td>
<td>![Yellow]</td>
<td>Physical Activity &amp; Obesity</td>
</tr>
<tr>
<td></td>
<td>Comfort of the Bike/Ped Network</td>
<td>![Yellow]</td>
<td>Respiratory &amp; Cardiovascular Health</td>
</tr>
<tr>
<td></td>
<td>Cohesion of Land Uses</td>
<td>![Yellow]</td>
<td>Social Capital</td>
</tr>
<tr>
<td></td>
<td>Effectiveness of Bike/Ped Generators</td>
<td>![Yellow]</td>
<td>Bicycle &amp; Pedestrian Safety</td>
</tr>
<tr>
<td></td>
<td>Access to Parks &amp; Fitness Programs</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incorporation of Civic Activities &amp; Uses</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td>Access to Goods &amp; Services</td>
<td>Access to Health Care</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to Healthy Food</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to Transit &amp; Jobs</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safe Access to Schools</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to Education</td>
<td>![Yellow]</td>
<td></td>
</tr>
<tr>
<td>Crime</td>
<td>Frequency of Crime</td>
<td>![Red]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effectiveness of Lighting</td>
<td>![Red]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of Natural Surveillance</td>
<td>![Red]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of Territorial Reinforcement</td>
<td>![Red]</td>
<td></td>
</tr>
</tbody>
</table>

*Each color represents one of the indicators. These colors correspond to each influencing factor (gray boxes).
LIFT Strategic Plan Overall Findings

The LIFT Orlando Strategic Plan incorporates a holistic approach to planning, capturing important baseline data and setting long term goals that are both critical to human health and achievable.

The LIFT team has set a goal of partnering with non-profits to fulfill the goals set and has succeeded in implementing this strategy, as can be seen in the fulfillment of a Lake Lorna Doone master plan, the PENDANA at West Lakes development, and the West Lakes Business Park concept.

The strategic activities proposed in the LIFT Strategic Plan will have a positive impact on the health indicators listed in this report; however there is not explicit, high-level language advocating for increased bicycle and pedestrian safety in the current plan. This goal can be imbedded within the “create a program to improve overall health and wellbeing” activity.

The outcome measures covered in the plan are likely to be addressed by the planned strategic activities. It is important for LIFT Orlando to continue to work with donors to infuse the much-needed catalyst of financial capital to expedite results across all outcome measures. A partnership with the Winter Park Health Foundation is one such relationship that can turn long term goals into goals that are achievable in the intermediate term.

A cradle to career focus is necessary for the West Lakes communities, especially as future generations grow up within the community. With the new University of Central Florida campus arriving in downtown Orlando (and in close proximity to the study area), it is more possible than ever to increase the number of college-educated West Lakes residents to remain in the community, invest in the community, and serve as champions for future generations. The PENDANA at West Lakes development will be a likely residence destination for young professionals, as college educated residents will be looking for better housing.

It is highly recommended that the LIFT Orlando team work with the City of Orlando with the implementation of the Green Works plan, as there are many high-level consistencies between the strategic goals of the two programs. Furthermore, it is recommended that LIFT Orlando continue to work with City of Orlando planning staff, and in particular the Main Streets Program, on bicycle and pedestrian improvement needs.

This health impact assessment analyzes the potential impact of the LIFT Orlando Strategic Plan and provides recommendations that are tied with existing programs at the City of Orlando and Orange County.

Potential Impact
The Strategic Plan lays the framework for these goals to be accomplished. Additional team work with the City of Orlando and its associated advisory committees and monthly meeting groups, as well as the Florida Department of Transportation, Orange County Public Schools and the Orlando Police Department will allow for these goals to be met in the short term.

Additional Impacts
Lower obesity rates
Lower asthma rates
Lower cardiac disease rates
Lower diabetes rates
Lower violent, property & nonviolent crime rates
Stabilize property values & population
Higher employment rates & wages
Higher level of belonging to a community
Increased neighbor interaction/cohesion
Decreased high school dropout rates
Increased overall life expectancy
Lower single motherhood rate
Higher degree of income mobility
West Lakes Overview

The Communities of West Lakes, the LIFT Orlando Focus Area, is a composition of neighborhoods located around the Citrus Bowl in the City of Orlando. This area is located west of I-4 and Downtown Orlando and is bisected by the East-West Expressway (408 Toll Road). The study area is approximately 490 acres in size, has a population of 1,467 and all areas of the study area are located in the City of Orlando with the exception of a small area on the northwest corner of the site. The study area is a historically low income area and approximately 74.9% of the residents are African-American.

The Communities of West Lakes is bounded by Colonial Drive (SR 50 to the north, Orange Blossom Trail (SR 441) to the east and John Young Parkway to the west. This area is approximately ¼ of a square mile around the Citrus Bowl Stadium and includes Rock Lake, Spring Lake Manor, Lake Lorna Doone (Citrus Bowl-Westfield), Lake Sunset (Luola Terrace), and Clear Lake (Bunche Manor/Hollando).

The City of Orlando has identified the Citrus Bowl District and the Church Street District as areas prime for redevelopment. This will have a major impact on the residents within these communities. LIFT Orlando is working with its partners, the community and investors to break the cycle of poverty through the revitalization of the community.

The study area is located in the 32805 zip code, an extremely vulnerable zip code for health, income, education and other life factors. The graphic to the right taken from the LIFT Orlando Strategic Plan compares the Distressed Communities Index between the 32805 zip code (includes study area) and the 32804 zip code (College Park). The greatest social determinant affecting a child’s probability of success in life is the zip code in which he/she lives (LIFT Orlando, 2016).

According to LIFT Orlando’s 2016 Community Report, Lake Lorna Doone and Sunset Lake, the neighborhoods immediately surrounding the Citrus Bowl, have been considered among the lowest income neighborhoods in the Country with Lake Lorna Doone as the lowest income neighborhood in Orange County. The impacts of poverty can reach all areas of life, including health, and can have “a dramatic impact on the wellbeing of children and families” (LIFT Orlando, 2016).

Since 1990, there has been a steady decline in the number of households without a vehicle. Approximately 72% of households in the study area have one or zero vehicles available. Almost half of these households have no vehicle available, making access to reliable and efficient transit options necessary the community to access jobs, health care services, groceries, and other areas of need. Even one vehicle households are considered transportation dependent, especially when there is more than one adult in the home.
The LIFT Orlando Focus Area is located to the west of downtown Orlando and is situated in the 32805 zip code.

The study area analyzed in this HIA includes an area in the southwestern portion of the LIFT Focus Area.

Five neighborhoods make up the communities of West Lakes, including the following (numbered on map above):

1. Clear Lake: Blanche Manor/ Hollando
2. Clear Lake Cove
3. Lake Sunset/ Luola Terrace
4. Lake Lorna Doone
5. Rock Lake
Study Area Demographics (see appendix 2 for additional data and maps)

Population Overview
According to the 2011-2015 ACS, the population of the LIFT Orlando focus area is approximately 1,467 and has been trending downwards for more than 25 years. In 1990, the population was almost 2500 (see the chart on the following page). Since then, there has been a decline in the number of residents of the community, with a largest drop around 2010-2013 which may be partly attributed to the closure of the Washington Shores Apartments by 2013. It is expected that the population will continue to decline through 2020.

Approximately 30% of the population is under the age of 19, indicating the need for childhood resources and educational and training opportunities. There is a potential for a strong workforce with over half the population (52%) being between the ages of 20 and 60, especially if there are opportunities for training new skills and self-employment opportunities. With 19% of the residents aged 60 and over, there is a need for elder care services and opportunities to age in place and provide for the multi-generational family.

Educational Attainment
Just over 60% of the adult residents have an education attainment of a high school diploma or less; 20% only have up to a high-school education with no diploma; 41% have a high school diploma. This severely limits good job opportunities for these individuals if special job training skills and opportunities are not made available within the community. While 23% of the residents have some college, only 16% have an associate’s degree or higher, indicating a need to assist adults with completing their higher educational goals.

Employment Overview
Over 20% of those in the workforce in the community are unemployed. This is well above the 2017 Florida unemployment rate of 4.5% and the Orange County rate of 3.5%. This excessive unemployment rate contributes to the poverty issue within this community as well as the associated health impacts such as diabetes, depression, high-blood pressure and heart disease. It is critical to address employment opportunities within the community as well as train the workforce for jobs that do not require a college diploma. The goal of LIFT Orlando is to have a 93% employment rate.

Families below Poverty Level
According to LIFT Orlando, “With income levels lower than 96.3% of U.S. neighborhoods, 45.6% of the children growing up here (zip code 32805) live below the federal poverty line, placing it at a higher rate of childhood poverty than 87.3% of U.S. neighborhoods”. According to the 2011-2015 ACS, approximately 24% of families in the study area are living below the federal poverty line. There appears to be a decrease between 2010 and 2013, however, again, this is most likely associated with the displacement of numerous low income families with the closing of the Washington Shores Apartment Complex.
Per Capita Income
The per capita income is reflective of the educational attainment and employment issues facing this community. The median household income of $18,409 in the 32805 zip code is significantly lower than the national average of $29,701. According to the 2011-2015 ACS, the per capita income of the study area is barely $15,000 per year, after being stagnant at about $10,000 per year from 2000-2010. There was an increase in the average per capita from 2010-2013; however, this may be attributed to the closing of the Washington Shores Apartment and the displacement of the extremely low income families, thus changing the average. The expected increase in the average per capita income through 2020 is minimal, especially when compared to the City of Orlando, Florida and the rest of the United States. There is an approximate gap of nearly $15,000 - $18,000 in the per capita income between the study area and the other geographies. The goal of LIFT Orlando is to raise the per capita income to $25,000.

Median Home Values
In 1990, median home values were around $50,000. The LIFT Orlando Focus Area, while it experienced some increase in home values, did not keep up with increase in values in Orlando and other areas, barely reaching about $90,000 in 2010 just before the housing crash. As with the rest of the country, the home values in the study area declined from 2010-2013 and are expected to slowly rise through 2020, however, again, at a much less rate than the other areas.

Source: United States Census – 2011-2015 ACS and Historic Trending
ASSESSMENT OF ENVIRONMENTAL HEALTH FACTORS

BIKE/PED ACCESS & MOBILITY

LAND USE & THE BUILT ENVIRONMENT

ACCESS TO GOODS & SERVICES

CRIME & THE BUILT ENVIRONMENT
Overview

Assessing the level of bicycle and pedestrian access and mobility in a community relies on examining the current transportation network and improvement plans that have been put in place.

The Wellness Connection

It has been well-documented in the medical community that increased participation in walking and cycling reduces diabetes, obesity, cancer and heart disease rates. Therefore, an audit of the bicycle and pedestrian network has been completed to gauge the potential for increased walking and biking rates among community residents. The audit focuses on efforts by LIFT Orlando, the Florida Department of Transportation, the City of Orlando, Orange County and LYNX.

Targeting the Wellness Indicators

A safe, effective and comfortable-to-use bicycle and pedestrian network can improve community health on a number of levels. From a physical activity perspective, the pedestrian network can be the ultimate ‘enabler’ for community residents to increase their daily activity. Bicycle and pedestrian infrastructure can also have an impact on the collective. It has been shown that countries that have more bicycle and pedestrian infrastructure have lower overall obesity prevalence figures. In addition to physical health and obesity rates, increased walking and biking increases respiratory and cardiovascular health via decreases in cancer and heart disease rates. A safe, effective and comfortable-to-use bicycle and pedestrian network will also have lower injury and death rates for bicyclists and pedestrians.

Walk Scores & Social Capital

The image on the bottom right of this page depicts the Walk Scores within a one-mile radius of the study area and depicts medium scores. This portion of the report focuses on the actual bike-ped infrastructure, while the next section – The Built Environment – focuses on the use of the surrounding lands. It is important to note that these factors are not mutually exclusive in increasing walk scores and building social capital.

Environmental Factor Components

* Safety of the Bike-Ped Network
  A safe bicycle and pedestrian network reduces the probability of bodily injury in a traffic incident. A safe network that reduces bicycle and pedestrian exposure also ensures reliability.

* Effectiveness of the Bike-Ped Network
  An effective bicycle and pedestrian network connects important community landmarks and generates local trips through added convenience. Effective networks are heavily utilized.

* Comfort of the Bike-Ped Network
  A comfortable bicycle and pedestrian network provides ample shading, lighting, and has a seamless relationship with surrounding land uses. Social capital can flourish with comfort.
Safety of the Bike-Ped Network

According to Smart Growth America's annual "Dangerous by Design" bicycle and pedestrian risk analysis, the Orlando-Kissimmee-Sanford Metropolitan Statistical Area (MSA) experienced 2.58 pedestrian fatalities per 100,000 citizens in 2016, with 575 pedestrian deaths occurring over a ten year period from 2004-2014. The study area is centrally located within this MSA and the health and wellness of its residents depend on continued investment in safe infrastructure.

The City of Orlando Green Works Plan has a target to reduce bike/ped fatalities in Orlando by 50% by 2018 and 100% by 2040, in part through the Orlando Walks sidewalk program and the City's Main Streets program. The LIFT Orlando Strategic Plan does not focus specifically on bicycle and pedestrian safety as part of its Health and Wellness program. It is highly recommended that LIFT Orlando adopts the City’s goals and works with Public Works to install safe infrastructure. The Orlando Walks and Main Street programs have the potential to have a strong impact on the community over the intermediate to long term.

Bicycle and Pedestrian Crash Locations
The majority of the bike-ped crashes in the vicinity of the study area occurred on US 441 (Orange Blossom Trail) between April 2015 and April 2017. Four intersections along this stretch of road had three or more crashes over the two-year period, including the intersections with Central Boulevard, Colyer Street, Long Street and Gore Street (where a fatality occurred). In addition, three crashes occurred at the intersection of John Young Parkway and Orange Center Boulevard over the two-year period. It is highly recommended that LIFT Orlando work with the City's Public Works Division, Planning Division, FDOT and MetroPlan Orlando to mitigate the danger of these intersections by developing specific solutions. Placement on the MPO's regional priority list is critical for these intersections to be ranked and placed on a schedule for improvement.

Orlando's Main Streets Program
As recommended in the text above, a strong relationship between LIFT Orlando and the city’s Public Works and Planning divisions will have positive effects on the community over the intermediate to long term. The City's Main Streets program currently works through ten “main street neighborhoods” such as Mills 50, the Milk District and the SoDo District, and works with community stakeholders and residents to improve specified streets within these neighborhoods. It is highly recommended that LIFT Orlando staff broach the subject of a potential eleventh Main Street Neighborhood in West Lakes with City staff.

Regional Trends
While Orlando is among the most dangerous urban areas in the country for bicyclists and pedestrians, it is worth noting that from 2015 to 2016 the MSA had the sixth best year-over-year improvement in Danger Index out of 104 urban areas analyzed. This improvement should be seen as a positive sign that the city’s efforts to improve infrastructure are working.
Transportation Network Findings

**Picture 1:** The bicycle lanes on the north and south sides of Orange Center Boulevard provide ample room for bicyclists. Painting such lanes green would improve their visibility.

**Picture 2:** Orange Blossom Trail has a number of businesses that are accessible from the sidewalk level. Increased tree coverage in this area could improve business further (see source from Comfortability section).

**Picture 3:** Central Boulevard provides outstanding views of Lake Lorna Doone and Camping World Stadium in a shaded pedestrian environment. Replicating this success elsewhere within the study area is critical. A nicely-shaded bus stop is present at this location as well.

**Picture 4:** Continuous sidewalks along Rio Grande Avenue provide great connectivity, however tree shading and ADA facilities are lacking in some areas along this corridor. Recent tree-planting in the stadium area (pictured) should continue throughout the corridor.

**Picture 5:** South Street leads to downtown Orlando but is completely automobile-focused. A lack of sidewalk separation on the north side and thin sidewalks on the south side create an uncomfortable pedestrian experience. A retrofit is recommended for this area.

**Picture 6:** Right-of-way restrictions currently amounts to a lack of a sidewalk along the east side of Rio Grande Avenue adjacent to Lorna Doone Park. It is highly recommended that the redesign of Lorna Doone Park provides sidewalks in this location.

**Picture 7:** Many businesses and civic buildings do not connect to street-level sidewalks. It is recommended that when new businesses come in, their paths connect to existing sidewalks.

**Picture 8:** Exposure-reducing sidewalks are recommended in all areas, even in neighborhoods with low speed limits and traffic volumes.
Maps depicting Speed Limits, Annual Average Daily Traffic and Total Number of Lanes are located in Appendix 2.

**Analysis:** The study area has a number of sidewalk gaps that need to be addressed. Please see the recommendations portion of this report for specific mitigating efforts that can be performed to improve pedestrian safety.
Effectiveness of the Bike-Ped Network (Local Trip Generation)

This section of the Health Impact Assessment analyzes how effective (or useful) the community’s bike lanes, sidewalks, and other bicycle and pedestrian infrastructure are at creating and facilitating local trips via walking and biking. While the “Effectiveness of Bike-Ped Activity Generators” portion of this report deals with actual buildings and parks that generate local trips, this section focuses strictly on the utility generated and quality of the transportation infrastructure itself.

Existing and Proposed Bike-Ped Infrastructure

Sidewalks: Sidewalk coverage within the study area is 76.4% complete, greater than the approximate 49% average sidewalk coverage for low income communities as determined by the Safe Routes to Schools National Partnership in Bridging the Gap, Income Disparities in Street Features that Encourage Walking. Sidewalk coverage along the main roads in the study area is mostly complete, but two gaps along the east side of Tampa Avenue, and a lack of sidewalks on Norton Avenue and along the west boundary of Lorna Doone Park should be addressed by LIFT Orlando to the Public Works Division at the City of Orlando. The division has a sidewalk program called “Orlando Walks” which maps proposed sidewalks by commissioner district, but none of the aforementioned sidewalk gaps are currently listed.

Bike Lanes & Shoulders: Paved shoulders and bicycle lanes are present on all three major roads setting the study area boundary, but some gaps exist. The City of Orlando has addressed these issues with their citywide bike lane plan, which fills gaps in bicycle lane coverage along Gore Street, US 441 and John Young Parkway. In addition, bike lanes are proposed for Central Boulevard, Rio Grande Avenue, Tampa Avenue and Carter Street. These plans, if implemented, will have a very strong and positive effect on the study area. It is recommended that LIFT Orlando follow up with the City on the progress of these plans.

Trails: While there are currently no trails in the study area, the City of Orlando has developed trail plans that, if implemented, would have a very positive impact on both local and non-local bike-ped trips for West Lakes residents. The Orlando Urban Trail connection via Carter Street would connect residents with goods and services in the downtown district while increasing overall community activity and physical health.

Complete Streets

The City of Orlando Green Works Plan targets an increase in citywide complete street mileage of 20% by 2018 with the addition of 19 miles between 2010 and 2040. The recommendations portion of this report includes proposed Complete Street retrofits to four streets in the area.
Comfort of the Bike-Ped Network (Quality of Local Trips)

The quality of walking and biking trips can be affected by factors such as lighting, the amount of shade, outdoor temperatures and the overall urban experience. To a degree, ensuring that West Lakes residents stay (or become) active within their neighborhood relies on the overall comfortability of their trip – just as safety and system usefulness matter.

The pictures on the right side of this page depict varying levels of comfort for the three aforementioned comfortability measurables: Urban context (pictures 1 and 2), lighting (pictures 3 and 4) and shading (pictures 5 and 6). Refer also to the maps on the next page of this report for a detailed look at the status of these comfortability variables within the community.

Urban Context
The urban context describes the relationship between the sidewalk and surrounding land uses. This experience is often tied to overall “scale”, or the degree to which buildings are accessible from the sidewalk and create an “outdoor room”. This is not the norm within the study area, as parking lots and suburban buildings with large setbacks represent 30% of the overall sidewalk experience within the study area. LIFT Orlando should consider working with the City of Orlando to develop vibrant “village” style redevelopment as outlined in the Green Works Plan. The PENDANA at West Lakes development will have a positive impact on the urban context of the area, and additional developments like this can greatly improve the “feel” from the sidewalk, thus creating more walking and biking trips, as well of the development of main streets which offer gathering places that meet pedestrian needs.

Lighting
Lighting provides security from crime (primarily robberies and burglaries) and improves the visibility of bicyclists and pedestrians for approaching motorists, especially at crosswalk locations. Lighting improves comfort and perceived safety for would-be bicyclists and pedestrians. It is imperative for LIFT Orlando to work with the residents, the Orlando Utility Commission and the Orlando Police Department to add lighting to high crime walking and biking areas within the community. Areas with higher non-auto traffic should be prioritized.

Shade
Shade protects the skin from cancer-causing ultra-violet (UV) radiation and results in a cooler, more comfortable walking and biking environment. Shading and other methods of reducing complete exposure to the environment has been proven to increase economic vitality (via more walk-by-sales) and improve comfort, resulting in a longer amount of time spent outdoors. The specific issue of shading and recommendations to LIFT Orlando are found later in this section as well as in the recommendations section of this report.
Pedestrian Comfortability

Sidewalk Experience
- Urban
- Suburban/Parking
- Natural/Green
- Neighborhood
- Underpass

Pedestrian Comfortability

Tree Shading
- High (Canopy)
- Medium (Intermittent)
- Low (Sparse)
- None
- Tree
- Canopy

Pedestrian Comfortability

Lighting
- Lit / Within Radius
- Dim / Not Within Radius

Roadway Comfortability

Picture Examples
- Good Example
- Bad Example
Pedestrian Comfort: Reducing the Heat Island Effect

The heat island effect is a phenomenon that occurs when the alteration of land surfaces to an urban form increases the temperatures of those areas relative to undeveloped areas. This effect along with the heat and mugginess it brings can have a deterring effect on human concentration and likelihood to partake in locomotive activity. Furthermore, illnesses related to exposure to high temperatures include heat exhaustion, heat cramps and heat stroke, the latter of which can be fatal. Risk is increased for infants and the elderly.

One of the most-cost effective ways to decrease the heat island effect is by planting trees. The City of Orlando has a “One Person One Tree” program that provides city residents the opportunity to plant a free tree on their property. The Green Works Plan outlines a goal to increase the overall citywide canopy to 27% by 2018 and 40% by 2040. With overall tree canopy coverage of 12.5%, it is recommended that LIFT Orlando and West Lakes residents actively work with the City’s One Person One Tree – Energy Saving Trees program to plant more trees in the community. The HIA team has developed a “Tree Placement Plan” within the design recommendations portion of this report detailing potential tree placement strategies for the City of Orlando and LIFT Orlando to undertake with local residents. Placement is recommended in front yards, adjacent to sidewalks and in barren areas. See the map on the following page for help in prioritizing tree placement locations.

Strategy: Green roofs also reduce the heat island effect

Stats: 140 trees from the Energy Saving Trees Program have gone to residents in the 32805 zip code. The Street Trees Program has also been implemented, but not in the study area.
Current Tree Coverage

Coverage Stats

Site Size: 489.89 Acres
Canopy Coverage: 61.23 Acres
Percent Coverage: 12.5%

Primary Current Tree Typology

Southern Live Oak
Longleaf Pine

Source(s): City of Orlando, LIFT Orlando (Boundary): InfoGroup (Grocery Stores)
Overview

Determining how the built environment impacts community health and wellness relies on examining the layout of the community, determining the effect of landmarks and assets on activity generation, and unraveling the social fabric built through civic programs and activities.

The Wellness Connection

Neighborhoods and districts that reward people for non-automotive mobility do so by having landmarks and social programs that are worth walking and biking to. To that tune, wellness is measured, in part, in terms of physical health and social (or mental) health within this assessment. In terms of the built environment, this corresponds to how well the layout and assets within the community make people physically active (promote physical activity), and how effectively social programs create positive social relationships.

Targeting the Wellness Indicators

According to a 2008 international study on walking, cycling and obesity rates, countries with high rates of non-automobile travel (such as the Netherlands and Germany) have lower rates of obesity than countries with a heavy reliance on automobiles for travel such as America. This section of the report assesses primarily assess how effective the built environment generates walking and cycling trips, as the connection between walking and biking and physical health indicators has been well-established in the medical community. This section also aims to improve mental health as a result of increased walking and biking, as studies show that increased physical activity can reduce the risk of depression in adults.

An analysis of crime and the built environment is located within the Crime section of this report.

Environmental Factor Components

* Cohesion of Land Uses
  Proper juxtaposition, intensity and diversity of land uses can create a synergetic environment that promotes walking, biking and community interaction.

* Effectiveness of Bike-Ped Activity Generators
  A sidewalk or a bicycle lane with no meaningful destinations will not be useful. The bike-ped network relies on ‘activity generators’ for trips to happen.

* Access to Parks & Fitness Programs
  Parks, gathering spaces and recreational programs improve the physical and mental health of communities. Aligning these community assets is essential to citizen health.

* Incorporation of Civic Activities & Uses
  Civic opportunities and programs should be imbedded within the framework of a community. These assets leverage the ability for community members, local businesses and civic institutions to improve community cohesion.
Cohesion of Land Uses

The juxtaposition, intensity and diversity of land uses and presence of non-residential destinations in a neighborhood can create an environment that promotes physical activity in the form of utilitarian walking and biking, improving overall community health.

Site Overview and Parcel Designations

The study area is primarily single family residential in the west, commercial and industrial to the east and is anchored by the centrally-located Camping World Stadium. Current zoning and future land use codes by the City do not prevent redevelopment of dilapidated structures to meet modern urban planning criteria. The codes do not restrict potentially impactful development.

PENDANA at West Lakes (Spring 2018)

PENDANA at West Lakes will be a new multi-family, multi-income residential development with 320 units, 120 of which are senior citizen units. This development will replace lower-quality units and aims to attract residents who have left the area over the last decade. LIFT Orlando was a strategic partner in this development and its impact should be immediately positive for the community. These units will instill a sense of pride, boosting social capital, and could be a catalyst for future development and jobs in the area. Continuing this type of advocacy will be effective for LIFT Orlando.

Land Use as a Catalyst for Livability & Activity

The City of Orlando Green Works Plan describes a goal of the City’s emerging districts being “unique, vibrant, pedestrian-friendly, walkable villages”, and the current land uses present to not hinder such a future. Residential and commercial parcels are in close proximity to one another. It is recommended that the City of Orlando potentially create an overlay zone if future development is restricted at any time in the study area. Future Land Use categories such as the “AC - Activity Center” designation by Orange County provide restrictive styles within a more liberal parcel-by-parcel framework. This could also assist in attracting mixed-use developers. The creation of development standards and design guidelines would be critical in such a case.

Land Use Flexibility

The Orlando Green Works Plan has a goal to “amend codes to allow for local food production”, and this policy proposal is perfect for the West Lakes area. Ensuring that residents can grow their own food within the R1, R-2, R-3 (and all associated) city residential zoning codes and the R-2 and R-3 county residential zoning codes is critical. As eateries begin to establish in the area, locals will truly be able to support the local food to local table concept if codes allow for it.

Best Practices: Building Conversion

The City of Winter Garden’s Plant Street corridor was once home to many industrial parcels. These parcels were transformed into retail establishments, which both improved the function and preserved the historical character of the original corridor. West Lakes has similar buildings, but critical industrial types that contribute to local systems and community jobs should remain.
INCORPORATING CIVIC INFRASTRUCTURE INTO NEIGHBORHOODS CAN BUILD COMMUNITY COHESION AND SOCIAL HEALTH

Civic infrastructure can include religious institutions, community centers, outdoor gathering spaces and government buildings. These facilities allow for interaction between community members.

PLACING RESIDENTIAL UNITS WITHIN A WALKABLE DISTANCE TO TRANSIT CAN IMPROVE RESPIRATORY HEALTH

Automobile trips expel carbon dioxide into the atmosphere, but community-wide reductions in automobile trips can increase local air quality at the neighborhood level.

HOW CAN SMART LAND USE POLICY IMPROVE COMMUNITY HEALTH?

A PROPER JUXTAPOSITION OF LAND USES CAN INCREASE PHYSICAL ACTIVITY

Ensuring that residential areas are within a 0.5 mile radius of transit, healthy food, and at least one park can transform non-local automobile trips into local biking and walking trips.

THE RELATIONSHIP BETWEEN THE BUILT ENVIRONMENT AND STREETS SHOULD BE SEAMLESS

A common crime prevention tactic is to “extend” units seamlessly into the street network using windows, access control and lighting. The creation of these “outdoor rooms” separates public, semi-public and private spaces.
Effectiveness of Bike-Ped Activity Generators

This section of the report analyzes the assets within the community that help in generating local walking and biking trips. While the “Effectiveness of the Bicycle and Pedestrian Network” portion of this report looks at the actual bicycle and pedestrian infrastructure, this portion analyzes off-network assets and programming efforts that can increase walking and biking.

Programming Efforts

There are currently no programs aimed at increasing walking and biking within the study area by LIFT Orlando or the City of Orlando. However, within the past few years Juice Bike Share has launched a bike-sharing program within downtown Orlando and its popularity has surged. This (now privately-held) company allows bicycle rentals and has multiple stations located throughout the downtown area. It is recommended that the City of Orlando and LIFT Orlando consider a feasibility study to expand the Juice Bike Share program to the West Lakes neighborhood. This program could assist area residents who want to go on long-distance bike rides to sub-regional attractions, and could spur business within the study area if a centrally-located bicycle station was built.

Schools are another major bicycle and pedestrian activity generator. Two schools – Jones High School and Rock Lake Elementary School – are located within or in close proximity to the study area. It is recommended that LIFT Orlando, Rock Lake Elementary School and the Rock Lake Community Center come together to determine the feasibility of a Walking School Bus program for students attending Rock Lake Elementary School.

Other programs such as “Walk with a Doc” can target the senior population while serving two purposes: Increase physical activity and provide health education.

Neighborhood Amenities

The study area (and immediate surrounding area) has a number of food and grocery stores, churches, parks, schools, entertainment centers and community centers, mainly focused along Orange Blossom Trail and Camping World Stadium. Camping World Stadium is the sole major employer within the study area that employs community residents.

What is missing?

A number of potential assets are missing from the study area and surrounding area, including: Healthy food stores or restaurants; a community garden; employers (local jobs); multi-family residential development; gyms; public athletic facilities. It is recommended that the LIFT Orlando team work with the City of Orlando to build one or more of these assets or to promote local resident investments in assets within the community.
Access to Parks & Fitness Programs

The built environment can have lasting impacts on physical activity if not addressed. The CDC reports that physical inactivity serves as a risk factor for diseases such as diabetes, high blood pressure, and obesity. Parks and playgrounds in a community can provide opportunities to run and play and may increase unstructured physical activity. If children can easily access safe parks and playgrounds in good condition, they are more likely to engage in recreational physical activity there. Parks provide a place to escape from day-to-day life and relax in an aesthetically pleasing, natural environment. Another study observed older residents and found that “park users had significantly higher perceived mental health scores than non-park users”.

Also, despite having access to two public parks, Lorna Doone Park and Lizzie Rodgers Park as well as the Orlando Sports Complex, directly in the study area, along with the John H. Jackson Community Center and the American Combat Club just to the west of the study area, approximately 36% of adults in the study area note that they do not have leisure time for physical activity according to the CDC. Therefore, it is important, in the development of a healthy community, to make it easy to incorporate physical activity into everyday life, and increase the opportunities and desire to utilize park and recreational facilities as ways to be physically active and community oriented.

Through their strategic plan, LIFT Orlando focuses on the development of new facilities and the sustainability of partnerships with existing community fitness entities in their strategic plan. This collaborative effort with the network of community partners will aid in strengthening the impact of a community-based approach to physical activity. As a collective, fitness and community organizations can come together to promote the improvement of health and overall quality of life. It is important that health training and educational opportunities coincide with access to fitness opportunities to truly impact and affect the lives of residents in a way that will last a lifetime. Access to facilities alone does not ensure a healthy lifestyle and the efforts of the community may be short lived if not combined with lifestyle changes made available through cohesive health education opportunities. With a focus on programing and education as well as on the development of high-quality physical fitness space, the goal of increased access to physical activity opportunities and increased health impacts may be achieved. An expansion of access to health and fitness resources through a community-based method or project increases the quality of life of participants.

Case Study: This community-focused fitness effort was modeled in the small town of Tullahoma, Tennessee (Parker et al., 2016). The City began an initiative known as “Get Fit” to transform the perspective surrounding personal health and well-being. The initiative focused on personal empowerment and community partnerships between entities such as local pharmacies, wellness centers, and existing community weight loss programs to decrease the occurrence of obesity and Type 2 Diabetes. The Get Fit! Program provided group exercise sessions, the delivery of health information from professionals, and health educational tools made for incorporation into daily routine as well as monitoring and tracking of health indicators throughout the program.
Community Parks

Lake Lorna Doone Park is a focal point of development for Lift Orlando, with plans to incorporate an increased number of physical activities and events that will increase park usage and community involvement in the area. According to community members, Lake Lorna Doone Park is also known as a place of community gathering and fellowship which they wish to enhance through better lighting, an increase in visual safety, and more designated parking for the park attendees. Ensuring access to and providing opportunities in Lizzie Rodgers Park should also be considered a priority as it is adjacent to the Orange Center Elementary and the closest park to the PENDANA at West Lakes development.

While the improvements to the parks and the planned programs are important for community engagement and physical activities, it is important to also consider the walkability and bikeability of the area as well as park safety. Powell et al. (2003) found that there was a significant positive association between those who lived within a 10-minute walk of parks and those who meet the surgeon generals recommended physical activity levels. In general, those who can walk to parks within 10 minutes are more likely to be active. However, if the conditions of the routes to the park are undesirable, it is most likely that residents will be deterred from visiting the park. The Lorna Doone Park master plan is depicted on the bottom right of this page. This plan has undergone thorough review by neighborhood residents.

It is important to note crime specific to Lake Lorna Doone Park, as actual and perceived crime can have an impact of physical activity. People are likely to be active if they perceive their neighborhood as being safe from crime and that people have lower rates of physical activities when they fear crime. Members of the community understand the perception of the area, particularly the Lake Lorna Doone Park Area. According to the Crime Data provided by Orlando Police Department, there are a significant number of reports of suspicious persons or cars being reported in this area. More eyes on the street and in the park along with a change in perception may help to change these findings.

Stadium Gathering Spaces

Three tailgate lots serve as large gathering spaces for events at Camping World Stadium. It is recommended that more tree coverage be added to these areas to improve comfort.

The Green Works Connection

The City of Orlando Green Works plan has a target to ensure 95% of residents live within ½ mile of a park by 2040, with an interim figure of 85% by 2018. The redevelopment of Lorna Doone Park will ensure that approximately all of the community’s residents will be within ½ mile of a park. A diverse array of planned activities coupled with the voluminous community input received should make the park a success once completed.
Incorporation of Civic Activities & Uses

LIFT Orlando has done a great job of creating and working alongside community programs to increase community cohesion and residents familiarity in one another. Social health is a critical piece of the health and wellness spectrum and has a direct impact on other types of health, primarily when dealing with early-intervention for children living below or close to the poverty threshold. For example, a study in California showed that at risk youth who were not involved in the after-school program at a San Francisco-area school were two-to-three times more likely to be involved in criminal activity and arrested during a six-month control period. After school programs also decrease high school dropout rates, which has a direct correlation with life expectancy as detailed in the Crime portion of this report. Civic activities also include those spurred from economic development, family programming, school-related activities at the stadium, church-related activities and long term district branding efforts that aim to galvanize community identity.

Civic Infrastructure

From an infrastructure perspective, creating a “live, work and play” environment is critical for building community cohesion. The LIFT Orlando Strategic Plan has outlined preliminary visions for the “Stadium in the Garden” (also known as the West Lakes Business Park), an area near Camping World Stadium that has been prioritized for the addition of local jobs in the food and customer service segments. Described as a “food district”, this proposed development could increase community pride in the area while providing residents with a well-paying job. This project and others like it that aim to refine the definition of the study area could positively impact community cohesion and overall social health.

Family Programming & Events

Florida Citrus Sports, the Polis Institute, LIFT Orlando and Florida Blue have teamed up to create the MVP Families program, which helps to guide children to college acceptance. This program has and will continue to have an outstanding impact on the neighborhood. A second program that should be continued and potentially tied-into the redevelopment of the community is the LIFT Orlando Art Project. In the past, LIFT Orlando has worked with youth in the community on art projects culminating in art shows (such as “Artfully Said”) where children artistically express the positive and negative attributes of their neighborhood. Adding public art installments to the built environment designed by children within the community from art shows such as “Artfully Said” could improve the sense of ownership that children have in their community.

Civic Activities at the Stadium

The Jones High School Tigers play their football games at Camping World Stadium, attracting large crowds of local residents. In perhaps the biggest annual occurrence for the community, Jones High School takes on Evans High School in the “Soul Bowl”. Events like this increase community cohesion and provide positive reinforcement for student-athletes who earn their way to play in the game. School-related functions of this sort can be building blocks for additional community cohesion.
The Built Environment: *Industrial Smog & Air Quality*

The built environment has associated externalities that can have negative affect on community health, primarily in the form of industrial development. According to the World Health Organization, carbon dioxide emissions can contribute to health problems such as heart disease, stroke, chronic and acute respiratory disease, and cancer. While the United Health Foundation has found that overall particulate matter exposure has decreased over the last decade, it is important for the City of Orlando to address this issue head-on.

The City's Green Works plan has set a goal to reduce carbon dioxide (CO2) emissions by 25% by the year 2018 (with a 2007 baseline). The goal increases to a 90% reduction by 2040. If met, this policy will have a positive impact on respiratory and cardiac health within the West Lakes communities. To ensure results, the City of Orlando will utilize LEED certification on all new city buildings.

The City's Green Works plan also develops strategies to increase investment in green infrastructure. Notably, the PACE Program (Property Assessed Clean Energy) allows special financing programs for developers to decrease the carbon foot print of their buildings. It is recommended that the LIFT Orlando team work with the City of Orlando and prospective developers to ensure that future buildings and developments meet LEED criteria.
Overview

Influencing factors associated with this HIA focuses on the ability of the LIFT Orlando Strategic Plan and partner efforts to increase access to healthcare, healthy food options, transit and jobs, and education. Access means that goods and services are available, affordable, approachable and reachable. The CDC reports that physical inactivity serves as a risk factor for diseases such as diabetes, high blood pressure, and obesity. Studies have well documented that having a place to walk significantly increases individuals' physical activity. With a built-environment that supports an increase in physical activity through design and access, the risk for these serious diseases may decrease. Therefore, access to neighborhood services through active and safe modes of transportation, especially in low-income communities is important. Access to goods and services through active transportation modes provides the easy opportunity to be physically active while doing everyday things. Increasing access to these goods and services should positively impact the following indicators: physical activity and obesity, respiratory and cardiovascular health, social capital, bicycle and pedestrian safety and crime rates.

Although access to healthcare facilities is an important component of community health, concerted policy action in income security, education, housing, nutrition/food security, and the environment is also critical to improving health among socially disadvantaged populations. According to the Robert Wood Johnson Foundation, access to health care and health coverage only partially addresses better health outcomes. There are environmental factors that affect health that are not addressed through health care access. Those factors include indicators related to nutrition, fitness, and leisure, and safety.

The ULI Intersections report notes that healthy communities can “flourish” with access to various options of healthy food through venues such as grocery stores, community gardens, urban farms and farmer’s markets. Urban farming encourages residents to grow their own food to help bridge the gap of food insecurity. Food insecurity in the U.S. is prominent in households below the poverty threshold and in Black non-Hispanic households, lower-income urban areas without a full-service food store, the profile of the West Lakes communities.

Environmental Factor Components

* **Access to Health Services**
  Providing community members with access to health care must address the elderly, active adults and the children of the West Lakes communities.

* **Access to Healthy Food**
  Healthy food creates healthy people, and it is important to create good habits with the neighborhood’s youth. It is important that the community has true access to local healthy food.

* **Access to Transit & Jobs**
  Accessing transit is not only a luxury for many community residents – it is a basic need. With a lack of jobs in the study area, solutions within this section of the report are two-fold.

* **Access to Education**
  Education has been established as a “cradle to career” endeavor for the LIFT Orlando team and is one of the greatest investments one can make to ensure good long term health.

---

The Education-Health Link

Access to educational opportunities is comprised of providing that educational facilities and programs are available as well accessible for both children and adults. It is important to not only focus on K-12 education within the community but also opportunities for adults for job training and life skills, as well as higher education completion. As with all services within the community, access to these facilities needs to be accessible for residents to participate. Policies should aim to improve environmental conditions of the community to “address child care, housing, transportation, food security, unemployment, and economic development are important to both education and health.” Education is the center link to life-long health and wellbeing. It impacts career opportunities, lifespan, income and financial resources for healthier food, home options and healthcare. Policies that start kids out on the right educational path help to put them in a healthier position as adults through the reduction of various chronic diseases. Research has shown that education leads to longer life expectancy and reduced risks of chronic disease and risk factors associated with these diseases. Also, children who grow up in low income homes or neighborhoods live in conditions that can disturb their education, create stress and cause lasting harms resulting in unhealthy or risky behaviors, such as smoking or violence.
Access to Health Services

Access to health and human services is an important component of a high quality of life in communities and should include access to preventative services as well as diagnostic medical care and educational programs for the development of a life-long healthy lifestyle. “Traditionally, healthcare interventions in poor or low-income neighborhoods have focused on identifying health problems and providing services to prevent or alleviate these problems with little attention to enhancing people’s strengths or capabilities” (LIFT Orlando, 2016). Access to affordable care goes hand in hand with access to care facilities, especially since, in the 32805-zip code, 96% of seniors are on Medicare and only 72.5% of them have access to health insurance. The LIFT Orlando plan recognizes the importance of healthcare facilities, services and insurance in the community as there is limited health care amenities located within the study area boundaries. The study area is home to Hebni Nutrition Consultants and Planned Parenthood, which was recently bought by LIFT Orlando in July 2017. Most health care facilities are located outside the study area, including Orlando Regional Medical Center and the two Palmer Hospitals (Women & Babies, Children). Some of these facilities are geared toward the homeless such as the HealthCare Center for the Homeless, the Orlando Union Rescue Mission and others. Therefore, these facilities may not be accessible to the residents of the West Lakes Communities.

The Urban Land Institute through the efforts of their Building Health Places Initiative, published a research paper, “Intersections: Health and the Built Environment” which included the role of accessible health care facilities in healthy communities. The report focused on innovative healthcare practices such as the expansion of campuses and the integration of other health related services outside of clinical care. A community benefits more from healthcare facilities if they were centrally located within one building within the community such as in the case of Kingwood Medical Center in Houston, Texas. This Center is an example of adaptive re-use of a shopping mall. In the study area, this could be achieved by the reuse of existing buildings, such as the newly acquired Planned Parenthood location to bring more comprehensive and accessible care and services into the community may increase accessibility and overall improve health outcomes of the residents.

While a centralized comprehensive care facility is currently lacking in the study area, the LIFT Orlando Health and Wellness Goal calls for the creation of a mix of high quality facilities, programs and services in the community. LIFT Orlando has a concept to integrate health services near Orange Center Elementary School, which will help to provide a central location for some services, especially those for children and families as they participate in school activities. This center could include primary care, pediatrics, women’s health services, behavioral health, and dental, as well as flex spaces for specialists such as cardiology, endocrinology, neurology, and orthopedic. According to LIFT Orlando, the center could also include a gym concept that is largely focused on group exercise classes and provide space for health education, as well as a healthy cafe where nearby residents and employees can grab a quick, healthy meal. Health education programs are a vital component to increasing the overall health of the community. Programs can focus on various aspects from diabetes management, healthy cooking, prescription management and others as well as provide for opportunities for screening programs. This centralized healthcare facility, as well as the additional facilities it may spur, could also benefit the community by being designed in a manner to include a centralized open green space to assist with mental health and rehabilitation opportunities and incorporate natural light throughout its building space. Partnerships with medical schools such as UCF can provide additional resources and opportunities. An added benefit to providing health care facilities within the community is the potential for access to new jobs for residents, redevelopment opportunities and community partnerships as seen in Spartanburg, South Carolina and Tampa, Florida.

See the map and text on page 49 for more information on local medical offices in addition to the following map.
According to the 2016 Community Health Needs Assessment for Orlando Regional Medical Center, the closest hospital to the study area, patients who frequently over-utilize healthcare services typically suffer from multiple chronic conditions, and may also have complicated social situations that directly impact their ability to get and stay well. Often, due to socio-economic situations and lack of health care options, high-utilizer patients experience inefficient, poorly coordinated care resulting in over-utilization of the emergency room and costly hospital admissions. As noted earlier, the study area has minimal access to primary care physicians as noted through the US Department of Health and Human Services Primary Care Physician Density, especially when compared to surrounding neighborhoods. Combined with a high number of uninsured, health care access is a priority issue in the study area. Data from Florida Charts list the top 5 diagnoses for Inpatient and Emergency Room Visits in the 32805-zip code. Also, as shown on the hot spot maps on the following page from the Central Florida Community Health Needs Assessment (2016) for Orlando Regional Medical Center, the study area is part of a larger hot spot of uninsured patients visiting ORMC. These data indicate the high use of the ER by uninsured residents in the area and the top diagnosis of these patients. It will be important to work with the hospitals and partners to address some of the underlying causes of these admissions as well as the top 5 for the zip code to address the issue in a preventative manner rather than reactive. A centralized care facility serving uninsured residents may also aid in the reduction of ER use for non-emergency related issues and injuries.
Map Sources: Central Florida Community Health Needs Assessment (2015); Orlando Regional Medical Center (Patient Data); LIFT Orlando (Study Area)
Access to Healthy Food

The conversation surrounding equitable food access in America has focused on the physical availability of full-service grocery stores and healthy food options. Not only should the options be available, but they should be affordable as well. In many cases, an issue of food mirages may be present, specifically in low-income neighborhoods. A food mirage is a circumstance where “full-service grocery stores appear plentiful but, because food prices are high, healthful foods are economically inaccessible for low-income households.” Good nutrition establishes a healthy foundation for life, particularly in the first three years, which are critical to children’s physical and mental health, academic achievement, and economic productivity.

Food Insecurity Metrics

The U.S. Department of Health and Human Services, Centers for Disease Control and Prevention has made an effort to promote healthier communities through their Community Health Status Indicators (CHSI) 2015 project. This tool gives users the ability to identify community health indicators by county, giving a profile of that geographical area and how it compares to similar counties. The CHSI 2015 categorizes outcomes by health care access and quality, health behaviors, social factors, and physical environment. A relevant indicator under the physical environment category is limited access to healthy foods. This index identifies a population percentage of low-income families that live more than one mile from a grocery store. This creates a sense of food insecurity that stems from access regarding distance and affordability.

The California Department of Health in partnership with the University of California, San Francisco set out on a project to standardized indicators of a healthy community and provides tools to measure aspects of community health statistically. A total of 21 indicators were developed from 2012-2014 that are significant to the health of a community. Access to healthy foods and food affordability are two indicators that address the core needs of a community and its inhabitants.

Health Impacts

Healthy food options prevent the prevalence of chronic weight-associated illnesses such as heart disease. A diet that is high in nutritional value is important for all human beings at any age. Adverse health outcomes associated with an improper diet include some illnesses, “such as cardiovascular disease, some cancers, obesity, type 2 diabetes, and anemia.” With the increase of fast options and less number of meals eaten in the home, purchase, and consumption of foods from full service-grocery stores have been affected. The relationship between the food environment and health is difficult to quantify, but existing research does provide evidence that there is a positive association between the frequency/density of fast-food or unhealthier food options, and obesity and overweight rates. The proximity of healthy food options may decrease this negative outcome. Since “lower income families are less likely to have a nutritious diet than those with higher incomes,” access to healthy food options on an affordable scale is especially important in low-income neighborhoods such as West Lakes. Food security waivers based on its affordability, which ultimately affects healthy eating habits and overall positive health outcomes.
Applying the Green Works Plan
The City of Orlando Green Works plan has a community-centered recommendation to increase the availability of local food: you’re your own! The plan recommends the placement of community garden plots, farmers markets, food hubs, food distributors and urban farms to increase local supply. While distribution centers seem out of scale, the West Lakes Business Park concept includes distribution centers in its listing of potential job-creating partners. On the smaller scale, the report team highly recommends that LIFT Orlando work with the Green Works team, specifically on the goal to “develop community gardens and farms to serve every neighborhood in the city”.

The Green Works Plan also established Good Food Central Florida (GFCF) in 2013 to develop better food policy in Central Florida. It is essential that all food-related programs meet GFCF guidelines and best practices.

Community Impact
As shown in the obesity map on the previous page, the rate of problems associated with the lack of healthy foods is relatively high in the study area. One of the goals of this HIA is to review the options that are available to promote healthy food options in the community. To that end, this assessment defines and evaluates programs that are successful in the U.S. and those available in the City of Orlando and greater Central Florida.

Access in Disadvantaged Areas
Access to healthy food is one of the important factors in disadvantaged neighborhoods, especially those challenged with obesity. The food choice in this community is insufficient. Thus, creating a community that offers a variety of healthy, yet affordable, foods is essential. The first approach is bringing new grocery stores, either large or small scale, to the community. Approximately 284 out of 560 families in the study area utilize food stamps, so affordability is assured for approximately 50% of the population.

Scaling Down
The second strategy focuses on empowering smaller grocery stores that are already providing services in the community. Contrary to big supermarkets, smaller ones are more manageable in communities that lack enough food markets. Farmers market startups are also a great strategy toward increasing the access to healthy food as it can be easily built and sustained in communities. Pop-up food markets such as farmers markets in urban areas significantly increase access to healthy food and livability. Allowing residents to have farmlets in their front yards is one of the programs of the City of Orlando that can be utilized toward achieving a healthier community.

Eating Healthy in School
Promoting and increasing healthier foods in schools such as fruits or nonfat milk and having opportunities for students to regularly engage in physical activities improve students’ learning ability, and thus, lead to the creation of a healthier children population in a community. Orange Center Elementary School is a Title 1 school; therefore federal programs can have a big impact on this goal on a systemic level.
Access to Transit & Jobs

Designing for Transportation Choice

Planners have the opportunity to influence people’s lifestyles by the way they design communities. One of the needs of residents in any community is to get to their destinations conveniently and affordably. However, different communities are built and designed uniquely and the extent to which those built environments affect people’s health vary. In addition, providing access to jobs through various modes of transportation increases residents’ choice and satisfaction. Some communities may not have equally accessible, designed, or installed transportation systems for all users. Over the past decades and with the increase in car ownership, it has been observed how many communities have paced toward creating more car-oriented communities. This type of design will increase the number of vehicles and air pollution and consequently would reduce the level of health in the community. Meanwhile, transportation systems that do not provide adequate access for all users would leave residents with transportation modes that are unsafe or unhealthy. It is important to take necessary steps to improve the current condition of communities that do not address transportation modes for all users. Increasing access to jobs requires that planners and decision makers plan and implement strategies and programs for creating a more resilient and flexible transportation systems that address all users in a community.

Transit-Oriented Development

Transit-Oriented Development is a strategy toward creating communities that offer adequate access to jobs and other services and focuses on maximizing the development near transit stations to increase access to while increasing the density. This increased community density forms a compact neighborhood that not only have access to various services as it is close to transit stations, but also it creates a walkable community where people can benefit from this land use proximity and access different land uses all within a bike-walk-shed.

Funding Opportunities

Currently, there are funding opportunities for which communities can apply to increase access to jobs. For example, Transportation, Community, and System Preservation Program is a federal grant designated to help eligible organizations such as local governments to implement this strategy for increasing adequate access to jobs while decreasing the vehicle impacts on the environment.

Community of the Future

The LYNX 2030 vision plan will extend Bus-Rapid-Transit (BRT) from the study area to regional destinations. An Orange Blossom Trail BRT is planned to connect to the Florida Mall, while a John Young Parkway BRT will connect to International Drive. These routes, if completed, will quickly change the status quo for residents in the study area looking for jobs and seamless connections to those jobs. Tens of thousands of service-industry jobs would be able to connect to this line, which would greatly benefit the community.

Community Efforts & Plans

Through the Jobs Partnership of Florida, community residents have access to a 12-week class for job training. In addition to this program, LIFT Orlando created a West Lakes Economic Opportunities Council to find new economic opportunities for the neighborhood. These programs should have a positive long term impact.
Transit Dependency & Access

As the graph on the right side of this page illustrates, land use patterns, community member behavior, travel behavior, community health and all of the associated external costs are downstream from the effects of transportation infrastructure decisions. Transportation is a major opportunity for change in creating healthy communities and moving people out of poverty. Access to a variety of safe transportation options, including trails, transit, and sidewalks, is important for people to access jobs, education opportunities and healthcare services. For a community that is transit dependent, transit access can play a major role in the community health and economy, provided that transit is cost effective, reliable and efficient to support community needs. It is recommended that the Florida Department of Transportation and the Central Florida Expressway Authority place the long term needs of the residents at the forefront when planning additional facilities in the future.

Connecting to Jobs Economically

A study of transit's costs and benefits by the Mineta Transportation Institute (MTI) found that transit improves health care access and outcomes while reducing costs and that transit reduces accidents and injuries and the associated societal costs. According to the MTI research, low-cost and reliable transit access to medical services decreases the tendency of low-income people living in urban areas to skip treatments, thereby improving health and reducing health care costs to society. The study also found that “jobs and economic stimulus are among the largest benefit categories from transit investments” with 40%-46% of total transit benefits being attributed to jobs and the economy.

Aging in Place

Access to transit also provides opportunities for aging in place as seniors become more reliant on other forms of transportation to carry out their daily activities. Accessing transit also creates opportunities for physical activity as, according to Active Living Research, public transit users take 30% more steps per day than people who rely on cars.

Pulling it All Together

LYNX transit service provides access within a one-half mile radius to all residents living in the study area. The map to the right depicts these radii. It is recommended that LIFT Orlando work with LYNX to add shelters to the transit stops with the highest average volume of daily riders as this would provide more comfortable conditions for those utilizing transit.
Median Commute Distance

The median commute distance for workers in the study area is 11.64 miles, approximately 19% higher than the average across the City of Orlando despite the presence of high paying jobs in downtown Orlando just over one mile away. Median commute times in the study area are approximately 37 and a half minutes, well above the state and national averages which remain below 30 minutes. These issues are being addressed by LIFT Orlando via the West Lakes Business Park concept.
Location of High Intensity Uses within the West Lakes Neighborhood

Some of the activities performed by these types of businesses can have pernicious effects on the community's overall health and wellness. They tend to used loud equipment, require outside storage, produce noxious fumes, and bring truck traffic into the neighborhood. Eliminating these high intensity land uses is not a good idea because these are currently viable businesses that provide well-paying jobs. Instead, stakeholders should focus on developing strategic environmental and site interventions to better integrate these businesses into the community fabric and increase livability within the neighborhood. These could include screening of parking and loading spaces and open storage areas, using landscape buffers to transition between commercial and residential uses, and installing traffic calming devices along residential roads. Moreover, it is important to keep open communication between the business community and West Lake residents.

Neighborhood Access to Jobs

According to Infogroup, there are almost 600 establishments located within the study area. For analysis purposes, these establishments were grouped into economic sectors based on the type of services they provide to the community using the North American Industry Classification System (NAICS). Close to fifty percent of all neighborhood establishments belong to three economic sectors: Other Services, Health and Social Services, and Retail Trade. The Other Services sector is comprised of establishments that provide services such as repair and maintenance, the administration of religious activities, and other personal services. The most dominant industry types in the neighborhood are religious organizations (churches) with 42 establishments and automotive repair with 34. Establishments within the Health and Social Services sector specialize in providing an array of medical and social services to the population. These include miscellaneous health practitioner offices (16), physician practices (10), and child care services (12). Finally, the Retail Trade sector includes all establishments engaged in the selling of all types of merchandise to the public. In the study area, most of these establishments are convenience stores (10), automotive parts and accessories stores (10), and other building materials dealers (9). The ECFRPC also identified over 30 companies located within the neighborhood that could be classified as light or medium industrial uses. These include building contractors (5), manufacturers (9), transportation and warehousing businesses (12), and a metal recycler (1). Most of these businesses most likely located in West Lakes because of the neighborhood's close proximity to the Downtown Orlando Business District and major thoroughfares. They are concentrated south of West Washington Street between South Westmoreland and Tampa Avenue.

High Intensity Uses

Business Types

- Building Contractors
- Manufacturing
- Transportation and Warehousing
- Other
Benefits of Transit: Reducing Auto-Generated Smog

Automobiles generate smog that can decrease the quality of air. This is especially true in areas where cars come to a halt and idle, life streets with traffic jams and, perhaps most importantly for the West Lakes study area, school drop-off and pick-up lines. Dr. William Vizuete, a UNC-Chapel Hill environmental engineer, has found a direct correlation between respiratory illness among children and the elderly and exposure to pollutants from automobiles. Particularly alarming in the UNC study is the fact that children breathe approximately 50% more air than adults when accounting per pound of body weight. This makes mode choice – especially in terms of how children arrive and leave school – an important environmental factor in the study area. It is recommended that programming in this area target Orange Center Elementary School, as the attendance zone makes the school a walkable distance for most students. It is also recommended that LIFT Orlando work with Orange County Public Schools to create an “Idle-Free Zone” around Orange Center Elementary School and Jones High School.

The City of Orlando Green Works plan has set a number of goals for air quality. One of the goals is to increase daily bicycle, pedestrian, transit and carpool trips from 20% of all trips in 2010 to 30% of all trips in Orlando in 2020. By 2040, the Green Works team aims for this number to reach 50%. To assist in access for bicyclists and pedestrians, the City plans to add 23 miles of complete streets by the year 2040. In addition, 700 green fleet vehicles will be added to the city’s inventory. Not limited to small vehicles, the city includes hydraulic hybrid garbage trucks in its plan to make the fleet green.

I know I can save money, but how much am I really saving?

A lot. If you drive to work five times a week and travel 10 miles per round trip, you could save $783 a year by carpooling with one other person and over $1,000 a year by carpooling with two other people! That’s a lot of extra cash, and the savings only increase with more people in the carpool and the longer the distance you drive.

IDLE-FREE ZONE

Protect our children
TURN OFF YOUR ENGINE

Clean Air Zone
**Access to Education**

When speaking of access to education it is important to reiterate the meaning of access. These facilities should be available, affordable, approachable and reachable. Education is essential not only for well-paying jobs and higher incomes, but also for health as education is at the center of a cycle that impacts career opportunities, lifespan, income and financial resources for healthier food, home options and healthcare.

Policies that start kids out on the right educational path help to put them in a healthier position as adults through the reduction of various chronic diseases. The LIFT Orlando Cradle to Career concept as well as the "neighborhood school for life" concept recognizes this connection. LIFT Orlando has seen great results with various chronic diseases. The LIFT Orlando Cradle to Career concept recognizes this connection. LIFT Orlando Cradle to Career concept recognizes this connection.

Research by the Virginia Commonwealth University has documented some health statistics as related to education. According to VCU, studies have found that the gap of life expectancy between the most and least educated has widened from 13 to 14 years from 1990 to 2008. Also, Americans with less education are more likely to have major diseases, such as heart disease and diabetes, are likely to have risk factors such as smoking and obesity, and diminished physical abilities for health reasons or be disabled. The research found that by 2011, smoking was reported by 27 percent of people without a high school diploma or GED but by only 8 percent of those with a Bachelor's degree.

There are numerous adult educational facilities located just outside of the study area such as the UCF Downtown Campus, FAM, Webster University and the American College of Civil Trial Mediators, with Orange Center Elementary School and Johns High School within the study area. Memorial Middle School is located just south of the study area.

LIFT Orlando aims to increase the opportunities associated with these neighborhood schools by developing a state-of-the-art Medical Sciences Magnet at Jones High School and emphasizing STEAM at the Orange Center Elementary and Legends Academy. These facilities, through partnerships already established by LIFT Orlando, can help realize the "cradle to career" goal of LIFT Orlando, provided these facilities and programs are affordable, approachable and reachable through financial support, incentives and community and family support, as well as improvements to the built environment to ensure access in a safe and healthy manner.

The Safe Routes to School program is a potential funding source for infrastructure projects as data indicates various gaps in sidewalk connections throughout the community. As infrastructure improves, the potential for child pedestrian injury declines according to a study of injuries prior to and after SRTS interventions in New York City. The study cited by ALR found there was a 44 percent reduction in injuries rates after SRTS interventions compared to no change in areas that did not interventions. It was also found that the total cost of implementing SRTS interventions in New York City was just over $10 million and produced reductions of "$221 million by reducing costs associated with injury, lifelong disability, and death.”

**Schools in the Study Area**

Orange Center Elementary School and Jones High School are located within the study area and provide an opportunity for students to walk and bike to school. According to the Orange County School District, a large portion of these students walk and bike to school, emphasizing the need to ensure safe access to these facilities.

Studies have shown that low-income, minority communities generally have higher proportions of students who likely walk to school, which for the West Lakes communities most likely stems from financial insecurity and the low rate of auto ownership. However, according to Active Living Research, despite the proximity of schools, several factors may serve as barriers to walking and biking to school. These factors generally revolve around the built environment and include the lack of sidewalks, vehicular volume and speed, unsafe road crossings, and concerns about children traveling on their own.

As childhood obesity rates rise, it is becoming increasingly important to incorporate healthy activities into the daily lives of children and address policies and practices that create barriers to daily physical activity for children, including walking and biking to school. According to a study reported by Active Living Research (ALR), Sirad, et al. found that South Carolina 5th-graders who "walked to school five days a week had approximately 24 more minutes of moderate-to-vigorous physical activity per day than those who walked less than five days or traveled by car" which would have residual impacts on health care costs as well as transportation costs. Studies have also shown that physically active children also tend to perform better academically, have greater cardiorespiratory fitness and evidence suggests that physical activity among children is related to better mental health.
Access to Education (continued)

The Safe Routes to School program and the Walking School Bus are opportunities for the West Lakes communities and students to engage in programs that foster the healthy activity of walking and biking to school while providing life-long benefits of education associated with being safe pedestrians. A study presented in the Active Living Research Report studied the impact of SRTS in Florida, Mississippi, Washington, and Wisconsin showed that the walking rate showed an increase in walking to/from school from 9.8 percent to 14.2 percent after implementation of SRTS at the 55 schools studied.46 The biking rate increased from 2.5 percent to 3 percent at the 50 schools with available data. Additionally, the average rates of walking and biking to school increased with the length of time students participated in the SRTS program, indicating the establishment of healthy habits as well as the necessity to maintain this successful program in participating schools47.

It can be assumed that infrastructure improvements within the study area, as well as along major access routes such as Orange Blossom Trail, West Robinson Street, West South Street and others outside of the study area as well as improving transit routes to adult educational facilities will create an environment welcoming to pedestrians therefore, promoting walkability/bikeability to these facilities. Therefore, as mentioned throughout the report, increasing daily physical activity of adults and impacting the overall health of the individual, particularly obesity rates and cardiovascular and respiratory health issues. However, these benefits will not be realized if the opportunities to participate in these educational opportunities are not affordable or made available to the community.

Additionally, due to the low graduation and post-secondary education rates, accessible and appropriate opportunities for workforce training as well as guidance for applying for and finishing college credits, should also be a priority as well as opportunities for life programs, such as healthy living, social and family management and others. Ensuring continued education past high school should be a priority to increase the overall health of the community as it has been found that even some additional years of education after high school has been found to increase life expectancy of individuals, regardless of ethnic background12.

According to the Center for Post-Secondary and Economic Success, many times, without guidance, the process to post-secondary credits is difficult to navigate due to the various systems and organizations involved, especially for lower-skilled students and those with a GED. Also, some short-term training programs many times do not lead employment or educational opportunities48.

Additionally, a “career pathways framework” (and grants) made available through various higher-education and business partners can be an “effective way of connecting education, training and support services for next level educational or job opportunities to meet employer demand for skilled workers”49. Access to educational opportunities needs to fit the characteristics of the community and provide for flexibility, bridge programs for the lowest literacy levels, various education delivery modes, and opportunities for financial aid.

The Cradle to Career goal of the LIFT Orlando Plan is fundamental in providing a number of resources and partnerships to the community including various programs from preschool through high school and beyond. Partnerships and resources can also provide access not only to classes and programs, but also resources such as technology/computer labs to enable residents to participate in on-line classes and job training opportunities as learning technological skills as adults is important for career advancement. This ties directly into the goal of LIFT Orlando to establish a “neighborhood-specific job training initiative” and these resources can help individuals navigate the post-secondary education environment.

Additionally, the Health and Wellness Goals address health and nutrition education programs by working to increase education opportunities through the S.T.E.M teaching garden at Orange Center Elementary for the whole family. Expanding these services along with other health education opportunities are important drivers to changing the culture of the community. These educational resources will help to ensure that as individuals increase their educational attainment and access opportunities for healthier lives, they have the skills sets to put healthy and sustainable habits into practice such as healthy cooking, daily physical activity, and health care management.

Tracking the number of students of these schools who activity commute to school could serve as strong baseline and trend data to support improvements to pedestrian infrastructure. Additionally, as redevelopment comes into the community, LIFT Orlando and partners such as the City of Orlando and Orange County may be able to require sidewalk connects associated with development.
CRIME
Criminal activity in a community can have negative impacts on communities in many forms. While the most devastating effects of crime is the impact that it can have on people and families, criminal activity also has community-level effects. A study by the UCLA Ziman Center for Real Estate found that higher-than-average crime rates not only decreased commercial property values, but did so in higher rates (or with higher “elasticity”) in low-income communities. This exacerbates the effect of crime on low income communities and can lead to a further depression in local economic activity.

Poverty has been shown to be a strong determinant in overall crime rates. The West Lakes communities experience a higher-than-average 24.4% poverty rate on a family level, increasing the risk for crime on a community level. Approximately 60.91% of the West Lakes population has never been to college and approximately 19.51% did not graduate from high school, which increases the likelihood of criminal behavior according to the U.S. Bureau of Justice Statistics. Reversing these trends is critical, but only one part of the solution.

The solution to decreasing crime also lies in the hands of community members, neighborhood and home owners associations, non-profits and other stakeholders in creating neighborhood programs that protect citizens and boost community morale. LIFT Orlando should continue to engage these community members alongside their relationship with officers in the Orlando Police Department.

Environmental Factor Components

* **Frequency of Crime**
  Reducing the frequency of crime within the West Lakes communities can help to build social capital and increase walking and biking activity.

* **Effectiveness of Lighting**
  Lighting provides security at night and has been proven to decrease the frequency of crime. Ensuring that lighting covers high-crime areas at night is critical.

* **Use of Natural Surveillance**
  Natural surveillance is a tactic of urban design to naturally place "eyes on the street" and institute a naturally-occurring neighborhood-watch program.

* **Use of Territorial Reinforcement**
  Territorial reinforcement is the act of “hardening” urban environments to criminal activity. Maintenance is a large factor in territorial reinforcement.
Frequency of Crime

A primary goal of this assessment is to identify strategies that will assist in lowering crime rates. The frequency of crime in a neighborhood has a considerable effect on overall livability and trust between neighbors, therefore the health and wellness benefits can include lower injury rates and increased levels of social capital. However, more than crime itself, many community stakeholders including Commissioner Regina Hill argue that the perception of crime in the area is among the greatest challenges to overcome. Recommendations will therefore tackle both issues.

Overall crime rates in the 32805 zip code are higher than the city of Orlando as a whole. Violent crime rates in this area are also higher than the city’s overall figure according to crime data provided by the city of Orlando. The table to the right depicts 9-1-1 calls over a six year period from one of the study area’s high crime areas, Lorna Doone Park, which has been the subject of LIFT Orlando redevelopment and crime reduction efforts. The tables on the next page of this report detail crime frequency in the study area.

An important factor moving forward will be the degree of communication between neighborhood associations (N.A.’s), homeowner’s associations (H.O.A.’s), resident associations (R.A.’s) and the Orlando Police Department. The police department has spent years building relationships in the community, and LIFT Orlando has assisted in this effort. LIFT Orlando should continue to work with public liaisons at OPD in this regard. Organizing community meetings that have these topics built in can allow crime to be one part of a larger conversation that also includes bike-ped safety, development and other efforts. The current neighborhood meetings held at the Rock Lake community center are a perfect venue for such meetings. It is recommended that LIFT Orlando include the following associations: Spring Lake Manor N.A., Lake Lorna Doone N.A., Lorna Doone R.A., Rock Lake H.O.A., Lake Sunset/Luola Terrace H.O.A., Clear Lake Cove H.O.A., Blanche Manor/ Hollando H.O.A.
Effectiveness of Lighting

Effective street lighting has been found to decrease crime by approximately 7 to 30%, meaning that while the use of lighting is effective; there is a high degree of variability in effectiveness from location to location. Due to such high variability, the cost-benefit impact of increased lighting is not completely known. It is, however, known that lighting is associated with increased use of streets and public places by community members who follow the law. In terms of lighting and its effect on the categorical criminal trinity - motive, means and opportunity - the latter two can be eliminated or reduced. It can be argued given the comprehensive research on the subject that lighting can have a positive effect on crime rates and the level of bicycle and pedestrian activity within a community.

Community Overview

The West Lakes communities are generally well-lit overall. However, Lorna Doone Park has high amounts of tree coverage, which limits lighting. It is recommended that LIFT Orlando work with the Polis Institute and site designers to ensure lighting within the park is consistent and is sourced from an elevation below the tree line. Lighting in all public parks should potentially be reviewed by City staff. The level of lighting available in residential areas should be assessed in person to address any potential gaps.

LED Lighting Benefits

LED lighting is a more environmentally-sustainable method of providing lighting for communities that is beginning to catch on in many cities. While these lights may be more expensive in the short term in some cases, the long term costs associated with these lights provide energy savings of 25 to 80% according to the US Department of Energy. In addition, the Department of Energy calculates that these lights last 3 to 25 times longer and can provide better lighting conditions than traditional lights. The image below depicts the difference in lighting conditions with an LED lighting system and a conventional lighting system. Use of LED lighting by the City in accordance with the Green Works Plan is highly recommended.
Lighting depends on event schedule (ball fields)
Crime Prevention through Environmental Design

Use of Natural Surveillance and Territorial Reinforcement

Natural Surveillance

Natural surveillance is a tactic of urban design to naturally place "eyes on the street" and institute a naturally-occurring neighborhood-watch program, or what Nicholas R. Fyfe refers to as the "fortress impulse". This can be done through architecture with the use of large windows that overlook the street, fences that are partially see-through, and maintenance of bushes and growth that occurs at or below eye-level.

The single family residential units within the West Lakes communities by-and-large do not have large windows, but this is a factor that cannot be changed. The lack of this critical design feature is mitigated by nicely-maintained lawns throughout the study area, the absence of vehicles parked on lawns, and a lack of impermeable fencing around lots. It is recommended that future residential or commercial development incorporate large windows facing primary streets.

Territorial Reinforcement

Territorial reinforcement is the act of "hardening" urban environments to criminal activity. Maintenance is a large factor in territorial reinforcement. This can include controlling access to private spaces, cleaning up nuisance graffiti, maintenance, and "target hardening" approaches that make public spaces look well-defended by building materials or the presence of security features.

The West Lakes communities were void of graffiti and broken windows during the project team site visit, which has been proven to decrease overall crime within an area. Continuing to monitor this (whether by the City’s parks division at the community’s parks, or monitoring by residents themselves) can help to ensure that the physical environment is not contributing to additional criminal activity.
Did you know?

The Power of Positive Life Choices

According to the Brookings Institute, positive early life choices are a strong determinant of future socioeconomic outlook and is the primary individual-by-individual factor pertaining to income mobility in the United States. The institute names three rules that economically disadvantaged children should follow, and if these rules are followed, then the long term risk of poverty is 2%. The rules include 1) finish high school; 2) get a full-time job; and 3) refrain from having children while single and under the age of 21. If these rules are followed, the institute has found, then an individual has a 75% chance of being in the middle-class over the long term. As the figures on this page depict, income level increases concurrently with life expectancy rates, and the chance of criminal behavior drops with increased educational attainment.

Breaking the cycle of crime is another factor that must be addressed for long term reductions in crime within the neighborhood. Research by Central Connecticut State University found that children of incarcerated persons were three times more likely to be incarcerated at some point in their lifetime as opposed to children without incarcerated parents. It is very important that children in the neighborhood are aware that despite their personal situation, positive individual life choices can provide for a better, longer life.

The City of Orlando has been instrumental in assisting at-risk youth. The College Decision Day program is a program for young people to motivate them – among their peers – to go to college. The program has helped 1,100 children get into college.

### Likelihood of Criminal Behavior By Educational Attainment

- Some High School: 41.3%
- GED: 23.4%
- HS Diploma: 22.6%
- College Graduate: 12.7%

**Source:** US Bureau of Justice Statistics (1997)

### Graduation Rates

**Jones High School**

- 2012: 92.3%
- 2013: 87.8%
- 2014: 93.4%
- 2015: 76.7%
- 2016: 91.2%

**Source:** Florida Department of Education (2016)

### Life Expectancy by Income Level

**Source:** The Health Inequality Project (2016)
RECOMMENDATIONS, EVALUATION & MONITORING
Recommendations: Bike/Ped Opportunities

Gore/OC Traffic Calming: Work with City of Orlando Public Works to install traffic calming infrastructure along Orange Center Boulevard and Gore Street from John Young Parkway to Orange Blossom Trail. This can include school signage, flashing beacons, and raised crosswalks.

Main Street Designations: Work with the Orlando Walks program and the Main Streets Program staff at the City of Orlando to implement complete streets along Tampa Avenue, Rio Grande Avenue, South Street, Gore Street and Orange Center Boulevard and establish West Lakes as the eleventh “main street neighborhood” in Orlando. This will help to ensure goals of the Green Works plan are met. See the street sections on the next page.

Improve Access to Downtown: Work with City of Orlando Public Works and Planning to retrofit South Street to be a primary bicycle and pedestrian connection to downtown Orlando to-and-from Camping World Stadium. This will ensure direct connectivity to jobs and future collegiate opportunities downtown.

OBT Street Trees: Work with the City of Orlando Planning Division and Public Works Division to plant street trees in the public right of way along Orange Blossom Trail to improve pedestrian comfort. See the tree placement plan map later in this section for more tree placement strategies.

Consider Starting an Adopt-A-Tree Program: Consider programs that aim to increase community involvement in tree placement programs like the aforementioned recommendation for OBT.

Plant Trees to Increase Comfortability (One Person One Tree): Work with community members to increase the neighborhood's participation in the City's One Person One Tree program to place trees on private property along neighborhood streets. The City's Green Works team has developed two programs – Street Trees and Energy Saving Trees.

Install Themed Pedestrian Signage: Develop themed pedestrian-scale signage within the West Lakes communities pointing to community destinations and work with the City of Orlando Public Works Division to place the signage throughout the community. This signage may be best suited for placement after the development of a community garden, clinic, food store and other community assets. The SODO District has themed signage that can be used as an example.

Green Bike Lanes: Work with the City of Orlando Public Works and Planning Divisions to paint the bicycle lanes along Gore Street, Orange Center Boulevard, John Young Parkway, Orange Blossom Trail, and along all other roadways that have planned bike lane facilities (see page 23). Bike lanes along future retrofitted roadways should also be painted green.

Ensure Property Access: Work with property owners to ensure that sidewalks connect into all internal sidewalk systems on properties. This is critical for institutional and commercial properties.

Complete the Sidewalk Network: Work with the City of Orlando and incentivize developers to prioritize sidewalk improvements within the community. Neighborhood residents can assist in the identification of highly-utilized sidewalks. Short term improvements would be helpful along the south side of Long Street.

Start a Trail Working Group: Set up community meetings to work with the City of Orlando trails team to develop concepts for the Orlando Urban Trail extension along the north side of Carter Street. The Carter Street extension to downtown is a good short-term kick starter.

Create a Walk & Talk Program: Work with community members to create a walking program similar to the “Monday Morning Walk with the Mayor” in Eatonville. These walks can be led by one or rotating community stakeholders and can involve discussions on neighborhood improvements. This includes “Walk with a Doc” programs.

Continue Focusing on Lake Lorna Doone Park: Continue ensuring that plans to upgrade the park are met, including the development of sidewalks along the entirety of the park’s perimeter.

Intersection ADA & Crosswalks: Ensure that ADA ramps and marked crosswalks are present at all 14 intersections that have had bicycle and pedestrian and crashes occur since 2015 (reference the map on page 19 to view these intersections).

Install Lighting: Work with City of Orlando Public Works and OUC to install pedestrian-scale lighting along roadways that are dimly lit at night (see the map on page 25). Areas of focus should include Church Street near Lake Lorna Doone Park, Long Street to the east of Rio Grande Avenue, and portions of neighborhood streets. LED lighting is recommended if long term cost benefits can be realized.

Implement Bike Share: Work with Juice Bike Share to determine the feasibility of expanding the service into the West Lakes neighborhood.

Consider Starting a Walking School Bus Program: Consider starting a Walking School Bus program for students of Orange Center Elementary School. Act as a liaison between the school and families. Trusted community volunteers that undergo screening can assist with these types of programs.

Work with the City of Orlando on the Bike Plan: The City will be updating its bike plan, beginning with an RFP in November 2017. Work with the City and its contractors on plan development as a stakeholder for the West Lakes communities.
Options to retrofit Gore Street are limited, however the lane widths can be reduced to 10' to allow for a 4' bicycle lane on the north side of the roadway. If it is feasible to take a lane away, consider adding a 6' grass and palm median to the center of the roadway with a 4' bicycle lane on the southern side of the roadway.

Orange Center Boulevard currently has bicycle lanes and is designed well. Retrofits to this roadway would include painting the bicycle lanes green, adding southern live oak trees to the median and adding additional trees along the sidewalk network. Traffic calming is also suggested on this site, as the PENDANA development will change the area’s context.

It is recommended that the city of Orlando consider adding bicycle lanes and extending the right-of-way along Tampa Avenue, primarily near the stadium. Street trees should be added to provide shade for pedestrians, especially along the east side of the roadway near the stadium. Wide sidewalks should be constructed along the east side of the street to accommodate for stadium visitors and large crowds.

Rio Grande is a primary roadway south of the stadium. It is recommended that lane widths are reduced to make room for 5' bicycle lanes on each side of the road.

It is recommended that the city paint the bicycle lanes along this roadway green and reduce lane widths to 10 feet from the study area to downtown Orlando.
**Recommendations: Place Making Opportunities**

**Limit Restrictions to Development on Opportunity Sites:** Work with the City of Orlando to ensure that zoning codes and future land use designations on “opportunity sites” identified on page 67 are inclusive to many forms of redevelopment. Redevelopment in the corridor should focus on mixed use, residential, institutional, recreational, food service and medical service uses. The establishment of an overlay zone may be necessary.

**Follow through with PENDANA:** Work with the developer of PENDANA at West Lakes through all phases of development to ensure the presence of senior living and affordable units after the completion of the site.

**Work with Opportunity Site Owners:** Work with property owners of opportunity sites to potentially sell and conglomerate their parcels to a developer with experience in mixed-income residential development or new urban mixed use development.

**Complete a Master Plan:** Work with community members via working groups (next section) to identify “character districts” and “functional areas” within the West Lakes communities. The map on page 67 of this report can be used as a starting point to further identify nodes within the study area during meetings with residents.

**Identify funding or loans to increase community involvement in investments.**

**Build a Medical Office:** Work with a community investor to build a small medical office in a central location within the community.

**Build a Healthy Food Store:** Work with a community investor to build a convenience store that serves healthy food in a central location within the community.

**Create a Community Garden:** Work with residents and the City of Orlando to build a community garden on a publicly-owned parcel (see map on page 84). This will help to ensure critical mass is achieved at the future Orlando City Soccer Stadium farmers market.

**Build a Community Health Facility:** Work with a community investor to build a small-to medium sized gym or indoor athletic facility in a central location within the community. Many seniors in the community want aquatic and aerobic facilities.

**Provide Athletic Park Access:** Work with the City of Orlando to provide public access to the high school athletic complex via a joint use agreement. Intramurals could flourish.

**Institute an Idle-Free Zone around Schools:** Work with Orange Center Elementary School and Rock Lake Elementary School (outside of study area) to institute an “idle free zone” in the school drop-off and pick-up lines. Signage should be installed.

**Align Efforts at Lake Lorna Doone Park:** Work with residents to ensure that the redeveloped park becomes known as a family-friendly and safe facility.

**Attract a Large Employer:** The LIFT Strategic Plan includes a plan to attract employers to the West Lakes Business Park. Continue to develop strategies to bring a food packaging or distribution center to the area in order to add more local jobs. The completion of a community master plan can help to entice developers.

**Increase Police Presence:** Work with the Orlando Police Department to install a continuous police presence at Lake Lorna Doone Park after redevelopment is completed.

**Infuse Local Spirit:** Leverage the efforts of community events such as “Artfully Said” and install art work created by community members throughout the community.

**Market and Deliver on the “Soul Bowl”:** The annual football game between Jones High School and Evans High School is well-known to community residents. Consider working with Florida Citrus Sports and Camping World Stadium to set up an annual tailgate and block party at the stadium for this event.

**Cozy and Clean Transit Stops:** Work with LYNX to ensure that transit stops with the highest ridership counts have coverage, seating and a trash receptacle.

**Swoon Visitors and Document the Location:** Pop-up food shops along Tampa Avenue allow people from around the region and country visiting Camping World Stadium to meet local residents and buy local food. LIFT Orlando should work with community members to provide similar pop-up services that could transition in the long term into business locations. Focus should be along Tampa Avenue near the stadium.

**Work with Code Enforcement & Police:** Work with citizens, police and code enforcement to report out-of-control trash, squatting in abandoned buildings, broken windows and graffiti. Ensure that neighborhood watch programs prioritize these items.

**Improve Lighting:** Work with Orlando Public Works and OUC to install bright LED lighting in areas where crime occurs on a regular basis. Maps depicting high crime areas are located on page 56 of this report.

**Work with Residents on the Development of Character Districts:** Work with residents on creating functional character districts, beginning with the map on page 67. In addition, work with prospective developers on placing large windows along future residential and commercial frontages to reduce crime and increase “eyes on the street”.

**Beautify the Stadium Area:** Beautifying the stadium area with trees, sidewalk designs, plazas, seating areas and other items could allow more businesses (or perhaps a hotel) to move into the area. Continue to work with the City of Orlando on these efforts.

**Help Residents Start Small Business:** Align businesses with community needs.
Proposed Tree Coverage

- Current Coverage (12.5% Coverage)
- New Tree
- 80' Oak Canopy (29.5% Coverage)
- 120' Oak Canopy (32.5% Coverage)

Additional trees via the One Person One Tree Program on residential properties could result in 40% coverage.
West Lakes
Preliminary Functional Districts

- West Lakes Business Park
  - Restaurant
- Park Facilities
  - Lake Lorna Doone Park
  - Multi-Purpose Park
  - Jones HS Athletic Complex
  - Landscaped Area
  - Lizzie Rogers Park
- Stadium Area
  - Camping World Stadium
  - Tinker Field
  - McCracken Field
- Flex Space
- Schools
  - Jones High School
  - Orange Center Elementary
- Vacant Opportunity Sites
- OBT Frontage
- Identified Infill Sites
  - Fitness Center
  - Medical Clinic
- Church Sites
- PENDANA at West Lakes
- Stadium Parking & Roof Top Park
Recommendations: Program & Outreach Opportunities

Imbed LIFT with the City: Create a staffed position or morph a current position at LIFT Orlando to work directly with the City of Orlando, residents and potential developers on planning tasks. This person would be responsible for attending the city’s bike-ped meetings, MetroPlan Bicycle and Pedestrian Advisory Committee (BPAC) meetings, Parramore plan meetings and other boards and committees to ensure that the LIFT vision aligns with the City of Orlando’s vision. This person will also work with LYNX on transportation issues.

Enhance Community Working Group Meetings: Enhance monthly community working group meetings to discuss issues pertaining to crime, development, transportation, food and health. These meetings should be open to the public and include the following stakeholders:
- Crime & CPTED → Orlando Police Department, Neighborhood Associations, HOA’s
- Development → POLIS Institute, City of Orlando, Developers
- Transportation → FDOT, Central Florida Expressway Authority, City of Orlando, LYNX
- Food & Health → Subject-matter experts

Align Assets with Fitness Programs: Work with local business owners and the City of Orlando Parks Division to align health training and educational opportunities with fitness assets like parks and gyms. Ensure with the City that parks are accessible.

Leverage Lake Lorna Doone Park: Work with community members to schedule events and programs at the newly-improved Lake Lorna Doone Park once redevelopment is complete.

Continue Family Advocacy & After school Programs: Continuing to work with families on programs such as the MVP Families program will have an outstanding long term impact. Ensuring that this program stresses the need for after school programs is also critical.

Continue Monitoring: LIFT Orlando should continue to monitor its programs and compile health surveys and screening to ensure that baseline data is monitoring the effect of programs that have been implemented.

Identify Reasons for Health Coverage Gaps: Survey residents to identify specific reasons why medical coverage is not accessible. Tailor programs to survey results.

Consider the Expansion of Fleet Farming: Work with the City of Orlando to expand (as possible) the fleet farming program into the West Lakes communities. The Parramore neighborhood was recently the recipient of a $250,000 grant to install fleet farming.

Educate Residents on Farmlets: Expand community members’ ability to create their own farms by informing them about seed sheets and other items at working group meetings.

Start Adult Education Programs: These programs can include health and fitness education, technology training, job training and other related programs.

Work with the National Black Child Development Institute: Work with the NBCDI on programs such as the Father and Daughter’s Luncheon, Project FUN (Families Understanding Nutrition), and the Love Yourself Cooking Live cooking demo.

Expand Partnerships with Universities: Working with universities such as UCF can improve community health while providing real-world training opportunities for students. The UCF College of Medicine and the graduate-level Urban and Regional Planning Master of Science Program could be perfect fits to work on community health, bicycle/pedestrian safety and community outreach efforts.

One Person One Tree: It is critical that LIFT Orlando communicates the One Person One Tree program offered by the city of Orlando. Community engagement with this program could greatly enhance long term air quality and bike/ped comfortability in the neighborhood. Members of the community may not be informed of this program, so implementation could involve a community-wide outreach effort to plant in excess of 50 to 100 trees in the short term. This will have a lasting long term impact.

Start a Safe Routes to School Program: As discussed in the bike-ped recommendation section, LIFT Orlando should work with Rock Lake Elementary School and Orange Center Elementary School to consider implementing a Safe Routes to School program. This would include the creation of a Walking School Bus.

Leverage Existing Neighborhood Groups: Work with the Orlando Police Department, neighborhood associations and homeowner’s associations to deter criminal activity and ensure positive communication between police and community residents. Utilize working groups to stabilize relations.

Apply for a Mayor’s Matching Grant: The City of Orlando provides grants to non-profits, neighborhood associations and schools to address community needs, improve education and build community pride. A number of the recommended proposals in this report would fit the grant requirements.

Hold Community Health Workshops: Working group meetings (mentioned previously) can also be an opportunity for community members to learn health and life skills from subject matter experts. Aligning these workshops with working group meetings can preserve essential resources.

Continue Co-Location Plans: Plans to integrate health services at Orange Center Elementary School can have a positive long term impact on the community. Completing this task is paramount to community health. Consider locating future health assets in close proximity to PENDANA (perhaps on the opportunity site to the east).

Create a Health & Wellness Team: Work with the Winter Park Health Foundation and Healthy Central Florida to create a “Healthy West Lakes” team modeled after the Healthy Eatonville team. This committee could implement programs through the model developed by Healthy Central Florida and Florida Hospital in Eatonville, Florida.
Evaluation & Monitoring

Baseline Data Creation
Monitoring the implementation of the recommendations in this report relies on ongoing data collection and analysis by the LIFT Orlando team. It is highly recommended that baseline information and statistics that are available from the City of Orlando, the Florida Department of Health, Orange County, and other sources be collected in the immediate short term to ensure that progress is made.

Measurements
Progress made via the implementation of this report should be measured in terms of the health indicators listed on page 9 under “additional impacts”. The indicators include rates of obesity, asthma, cardiac disease, diabetes, property crime, violent crime, employment, high school graduation, single motherhood, life expectancy and income mobility, as well as the stability of property values, the level of community inclusiveness and the level of neighbor interaction.

Data Collection Methods
It is important that health indicators are measurable in order to determine if progress has been made. Methods of monitoring progress include reviewing local (zip code level) statistics from vetted sources such as the Florida Department of Health, to surveying residents. Surveying residents can assist in capturing qualitative data such as level of comfort while walking to assist in the review of quantitative data such as walking and biking rates.

Review Timeline
It is recommended that LIFT Orlando review the results of its Strategic Plan and this Health Impact Assessment on an annual basis to determine the success of annual budget programs.
Appendix 1

Methods

Lighting Map
Lighting coverage was created utilizing a street lights “point” file from the Orlando Utilities Commission (OUC). The project team researched common lighting diameters corresponding to lighting wattages and utilized the “buffer” tool in ArcGIS to create polygons related to the researched lighting buffers. The buffers utilized per street light wattage level can be found within the legend of the lighting map. A number of sources were utilized to determine lighting buffers, and an average value was used. These values were assured for quality during a night time site visit.

Lighting Street Segments
The lighting street segment map utilized the lighting polygon shapefile as an input. The project team utilized the “clip” function in ArcGIS to delineate areas of roadways that intersect with areas where lighting was present. To capture areas of streets where lighting was not present, the project team utilized the “union” function in ArcGIS.

Tree Coverage Map
Trees were drawn using ArcGIS by utilizing an aerial image of the study area. The aerial image utilized was dated 2017 and is a product of Bing. Tree coverage maps were derived from the shapefile created. Coverage (color coding) within this map is referred to in terms that correspond to approximate local tree cover percentages: High (67% to 100%); Medium (33% to 67%); Low (1% to 33%) and None (0%).

Demographic Tables & Maps
All demographic tables and maps were compiled using the MySidewalk online tool. The project team utilized screen shots of maps and tables from the tool in this report. The original data sources corresponding to these maps and tables are noted within the captured images. Slight modification was done to these images for report consistency. No original data was altered.
Appendix 2

Demographic Data and Maps
Population Density

Time Series: Housing Units in Lift Orlando Study Area

Population Density: 3.9 people per acre
Median Household Income

Median Household Income: $20,626

Household Income

- 10,000 or Less: 62.69%
- 10,000 to 14,999: 80.15%
- 15,000 to 24,999: 78.98%
- 25,000 to 34,999: 67.05%
- 35,000 to 49,999: 81.14%
- 50,000 to 74,999: 24.78%
- 75,000 to 99,999: 15.80%
- 100,000 to 149,999: 2.35%
- 150,000 to 199,999: 0.87%
- 200,000 or More: 0.87%

Sources: US Census 2011-2015 ACS
Median Age

- Median Age: 35.24 years
Families Below Poverty Level

<table>
<thead>
<tr>
<th>Income to Poverty Ratio</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>49% and below</td>
<td>119.61</td>
</tr>
<tr>
<td>50 to 99%</td>
<td>350.84</td>
</tr>
<tr>
<td>100 to 124%</td>
<td>176.63</td>
</tr>
<tr>
<td>125 to 149%</td>
<td>165.40</td>
</tr>
<tr>
<td>150 to 184%</td>
<td>179.20</td>
</tr>
<tr>
<td>185 to 199%</td>
<td>15.30</td>
</tr>
<tr>
<td>200% and over</td>
<td>400.84</td>
</tr>
</tbody>
</table>

77.52 Families (24.4% of all families)
Rent vs. Own

**Owner-Occupied**
~206 units (33.9%)

**Renter-Occupied**
~401 units (66.1%)
Single Motherhood Rate


- Total Families in Study Area: ~317
- Single Females with Children: ~95
- Percent of Families with Single Mother: ~30.0%

Marital Status:
- Married: 24.18%
- Never Married: 31.60%
- Divorced: 15.20%
- Widowed: 6.85%

Source: US Census Bureau, 2011-2015 American Community Survey

Legend:
- Lift Orlando
- Single Female with Children: 95.05 females (12.8% of all females in the study area are single mothers)
Unemployment Rate

Employment Rate

81.7% (Zip Code 32805)

Labor Participation Rate

- In Labor Force: 10,024 (58.0%)
- Not in Labor Force: 6,996 (41.1%)

Time Series: Unemployed Persons in Study Area

- Source: DC, US Census ACS
Zero-Vehicle Households
Vacant Parcels

Publicly-Owned and Civic
Roadway Characteristics
Zoning

Future Land Use
Appendix 3

Source Documentation
European Center for Health Policy, WHO Regional Office for Europe  
Gothenburg Consensus Paper (1999)  
Retrieved from: http://www.who.int/hia/about/defin/en/

National Research Council  
HIA Toolkit, p.4 (2011)

Williams, McClellan, & Rivlin  
Beyond the Affordable Care Act: Achieving Real Improvements in Americans' Health (2010)  
Literature Link: https://www.ncbi.nlm.nih.gov/pubmed/20679651

American Planning Association  
Benefits of Street-Scale Features for Walking and Biking (2015)  
Retrieved from: https://www.planning.org/nationalcenters/health/streetscale/

The British Medical Journal  
Association between Active Commuting and Incident Cardiovascular Disease, Cancer, and Mortality: Prospective Cohort Study (2017)  
Retrieved from: http://www.bmj.com/content/357/bmj.j1456

Gregg, Gerzoff, & Caspersen  
Retrieved from: http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/215742

Bassett Jr., Pucher, Buehler, Thompson, & Crouter  
Walking, Cycling, and Obesity Rates in Europe, North America and Australia (2008)  

Smart Growth America  
Dangerous by Design (2017)  
Retrieved from: https://smartgrowthamerica.org/dangerous-by-design/

SRTS National Partnership  
Bridging the Gap, Income Disparities in Street Features that Encourage Walking (2012)  

Welsh & Farrington  
Effects of Improved Street Lighting on Crime (2008)  
https://www.campbellcollaboration.org/media/k2/attachments/Welsh_Streetlight_review_corrected.pdf

Oregon State University  
Pedestrian Collision Countermeasures (2006)  

United States Environmental Protection Agency  
Reducing Urban Heat Islands: Compendium of Strategies (2014)  

Hwang, Lin, & Matzarakis  
Mitigation of the Heat Island Effect in Urban New Jersey (2005)  

Solecki, Rosenzweig, Parshall, Pope, Clark, Cox, & Wiencke  
Mitigation of the Heat Island Effect in Urban New Jersey (2005)  
14 Howarth & Hoffman
A Multidimensional Approach to the Relationship between Mood and Weather (1984)

15 US Occupational Safety and Health Administration
Occupational Health Exposure: Heat-Related Illness and First Aid (n.d.)

16 United States Environmental Protection Agency
Using Trees and Vegetation to Reduce Heat Islands (n.d.)

17 Bassett, Jr., Pucher, Buehler, Thompson, & Crouter
Walking, Cycling, and Obesity Rates in Europe, North America, and Australia (2008)

18 Strawbridge, Deleger, Roberts, & Kaplan
Physical Activity Reduces the Risk of Subsequent Depression for Older Adults (2002)

19 McConville
Retrieved from: https://cdr.lib.unc.edu/indexablecontent/uuid:d3aa04d6-b64e-46d8-a334-357ac9d94e

20 Centers for Disease Control and Prevention
National Center for Environmental Health, Program Overview (2015)
Retrieved from: https://www.cdc.gov/nceh/information/built_environment.htm

21 The White House
Let’s Move! (2012)
Retrieved from: https://letsmove.obamawhitehouse.archives.gov/

22 Ho, Payne, Orsega-Smith, & Godbey

23 Payne, Orsega-Smith, Roy, & Godbey
Local Park Use and Personal Health Among Older Adults: An Exploratory Study, p. 23 (2005)

24 Cohen, McKenzie, Sehgal, Williamson, Golinelli, & Lurie
Contribution of public parks to physical activity (2007)

25 Evenson, Block, Roux, McGinn, Wen, & Rodriguez

26 LaFrance & Twersky
27 Fight Crime: Invest in Kids California
California's After-School Commitment: Keeping Kids on Track and Out of Trouble (2010)
Retrieved from: https://issuu.com/think_together/docs/fight_crime__california_s_after-school_commitment

28 World Health Organization
Ambient (Outdoor) Air Quality and Health Fact Sheet (2016)

29 United Health Foundation
America's Health Rankings (2013)

30 Robert Wood Johnson Foundation
Going Beyond Clinical Walls: Solving Complex Problems (2014)

31 University of California, Berkeley
Structural Radicalization and Food Insecurity in the United States (2013)

32 Virginia Commonwealth University & the Robert Wood Johnson Foundation
Education: It Matters More to Health than Ever Before (2014)

33 The Urban Land Institute
Intersections: Health and the Built Environment (2013)

34 East Central Florida Regional Planning Council, Impact Partners, LLC
Community Health Needs Assessment (2016)

35 Breyer & Voss-Andreae
Food Mirages: Geographic and Economic Barriers to Healthy Food Access in Portland, Oregon (2013)

36 Centers for Disease Control and Prevention
Community Health Status Indicators (2015).
Retrieved from: https://www.cdc.gov/communityhealth

37 California Department of Health
Healthy Communities Data and Indicators Project (2013)

38 Lournoy & Treuhaft
Healthy Food, Healthy Communities: Improving Access and Opportunities through Food Retailing (2005)

39 City of Orlando
Green Works Program (2010)
Retrieved from: http://www.cityoforlando.net/greenworks/food-systems/
90

United States Department of Agriculture
The School Day Just Got Healthier (2017)

Scott, Boyle, Eckley, Lehman, & Wolfert

Ferrell

Active Living Research
Walking and Biking to School, Physical Activity and Health Outcomes (2009)

Atkinson, Baldiga, Beck, Bolte, Crothers, Stover, & Williams
School Idling Reduction Team: Idling Gets You Nowhere, Turn Off Your Engine (2010)

DiMaggio & Li
Effectiveness of a Safe Routes to School Program in Preventing School-Aged Pedestrian Injury (2013)
Retrieved from: http://pediatrics.aappublications.org/content/pediatrics/131/2/290.full.pdf

Active Living Research
Impacts of Safe Routes to School programs on walking and Biking (2015)

Stewart, Moudon, & Claybrooke
Multistate Evaluation of Safe Routes to School Programs (2014)

CLASP
Five Strategies to Help Low-Income Adults and Youth Attain Community College Credits (2010)

Lens & Meltzer

Farrington & Welsh