Healthy Communities Research Group
Surveillance and Management Project
Findings Summary
December 2013

Acknowledgements

This project is a joint community effort of a variety of Liberty Parks and Recreation Department staff, Liberty city staff, Clay County Public Health staff, Liberty Public Schools staff, Liberty Hospital staff, community stakeholders, consultants, and researchers.

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Thank You to all of the City and County's Participating Partners and Stakeholders in the Community!

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Executive Summary

The Liberty Parks and Recreation Department, along with key strategic partners in the City and community, including the Clay County Public Health Department, Liberty Public Schools, and Liberty Hospital, launched the first year of the Healthy Communities Surveillance and Management Project in early 2013 with the non-profit organization, GP RED. The purpose of the three-year project in Liberty is to engage the community and stakeholders in an effort to reduce obesity in youth between the ages of 10 and 14 through a community-wide, systematic process that identifies policy, programmatic, and environmental changes which lead to more options for increasing healthy eating and active living in the city.

Throughout Year One, the Healthy Communities Research Group and the Liberty team collected key health and demographic data in the City and County, and identified strengths, opportunities, partnerships, and associations for alignment in the effort. The following Findings report outlines the information gathered through community meetings and resources that provided a range of data which the team used to evaluate the status of youth in Liberty, as well as overall demographic and health-related information at the school-district, county, regional, and state levels.

Through targeted activities, including the Multi-Attribute Utility Technique (MAUT: See Section III.), the Assets and Affordances Inventory and Analysis (See Section VI.), financial and policy analysis (See Section V.), and community meetings, the following findings and key focus areas for discussion and visioning in Year Two were identified:

- There are many non-profit and other organizations offering services in Liberty – How can LPRD facilitate the improved availability of programs and services by partners and other agencies for this target age group? For example, from the conversations held in March and June, stakeholders shared that there were yoga studios and other businesses in Liberty that youth found appealing, but could not safely access unless driven by an adult. Is there an opportunity to explore partnerships to bring some of those activities to the Community Center or other easily accessible facilities?

- Liberty School District has a wellness policy that outlines basic guidelines for creating a wellness committee, nutrition guidelines, nutrition and physical education, and other school based activities. Is there an opportunity to articulate clear shared City and District goals for youth that increase healthy food options and availability, enhance physical education and activities during the day, explore a shared Safe Routes to School program and funding strategy with the City, and engage youth in the process of developing these goals? Is there any potential to explore Farm to School education and school gardens aligned with educational strategies?

- The findings show that walkable access to assets and programs are a challenge in many parts of the City. The assets inventory and analysis concluded that there are many viable trails and open spaces held under the jurisdiction of private homeowners associations throughout Liberty that may serve as valuable connections. Given that connectivity was voiced as a significant barrier to youth, should this be an area of focus to address walkability and connectivity – providing safe alternative transportation routes? If so, what is the low-hanging fruit? How do we increase that in the coming five years? Given that the City has not drafted policies or regulations supportive of complete streets, is this a near-term goal to explore?

- Community and stakeholder input suggest that various assets and affordances within Liberty would benefit from upgrades to facilities and enhancements to the parks and trails, including more shade trees and structures, and non-organized, non-competitive activities and programming that appeal to families and youth. How much funding is available within the CIP budget, and if there is not sufficient funding currently, how can Liberty staff advocate for additional dollars to strengthen the budget?

- Review of the Unified Development Ordinance did not produce any strong language regarding regulation of pedestrian and bicycle access into any allowed uses within the zoning districts. Is there language within the Street Design guidelines or in another regulatory document being used by the City to mandate construction and context-sensitive design for sidewalks and/or bike lanes in every zone district, where appropriate?

- Availability of nutritious food options is a key factor for this study. What type of stance or guidelines should the Department create related to food availability, vending machine policies, and food brought in for events or meetings? One observation that was repeatedly voiced during the stakeholder meetings is the over-abundance of fast-food chains in Liberty, along with a lack of healthy food options. How can Liberty identify strategies to increase healthy food vendors through policies, economic development incentives, mobile food vendor regulations and promotion, and encouragement of farmer's markets and community gardens?

- The Liberty Parks and Recreation Department's perceived strengths include providing sports and drop-in programs and day camps. Given that walkable access to programs is a key issue, what areas should be the focus for enhanced programming?

- We now have a lot of warrant information and basic assets and affordances information. How do we get more community-specific information and better financial tracking in Year Two?

- How do we improve the culture in Liberty to empower youth and engage parents? There are several advocacy professionals and/or groups operating throughout the school district: Discovery Middle School – Peer Helpers & Breakfast Club, Liberty High School – Breakfast Club, and Liberty North High School – Prevention Coordinator Advocate. How can we bring these groups into the discussion for input?

- Obtaining information to make informed and evidence-based decisions – in an age of information explosion, it is essential to secure data that informs and engages managers, service providers, and partners of needs, best practices, outcomes, and impact of the services provided to community residents. There has been a notable lack of community-based input on the project from families and youth in Liberty. Stakeholders are concerned that valuable input is not being furnished, but efforts to advertise for events held during the project team site visits are not garnishing an audience. What other methods or strategies can be employed to bring this contingent of the community to the table?

- The largest age groups in the City of Liberty are those ages 22-54, followed by 5-13. Planning for the next ten years suggests a growing demand for focus on programs and services for young adults and Baby Boomers. What can LPRD do to plan and implement programming and enhanced assets for these groups, especially from ages 5 to 13?

- Policy review and analysis (formal and informal) – At the core of planning, management, and decision making are positive policies that create an agency and community climate directed at individual and collective wellness, improved service levels, direct understanding of their impact on personal health, and overall contribution to the "healthy community" as measured by selected indicators. Does the stakeholder team in Liberty agree that there is opportunity in the policy framework of the City and the School District to explore positive policy development? Since there are no Parks and Recreation Department policies relating to character building, should this be a consideration of LPRD to develop these policies?

- Access, inclusion, and capacity building of all children and youth – in the healthiest of communities, there are few barriers to accessing services, programs, and especially physical and natural places to sustain an active lifestyle. Further, the measure of a healthy community should be directed at outcomes that are aimed at increasing the physical, emotional, intellectual, cultural, and social capacities of the target population. Is there strong support from the project stakeholders to examine methods to address the continuum of options that will support healthy development of youth in Liberty? Given the concerns voiced in June, are there opportunities to explore public campaigns to inspire reduced screen time for youth, while encouraging them to get outdoors for physical activity, relaxation, and education?

The project team will focus its efforts in the coming months to engage stakeholders and partners in the community, and evaluate the findings in order to draft a Warrant for Agency Action (See Section II.). Together, the group will discuss potential policy, programmatic, and environmental opportunities to focus on that influence healthy eating and active living for youth in Liberty. The Year One Report will be completed in Liberty in March, 2014, and the project team will initiate Year Two soon thereafter.

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I. Introduction

Childhood obesity is a serious, growing epidemic, cutting across all categories of race, ethnicity, family income, and locale. Obesity rates have tripled in the past 30 years – a trend that means that for the first time in our history, American children may face a shorter expected lifespan than their parents. Additionally, the U.S. spends $150 billion every year to treat obesity-related conditions, with childhood health care costs rapidly increasing that number.

Researchers have estimated that 17 percent of children and adolescents ages 2 to 9 are obese, and that 31.7 percent are overweight. This translates to more than 12 million children and adolescents who are obese, and more than 23 million who are overweight.

Alarmingly, the obesity problem is starting at an even earlier age, with researchers estimating that 21.2 percent of children ages 2 to 5 are already obese or overweight, a percentage that has more than doubled during the past three decades. The obesity rate for children ages 6 to 11 has more than quadrupled (from 4.2 to 19.6 percent), and it has tripled for adolescents ages 12 to 19 (from 4.6 to 18.1 percent) over the past four decades.

A. Background of the Healthy Communities Surveillance and Management Project

Since 2009, the **Healthy Communities Research Group** (GP RED and Indiana University Bloomington, along with Indiana Parks and Recreation Association, the Bloomington Parks and Recreation Department, GreenPlay, Design Concepts, and Beta Site communities) has been working together to develop and test the **Healthy Communities Surveillance and Management Project.** The project targets the community aspects that influence obesity and active living. The initial "alpha project," in Bloomington, Indiana, was successful, and the methods are now being integrated into a training process and toolkit to be applied to additional "beta" site communities for further refinement, testing, and implementation in the future.

What is the Project About?
The Healthy Communities Project helps parks, recreation, and related departments and agencies assess, analyze, document, and evaluate five elements related to the repositioning of parks and recreation as a primary preventative community public health provider:

- **Creating a Warrant for Agency Action** – Why? Who? What is the Impact?
- **Convening Community Stakeholders and Champions** – Residents? Partners? Providers?
- **Policies, Laws, and Procedures** – What is influencing active living?
- **Fiscal Resources and Distribution** – What funds? How should they be allocated?
- **Inventory of Assets and Affordances** – Programs? Parks? Facilities? Food?

> **Beyond Health**
> **The Economy of Obesity**
> A high population of obese youth leads to a high population of obese adults. According to 2009 studies of 187 U.S. metro areas, *The Gallup Management Journal* estimates that the direct costs associated with obesity and related chronic conditions are about $50 million per 100,000 residents annually in cities with high rates of obesity. The direct and additional hidden costs of obesity are stifling businesses and organizations that stimulate jobs and growth in U.S. cities.

From an analysis of these elements, the project moves to creation of a systems portfolio, strategic concepts for improvement, and future modeling for the purposes of articulation, prioritization, management, and surveillance of outcomes over time.

We are pleased to be working with the project team in Liberty, including Liberty Parks and Recreation Department, Clay County Public Health, Liberty Public Schools, Liberty Hospital, and its partners. For this Beta Site project, we are focusing on youth in the community, **ages 10-14**. The methodology is transferable to all age groups, but we feel that this is the time of life in which we can evoke the greatest level of change, and there was a need to pick a measurable target age group to test the process and Toolkit. This is when youth are just starting to look outside parental guidance to make their own decisions, and are becoming more aware of their environment, options, and choices. If we can create opportunities and an environment that promotes good lifestyle choices and activity, we can contribute to their likelihood of increased movement, and therefore, reduced incidence of obesity.

B. Summary Overview of Year One Project Methodology and Schedule

Project Tasks & Milestones	Dates
Initial Planning Meetings with Staff and Stakeholders	Mar 12-13, 2013
Data collection and research	March – December, 2013
Staff and Stakeholder initial trainings and information gathering meetings, MAUT exercise	June 23-25, 2013
Presentation of Summary Findings, Trainings, and Visioning Sessions with Staff and Stakeholders	October 15-16, 2013
Drafting of Year One Recommendations, Impact Simulation, and Stella Modeling	November – February 2014
Year One Report of Project to Staff and Stakeholders	March, 2014

Details of each of these steps can be found in the following sections.

> *Note that this project is a three-year project. Year One is primarily for identifying and convening stakeholders, data collection and research, and initial findings compilation; identifying gaps in available information; and developing initial recommendations, modeling scenarios, and action strategies. Years Two and Three will continue to create and validate additional data collection strategies, provide additional training for staff, test the modeling scenarios, and evaluate the performance from the implemented strategies.*

The full project is also a continuing test, validation, and refinement of Beta testing of *The HCRG "Surveillance and Management Toolkit."*

II. Developing a Warrant for Agency Action

A. Introduction to the Warrant Development Process

As we enter this phase of the process of creating a systems approach to reducing childhood obesity in Liberty, Missouri, it is critical to develop a *warrant for the agency's action*. This process would entail gathering "evidence" and facts supporting claims that action is needed to address critical community, social, public health, and individual problems. In this case, the focus is on youth ages 10-14 years old in Liberty. What is needed is a document that will serve as the mandate to direct or redirect resources to increase human capacity and quality in lives, prevent the onset of lifestyle related illnesses and diseases, and save precious health care costs over the life of your citizens, businesses, and public agencies. *Figure 1* illustrates the connectedness of components involved in creating the warrant for agency action.

Figure 1: Connectedness Components
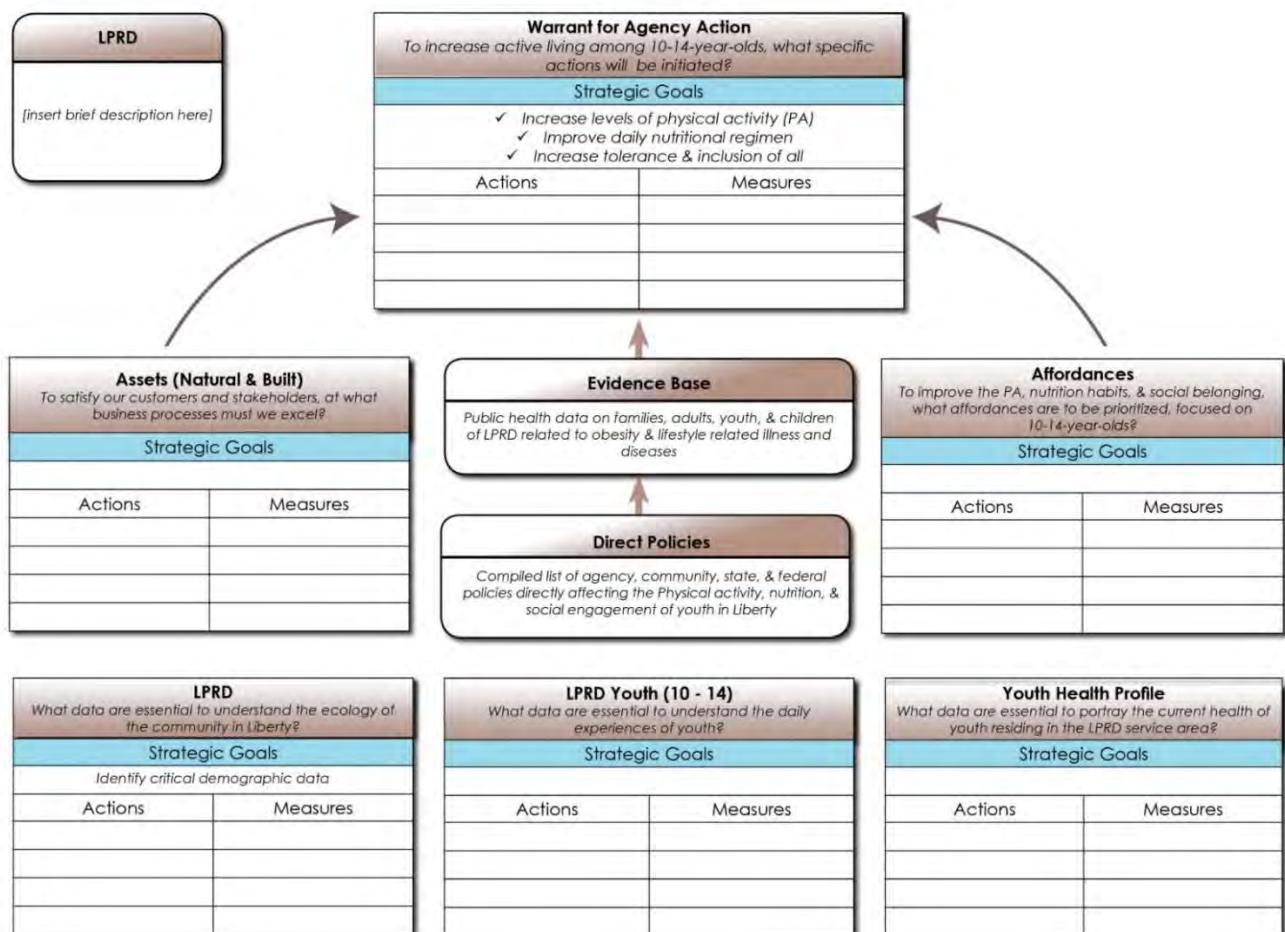
Adapted from the Balanced Scorecard by Robert S. Kaplan and Dave P. Norton. Harvard Business School Press.1996.

> The Project Needs a Name as it moves forward. Suggestions for an appropriate name can be part of the Year One Visioning Sessions.

Step 1: The warrant goals

Step 1 entails crafting of strategic goals for the Liberty Goals are simply stated as statements of direction and intent and are not measureable. We recommend listing a few (2-4) strategic goals which are determined by consensus of agency members and community stakeholders. An example of strategic goals for this step is illustrated below. Specific actions accompany each goal, which will be used to accomplish them. For each action listed, there should be a companion set of outcome measures. What do you expect to occur, when, and by whom?

Warrant for Agency Action	
To increase active living among 10-14-year-olds, what specific actions will be initiated?	
Strategic Goals	
✓ Increase levels of physical activity (PA) ✓ Improve daily nutritional regimen ✓ Increase tolerance & inclusion of all	
Actions	Measures

> **Note: Drafting of these goals is the intended outcome of the Findings and Visioning Sessions taking place on October 16th 2013– to be included in Year One Action Plan.**

Step 2: Description of Liberty, Missouri

In this step, we need to prepare an overview of Liberty and the agency's service area. We are particularly interested in the following information, which is often readily available in city or county records:
- ✓ General description of the municipality and the surrounding area.
- ✓ Population of the municipality/county and/or service area.
- ✓ Socio-demographic information on the composition of the community (e.g.) age distribution, average income, unemployment rate, ethnic composition, etc. These records are in federal census data, municipal data sets, and state records.
- ✓ Health status of the residents of Liberty, Clay County, and service area. Again, these are readily available from federal, state, and local public health records. Some key web links for this information include:
  - ▪ http://www.countyhealthrankings.org/app/missouri/2013/clay/county/outcomes/overall/snapshot/by-rank
  - ▪ http://kff.org/statedata/?state=MO
  - ▪ http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml
  - ▪ http://wwwn.cdc.gov/CommunityHealth/Demographics.aspx?GeogCD=29047&PeerStrat=11&state=Missouri&county=Clay
  - ▪ http://www.clayhealth.com/Default.aspx?ID=8f86673e-a2e8-4651-8967-819a3a5cad55
- ✓ Municipal strategic plan for Liberty and Clay County, Missouri.
- ✓ Description of the Liberty Parks and Recreation Department.
- ✓ Inventory and appraisal of assets and affordances under the LPRD control.
- ✓ Inventory of existing policies (formal and informal) used in delivering existing services to youth ages 10-14 years.

- ✓ Inventory of existing partnerships and collaboration with community agencies who serve youth and provide services that would affect physical activity, nutritional behaviors, or social engagement of youth.
- ✓ Listing and description of agencies in the municipality or service area that specifically serve youth ages 10-14 years. It is important to identify those who provide a comprehensive list of health, public health, counseling, and other services essential to developing and maintaining healthy youth such as specialty clinics, clubs, organizations, and services that augment or complement the services of your agency. Additionally, the list of assets and affordances provided by each will be very important in building the management model to increase access, utility, and opportunities to sustain an active, safe lifestyle in Liberty.

This information is to be utilized to craft a case statement that will be used in the warrant for agency action, as well as any journal articles, future grant submissions, and in the final report. This section should not exceed 5-10 pages, yet should contain references/links that direct interested parties to the appropriate appendices or websites.

> **Note: This descriptive information for LPRD is included in the following sections of this document.**

Step 3: Gathering additional essential information to support the warrant for agency action

One of the most important steps is to gather additional information on the health of citizens in the community in the years following the plan. This can be completed over time by using well established practices to conduct a Health Impact Assessment (HIA). According to the Centers for Disease Control and Prevention (CDCP) (http://www.cdc.gov/healthyplaces/), there are seven major steps in conducting an HIA. GP RED's HCRG has refined these steps and tailored them to the LPRD.

These include:
1) *Screening* (identify projects or policies)
2) *Scoping* (narrow down which health effects are priorities)
3) *Assessing* risks and benefits (to the 10-14 year old population and how they are being affected)
4) *Advancing* recommendations for policy, programmatic, and environmental actions to change (current obesogenic behaviors of youth in this case)
5) *Reporting* using ongoing surveillance methods
6) *Reporting* (presenting the results to agency decision-makers)
7) *Evaluating* (measuring the effects on obesogenic behaviors)

According to the CDCP, *"HIAs are similar in some ways to environmental impact assessments (EIAs), which are mandated processes that focus on environmental outcomes such as air and water quality. However, unlike EIAs, HIAs can be voluntary or regulatory processes that focus on health outcomes such as obesity, physical inactivity, asthma, injuries, and social equity. An HIA encompasses a heterogeneous array of qualitative and quantitative methods and tools. Rapid HIAs can be completed in a few days or weeks; full HIAs may require months to complete. The decision to conduct a rapid or a full HIA is often determined by the available time and resources."* (http://www.cdc.gov/healthyplaces/) Further information about using the HIA approach can be obtained from the proceedings of a major workshop held on the topic and sponsored by the Robert Wood Johnson Foundation at http://ajph.aphapublications.org/cgi/reprint/96/2/262.pdf.

Inventory of Assets

In this step, LPRD worked with Design Concepts and GreenPlay to create a detailed and codified inventory of its assets (natural and built). These data are essential to creating the Stella systems model and for management decisions. We are particularly interested in determining where the assets are located. This will be completed using GIS technology and provides critical information about the proximity of the asset to the study group of 10-14 year olds and their families. Templates have been provided for agency use, along with instructions on the level of specificity required.

Assets are divided in to two major categories (natural and built). While some natural assets (e.g.) park, lake, etc., may have built assets located in their designated area, it is important to work closely with the consultants from Design Concepts to codify each properly. Templates are provided to enter data and training sessions will offer guidance and respond to questions.

Again, it is important to identify the goals, specific actions, and outcome measures. We recommend listing a few (2-4) strategic goals which are arrived at by consensus of agency members and community stakeholders. Strategic goals are accompanied by specific actions which will be used to accomplish them. For each action listed there should be a companion set of outcome measures. What do you expect to occur, when, and by whom?

Inventory of Affordances

LPRD has utilized the HCRG template to conduct an inventory of the agency's affordances. We use the term affordances to mean what your agency provides its citizens through: a) formal programs, events, leagues, classes, etc.; and b) preventive and health promoting services such as screening clinics, farmer's market, community gardens, immunization services, health counseling, etc. either directly from your agency or in cooperation with another health, public health, or medical agency. Please identify the cooperating or collaborating agency or agencies.

Again, it is important to identify the goals, specific actions, and outcome measures. We recommend listing a few (2-4) strategic goals which are arrived at by consensus of agency members and community stakeholders. An example of affordance goals are illustrated below. Strategic goals are accompanied by specific actions which will be used to accomplish them. For each action listed, there should be a companion set of outcome measures. What do you expect to occur, when, and by whom?

> **Note: A complete overview of the Assets and Affordances data collection process and findings are included in Section VI.**

Liberty Youth Health Profile
In this step, it is critical to obtain information on the health of youth ages 10-14 in Liberty and the immediate service area. This will also require information from the city, county, and federal government. These data are not always available in the precise manner required, but there are several key sources from which they can be obtained including:

- ✓ US Census Office
- ✓ Behavioral Risk Factors Surveillance System (BRFSS)
- ✓ State of Missouri
- ✓ Clay County records
- ✓ Liberty municipal records
- ✓ Liberty School District
- ✓ Liberty Hospital
- ✓ http://health.mo.gov/data/CommunityDataProfiles/index.html
- ✓ http://apps.nccd.cdc.gov/youthonline/App/Results.aspx?LID=MO

> **Note: The Health Profile information for Liberty is included in Section IV.**

LPRD Youth (10 - 14)	
What data are essential to understand the daily experiences of youth?	
Strategic Goals	
Actions	Measures

LPRD Youth (10 - 14)	
Youth Health Profile	
What data are essential to portray the current health of youth residing in the LPRD service area?	
Strategic Goals	
✓ *Decrease risk factors of Liberty youth*	
Actions	Measures/Outcomes

Identifications of strategic directions of the Liberty Parks and Recreation Department
In this step, the agency is requested to provide documents which articulate the strategic directions of your agency. Typical documents would include a master capital facilities plan, a program planning document, accreditation documents (CAPRA), manuals of operations, agency policies and procedures manual, etc.

Of particular importance are those documents that contain policies and procedures for

Warrant for Agency Action	
To increase active living among 10-14-year-olds, what specific actions will be initiated?	
Strategic Goals	
✓ *Increase levels of physical activity (PA)*	
✓ *Improve daily nutritional regimen*	
✓ *Increase tolerance & inclusion of all*	
Actions	Measures

carrying out the mandate of the agency. Additionally, it is critically important to have a copy of the budget and categorical sources of funding. Policies are to be entered to the template provided. The budget will be entered into another template that is vital to creating the Stella® model. The HCRG team will train and assist LPRD staff in entering the data into Excel spreadsheets used for systems modeling.

Policies Directly Affecting Physical Activity, Nutritional Habits, and Social Engagement of Liberty Youth

Direct Policies

Compiled list of agency, community, state, & federal policies directly affecting the Physical activity, nutrition, & social engagement of youth in Liberty
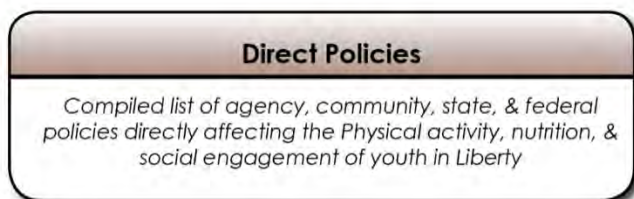
The first action for this step is to identify and codify all formal and informal policies that are directed at youth and their health, safety, well-being, and involvement in the affordances available in the community. A nominal group technique called the Multi-Attribute Utility Technique, or MAUT, will be used for LPRD staff, associated agency personnel, and stakeholders. The MAUT exercise requires the group to rank factors and indicators that are most important in changing present policies and professional practices that lead to the reduction of obesogenic behaviors among youth in Liberty. The following five factors will be considered: the Nutritional Regimen, Social Interaction, Transportation Services, Physical Activity, and Safety of Liberty Youth. From this effort, it is expected that the LPRD and stakeholders would then subsequently select one policy to address each of the five factors that would serve as the basis for building the systems management model.

Policy/Practice/Outcome Cycle

Youth behavioral outcomes
- Targeted outcomes measured
- Report of interim progress
- Revision in strategies

Policy formulation & adoption
- Analysis of current policies
- Conversion to "positive" policy
- Adoption
- Implementation
- Evaluation of utility & impact

Systems surveillance
- Criteria for impact analysis
- Data collection
- Analysis of data
- Modeling of trends
- Review by staff

Evidence based practices
- Information campaign
- Training of staff
- Ongoing input from staff, youth & parents
- Evaluation of practices
- Evidence base

South Bend Beta 2/26/13 dmc

An Evidence Base for Addressing Obesogenic Behaviors of Liberty Youth

In this step, there has been a review of the literature to provide a written document supporting the warrant for agency action. In this section, the HCRG seeks to identify not only the data supporting the economic impact of obesity among our children and youth, but also evidence that selected management strategies, systems analysis, and outcome evaluation create long term solutions to the pandemic of obesity in America. A section of the warrant for agency action will refer to and contain this evidence base.

Step 4: Prepare draft of warrant for agency action

GP RED's HCRG will prepare draft content of the warrant for agency action to be included in the Year One report from the information obtained in Steps 1-3. This document will appear as a review and brief summary of factors that are indicators of a "healthy community" and those that appear to detract or serve as barriers. This will provide information to the agency to be used in the process of creating, developing consensus for, and reviewing the initial draft agency warrant for action. This document is a product of the LPRD and its community partners.

The LPRD Warrant for Agency Action will be documented with sources provided by Liberty, as well as references from the literature to offer compelling evidence from research, federal and state initiatives, and the healthy communities projects from across the nation.

The final Year One report will contain several sections including:
1. Identification and Convening of Key Stakeholders.
2. The Youth of Liberty: A profile – including challenges to our youth, community, and quality of life, along with the impact of obesity on our youth.
3. Why we need to act now.
4. What actions will be taken by LPRD and its community partners.

Step 5: Agency review and approval of warrant for agency action

Staff of GP RED's HCRG will present a draft warrant for agency action to the LPRD for their review. The process for review of the document will be determined by the LPRD. An approved document will then be used to craft the systems model, and identify critical policies that would directly affect a 10-14-year-old's physical activity, nutrition, and/or social engagement. This document will serve as a critical part of a strategic initiative to improve active living and health status and potentially reduce health care costs for this, and following youth age groups.

Step 6: Securing support for the Actions and Implementation

Once the agency action document has been vetted through the agency and governmental oversight entities, it will be essential to secure the endorsement of others in the community who share the initiative and its potential effects on youth in Liberty. This support may come in different forms. It is deemed very important to have an official signing ceremony where the recommendations are officially accepted and/or adopted not only by LPRD but the respective commissions, councils and mayor, county officials, etc.

> *A copy of the **Michigan Healthy Communities Toolkit,** which outlines some of the possible methods of support building (but is not parks and recreation specific), has been provided to staff as an additional Resource Document.*

In addition, it is important to obtain letters of support from collaborators and partners who are currently involved in, or agree to become involved in, projects, activities, events, programs, etc. It may be very important to obtain support in the form of letters from children, parents, teachers, health care professionals, business executives, etc.

Future Information Gathering
While funding and resources were not identified as priorities in Year One of this Initiative, LPRD and the Liberty School District will conduct a representative sampling of youth in the City and the service area to determine the current levels of physical activity, nutritional regimen adherence, and social engagement of youth 10-14 years of age. This survey instrument is being developed by HCRG team members, and will be reviewed and approved by LPRD and Liberty School District prior to administration in early 2014. Participants in the survey would be selected in accordance with established sampling procedures to ensure compliance with federal, state, and municipal laws, as well as survey research protocols. It is expected that students from each of the three Liberty Middle Schools will participate in the survey, with written consent from their parent or guardian. The HCRG will design the survey instrument to be used on the web as an electronic survey. As well, the HCRG will prepare a manual for selecting the sample, managing the survey process, and collecting the survey responses, along with compiling the results to submit a report to LPRD.

B. Draft Outline for the Warrant Process for Agency Action

To start drafting the Warrant for Liberty, the HCRG and staff began addressing the following topics to see what information was available and what was missing. This process will also help determine the importance of collecting missing information in the future, and the return on investment of resources that will be required to do so. Research has been, and is being, conducted on the following items.

- ❖ **Obesity: Implications for public health and the economy**
  - ➢ Prevalence
  - ➢ The outlook if we continue on the same course
  - ➢ Public health and lifestyle related chronic illness
  - ➢ Health care costs
  - ➢ Economic impact
  - ➢ Other implications (learning, occupational outlook, etc.)

- ❖ **Liberty, Missouri: How healthy is this community?**
  - ➢ CDCP and other key indicators
  - ➢ Obesity profile
  - ➢ Chronic illness and lifestyle related diseases

- How do we compare to the State of Missouri? The United States?
  - Air quality
  - Water quality
  - Access to health care
  - Smoking rates
  - Unemployment rate
  - Education level
  - Public safety
  - Immunization rates
  - Sedentary living index

- **What are the critical factors to become a "Healthy community?"**
  - Positive policies (formal and informal) promoting healthy behaviors
  - Coordinated, sustainable strategic planning
  - Inventory and codification of assets and affordances
  - Regular appraisal of goal and outcome accomplishment
  - Community agency collaboration and partnerships
  - Use of evidence-based best practices in service delivery
  - Access to active lifestyle assets
  - Level of physical activity
  - Healthy nutrition options
  - Level of social engagement

- **Where is Liberty, Missouri in relation to other communities of comparable size on essential factors of a healthy community?**
  - Obesity prevalence and incidence
  - Public policies aimed at addressing the obesity issue among its children
  - Assets and affordances linked to children and youth
  - Public health indicators e.g. water and air quality, crime statistics, access to preventive health services, etc.
  - Sustainability of current and/or planned efforts to change behaviors related to obesity
  - Management practices employed to reach all children and youth
  - Funding per capita of services to children and youth
  - Measurement of outcomes and behavioral change

- **Community commitment to a "Healthy Liberty, Missouri"**
  - Formal declaration(s) of Healthy Liberty through formal and informal policies
  - Partners and collaborators letters of support
  - Designation of the Healthy Liberty planning and oversight committee
  - Confirmation of multi-level stakeholders to participate in community and neighborhood Healthy Liberty teams

- ❖ **What benchmarks and outcomes do we seek to change as a sentinel healthy community?**
  - ➢ Current and desired health benchmarks by target groups, areas, and Liberty community
  - ➢ Strategic outcomes (policy, environmental, health behaviors, asset and affordance related, economic, etc.)
  - ➢ Management approaches to creating and sustaining the healthy community
  - ➢ Impact and evaluation approaches to measure progress toward goals and specified benchmarks
  - ➢ Timeframe in which we envision this plan being ready for implementation
  - ➢ Timeframe of examining benchmarks, outcomes, and management practices

- ❖ **What actions must be undertaken to achieve the benchmarks**
  - ➢ Liberty Park and Recreation Department
    - ▪ Management
    - ▪ Staff
  - ➢ Community partners/collaborators
  - ➢ Liberty elected officials
  - ➢ Boards and commissions
  - ➢ District and local school agencies
  - ➢ Public health and health care providers
  - ➢ Social services and juvenile justice agencies

III. Identifying, Engaging, and Convening the Relevant Community

A. Stakeholder Engagement and Meetings

One of the first steps of this project is to identify and convene meetings with the staff, stakeholders, partners, and community members who are and/or should be involved.

1. Summary from the Stakeholder Engagement Meetings

This project targets youth, ages 10-14, so we wanted to meet with, engage, inform, and gather information from any relevant stakeholders for that age group. The primary week of initial information engagement was March 11-13, 2013. HCRG team members were on site, and a variety of meetings and focus groups were held.

Tuesday (12th)	9:00 – 12:00 pm	**Staff orientation and Templates Training**
	1:30 – 3:30 pm	**Focus Group with Educators/Other Service Providers/Stakeholders**
	6:00 – 8:00 pm	**Community-Wide Public Meeting**
Wednesday (13th)	9:30 – 11:30 am	**Wrap-up meeting with Liberty staff and Project team**

Participants from The City's Community Development Office, Liberty Schools, and Clay County Public Health Department attended and participated in the stakeholder engagement meetings (the sign-in sheets were compiled and are available from the Department), in addition to most members of the Liberty Parks and Recreation programming, administrative, and parks maintenance staff. A summary of comments (not formally edited or prioritized) from the four different meetings has been drafted into emerging categories and is provided below.

2. Strengths – What is Working Well in Liberty Relative to Active Living and Programming for Youth?

Strong working partnerships between the City and Stakeholders
- New prescription for health program being explored with hospital
- Great working relationship with public schools for buildings and facilities access
- School wellness policies assessments with recommendations, we hope it supports the schools to move forward
- Increased awareness by the school district about physical activity and the value of policies to support it
- Great William Jewell Physical Education program
- Strong scouting community, large troops (good alternative provider)
- Strong church youth base
- Pleasant Valley Baptist Church has strong center
- Youth Friends Program (for troubled youth – an adult mentors the child)
- School nursing program
- Community health needs assessment from Children's Mercy Hospital
- Health data sharing from Clay County Public Health

Strong community cohesion and connectedness
- Increasing population of youth and many opportunities to invest in their development
- Minimal perceptions of poor safety here, it feels pretty safe
- Parents willing to invest in health for kids
- Quality of Life perception is very high
- Highly educated community with higher incomes

Good existing and new parks and recreation programs and amenities
- A lot of neighborhood parks, and great parks department, who are very receptive to community and demonstrate strong leadership
- Good mix of all ages covered, from toddlers on up and a variety of activities, programs, and services being offered
- Good locus of control with Parks controlling programs and working more directly with kids, and ensuring quality control
- Robust programs (aside from 10-14)
- Good working relationship between cultural arts and athletics, and internal departments with a good balance of offerings
- Competitive with fees being charged vs. private sector costs
- Facility for kids to work out (family fitness center)
- Decent intramural program for age
- Good transportation
- Fitness testing, some reported to state
- Trails plan is essential

3. Areas for Improvement or Attention

Assets Improvements Needed
- Walkability is very dependent on where you live, and there's either great access or none at all with no sidewalks and poor connections, inadequate lighting, etc.
- No efficient public transportation, especially for kids
- Can't get to neighborhood parks unless they're in your backyard
- No city-wide trail system, we need connections that are safe
- Poor connectivity for bicyclists and pedestrians all around the city
- Lack of street connectivity on the other side of the bridge on the south
- Facilities have a lot of gaps, parks need more things for kids to do, more community gathering spaces
- Skate park needs improvement, no facilities for long boarding for 10-15 year olds
- Lack of shade in the parks and along the trails

Need Changes in the City's Culture as Related to Youth and Youth Obesity
- Social norms about food and lack of awareness that there is a problem with weight on kids – why can't we have non-food celebrations?
- Health is out of the curriculum for grades K-5
- Time for recess has diminished
- Need parents to be champions for healthy foods in schools

- Negative attitudes by parents when their kids are overweight
- BMI info that kids get directly can be insensitive to them
- We need to work with parents to get electronic records and not making it appear to be a critique to their parenting skills, but instead start a discussion on how to talk to them about getting into programs to address BMI. Or provide education to parents to talk to their kids directly. When youth make their own food choices, this is a critical time for education
- Need to provide opportunities for physical activity and education, and built environment changes without isolating or excluding youth
- Parents won't let youth out of their sight
- Mental health issues like stress, divorce, blended families, and multi-tasking are taking a toll on kids
- Nature based play is lacking here
- Too much screen time for youth
- Kids don't understand non-programmed play anymore
- Kids don't go outside to play after school
- Missouri is lowest in the nation for public health funding, and our ability to collaborate and lead is minimal

Programming Enhancements
- Elementary gym space may be taken for sports practice teams next year with changes in age at school
- Need more non-athlete play and programming opportunities
- Need more after school programs for middle school kids
- How to market to busy parents with little time to explore new programs and services?
- Excluding sports programs for ages 10 and up is challenging, and when they get older, we lose them because they become more competitive. Beyond sports is worse for age group to find things they want to participate in if not athletic
- We are losing youth to organized activities their parents can afford to place them in and provide transportation

Opportunities for Enhanced Alternative Provider Involvement, Marketing, and Relationships
- MARC – Mid America Regional Council
- North America Managers Office
- Boy/Girl Scouts
- Pleasant Valley Baptist Church
- School nurses
- Nutritionist
- Youth non profit
- Medical
- Other agencies
- William Jewell College
- Public Safety
- HyVee grocers
- Policy makers
- City Officials
- St Luke's

- Children's Mercy Hospital
- Business leaders (chamber of commerce, realtors, developers)
- Media
- PSAs for programs
- Quality of Life factors – school, health, public health system, City, County as the cornerstone of building out the system as the community grows
- Mental health providers
- Work with Neighborhood Associations who have great neighborhood parks and trails
- Schools

Food Availability
- Increase in fast food restaurants, high concentrations in town with few healthy options

B. Identifying and Specifying Desired Outcomes and Indicators

What are the critical factors to become a "Healthy Community?"
There are numerous approaches to creating and sustaining a "healthy community." For nearly 30 years, the United States has set health objectives for the nation. Since 2000, there has been an increased attempt by the federal government to engage in prevention strategies. According to the Department of Health and Human Services (December 2, 2010), "*Healthy People 2020 is the product of an extensive stakeholder feedback process that is unparalleled in government and health. It integrates input from public health and prevention experts, a wide range of federal, state, and local government officials, a consortium of more than 2,000 organizations, and perhaps most importantly, the public. More than 8,000 comments were considered in drafting a comprehensive set of Healthy People 2020 objectives. Based on this input, a number of new topic areas are included in the new initiative, including:*

1. *Adolescent Health*
2. *Blood Disorders and Blood Safety*
3. *Dementias, including Alzheimer's Disease*
4. *Early and Middle Childhood*
5. *Genomics*
6. *Global Health*
7. *Health-Related Quality of Life and Well-Being*
8. *Healthcare-Associated Infections*
9. *Lesbian, Gay, Bisexual, and Transgender Health*
10. *Older Adults*
11. *Preparedness*
12. *Sleep Health*
13. *Social Determinants of Health*"

A comprehensive list of health objectives for the nation serves as precisely defined targets for communities, agencies, and individuals. Of particular importance to the parks and recreation profession are items 1, 4, 7, 10, and 13. As of this date, there are no specific targets for items 7 and 13, but they are being developed. It is suggested that the Liberty effort to create a healthy community start by careful examination of the national benchmarks.

In addition, there are several longstanding efforts by communities across the nation and in Canada to build and sustain healthy communities. Of particular note are the efforts of the Health Improvement Collaborative of Greater Cincinnati (2011). They have a very clear set of procedures and collaborative effort to create community specific indicators of health in their service area, which is considerably larger than Liberty, Missouri. A document that will be quite helpful is the *Indicators of Healthy Communities: A Community Health Assessment for Greater Cincinnati.* This document, as well as Healthy People 2020, is focused on preventing chronic illness, improving access to health care, and assisting the most vulnerable segments of the population.

Liberty and its surrounding service area would be well served to examine the following indicators of healthy cities and communities which are rather clear perspectives from a social, economic, environmental, comprehensive, and practical perspective.

Example – California Healthy Community Indicators
Linda Rudolph, MD, MPH, Deputy Director, Healthy Community Indicators California Department of Public Health (January, 2011) poses the question "What is a healthy community?" The response is as follows: "*A Healthy Community provides for the following through all stages of life:*
- ✓ *Meets basic needs of all*
- ✓ *Safe, sustainable, accessible, and affordable transportation options*
- ✓ *Affordable, accessible, and nutritious healthy foods*
- ✓ *Affordable, high quality, socially integrated, and location-efficient housing*
- ✓ *Affordable, high quality health care*
- ✓ *Complete and livable communities including affordable and high quality schools, parks and recreational facilities, child care, libraries, financial services, and other daily needs*
- ✓ *Quality and sustainability of environment*
- ✓ *Clean air, soil, and water, and environments free of excessive noise*
- ✓ *Tobacco and smoke free*
- ✓ *Preserved natural and open spaces, including agricultural lands*
- ✓ *Minimized waste, toxics, and GHG emissions*
- ✓ *Affordable and sustainable energy use*
- ✓ *Adequate levels of economic, social development*
- ✓ *Living wage, safe, and healthy job opportunities for all*
- ✓ *Support for healthy development of children and adolescents*
- ✓ *Opportunities for high quality and accessible education*
- ✓ *Health and social equity*
- ✓ *Social relationships that are supportive and respectful*
- ✓ *Robust social and civic engagement*
- ✓ *Socially cohesive and supportive relationships, families, homes, and neighborhoods*
- ✓ *Safe communities, free of crime and violence"*

Example – Ontario, Canada indicators

Healthy Communities is a process by which a community determines its own vision, assets, needs, issues, and action plans when improving the quality of life for all its residents. Ontario Healthy Communities Coalition (OHCC) members adopted the following principles of a healthy community.

- Health is a state of complete physical, mental, and social well-being.
- Social, environmental, and economic factors are important determinants of human health and are inter-related.
- People cannot achieve their fullest potential unless they are able to take control of those things that determine their well-being.
- All sectors of the community are inter-related and share their knowledge, expertise, and perspectives, working together to create a healthy community.
- The process of developing healthy communities involves wide community participation, broad involvement of all sectors of the community, local government commitment, and creation of healthy public policies.

Qualities of a healthy community often include:

- Peace, equity, and social justice
- Clean and safe physical environment
- Adequate access to food, water, shelter, income, safety, work, and recreation for all
- Adequate access to health care services
- Opportunities for learning and skill development
- Strong, mutually supportive relationships and networks
- Workplaces that are supportive of individual and family
- Well-being
- Wide participation of residents in decision making
- Strong local cultural and spiritual heritage
- Diverse and vital economy
- Protection of the natural environment
- Responsible use of resources to ensure long-term sustainability

The challenge for LPRD is to determine their role relative to these qualities, and also other aspects for those elements they own and/or manage.

Summary of Indicators Overview

While there are numerous indicators of "Healthy Communities," there are also rankings of cities and communities (e.g.) best places to live, healthiest cities, happiest cities, etc. Many of these rankings are based on the use of existing data from the federal government, states, congressional districts, or other data sources. *Forbes* magazine publishes an annual assessment of communities and regions which assigns a rating to each area. Unfortunately, this rating is not for specific cities.

The following initial indicators are presented for consideration:
- Coordinated, sustainable strategic planning
- Inventory and codification of assets and affordances
- Regular appraisal of goal and outcome accomplishment
- Community agency collaboration and partnerships
- Use of evidence-based best practices in service delivery
- Access to active lifestyle assets
- Level of physical activity
- Healthy nutrition options
- Level of social engagement

Choosing the indicators that will increase the capacities of children and youth in the Liberty area to live a full, healthy, and vibrant life are of the utmost importance. The GP RED project team sought input from a variety of community stakeholders to identify and prioritize critical factors and indicators, using the Multi Attribute Utilities Technique (MAUT) exercise.

C. Multi Attribute Utilities Technique (MAUT) Exercise

During the RED team's site visit on June 24, 2013, project staff conducted a meeting of 19 representatives from the community, including members of LPRD, City of Liberty, Clay County Public Health Center, Liberty Public Schools, hospitals and mental health, and other members representing planning, law enforcement, major food distribution, etc., to identify and prioritize key factors and indicators of a healthy community.

The purpose of the MAUT session was to develop consensus on those key factors and indicators to guide policies that may positively influence youth, family, and community behavior and lead to the reduction of obesogenic behaviors. Based on previous procedures using a nominal group process, the focus was to rate the importance of five factors and their indicators in order to determine priorities in policy formulation, asset and affordance allocations, and professional practices required to change the course of youth behavior, and overall planning for the near future.

This was a major step forward in the first year of the Beta project. Data from this session will serve to provide a foundation for professional practice, planning strategies, training, collaboration efforts, and eventual behavior change. The results of this process are intended to guide actions of policy makers and professionals in their practice that leads to documented policy, environmental, systems, and behavioral change in the immediate future.

The five factors and relevant indicators within each factor considered and prioritized in the MAUT activity by the participants included the following:

1. **Nutrition regimen**: A balanced intake of food that is comprised of various solids, liquids, fresh, and prepared foods that provides the necessary daily nutrients for an active lifestyle and is culturally relevant.
   - Availability of healthy food
   - Information, education, and training
   - Healthy food/drink options
   - Collaboration with local restaurants
   - Community gardens

2. **Social Interaction:** Positive social relations with peers, adults in various settings. Engaging in social discourse. Developing and maintaining friendships with others.
   - Efforts to prevent bullying and hazing
   - Non-competitive organized activity options
   - Establish practices of social inclusiveness
   - Positive social environment
   - Relevancy of programs/services

3. **Physical Activity:** The array of opportunities in a community that require physical skills and capacities (e.g. balance, strength, flexibility, etc.) and often specific venues in which to engage during free or discretionary time.
   - Quality of natural and built assets
   - Varied physical demands of programs/services
   - Availability of assets/programs
   - Application of evidence based standards, practices by staff
   - Marketing and promotion of increased physical capacity

4. **Transportation Services:** Various modes of transportation of individuals or groups including vehicles offered by public, private, or family members. Primarily used for getting youth to and from a program, event, or activity.
   - Accessibility, availability, and interconnectivity of public transportation
   - Cost of services
   - Convenience
   - Consumer knowledge of public transportation services
   - Utilization rates

5. **Safety:** Provision of programs, activities, events, places, spaces (indoors or outdoors) that are not likely to cause avoidable harm, personal injury, or perceived threat of same.
   - Crime rate at or near assets/programs
   - Parent/children perception of safety level
   - Prevention practices of direct and affiliated service providers
   - Safety inspection and risk management
   - Staff supervision and surveillance efforts

In the MAUT session, the facilitator asked participants to assign a rating in percentage (%) of the importance of each factor (the sum of the percentages for the five factors equaling 100%). The data collected from participants on each of the five factors were entered into an Excel® template designed to calculate mean scores and standard deviations and to produce line graphs.

The results of this analysis were presented to the participants for each factor separately, data analyzed within 5-7 minutes and reported to the group using a projector and screen for all to see. A short discussion was initiated among the study participants based on the participant ratings. If there was consensus on the mean ratings representing how important each of these factors would be, then the facilitator confirmed agreement with the participants and moved to the next factor. If there were ratings that were clearly different from the mean, participants were encouraged to provide comments on their ratings.

Following a brief period of comments, participants were asked to perform a second round of ratings. These data were analyzed using the same procedures as indicated previously, and a final rating for all five factors was tabulated. After the ratings of all factors, participants were requested to review and rate the five indicators of each corresponding factor. The procedure used in rating the factors was also employed for rating each of the corresponding indicators.

Results indicated that the group of 19 participants rated Nutrition Regimen and Physical Activity highest with Social Interaction comprising the three factors of greatest importance. The other two factors (Transportation and Safety) were the lowest rated factors. There was also a discrepancy between the two groups' priorities, which suggests the importance of community dialogue and collaboration for future policy and programmatic direction.

Figure 2: Mean coefficients of each factor rated by two groups (LPRD and LCOM)

	Nutrition regimen	Social interaction	Transportation services	Physical activity	Safety
■ LPRD	23.9%	17.6%	17.7%	26.4%	14.4%
■ LCOM	26.9%	22.4%	17.8%	19.9%	13.0%
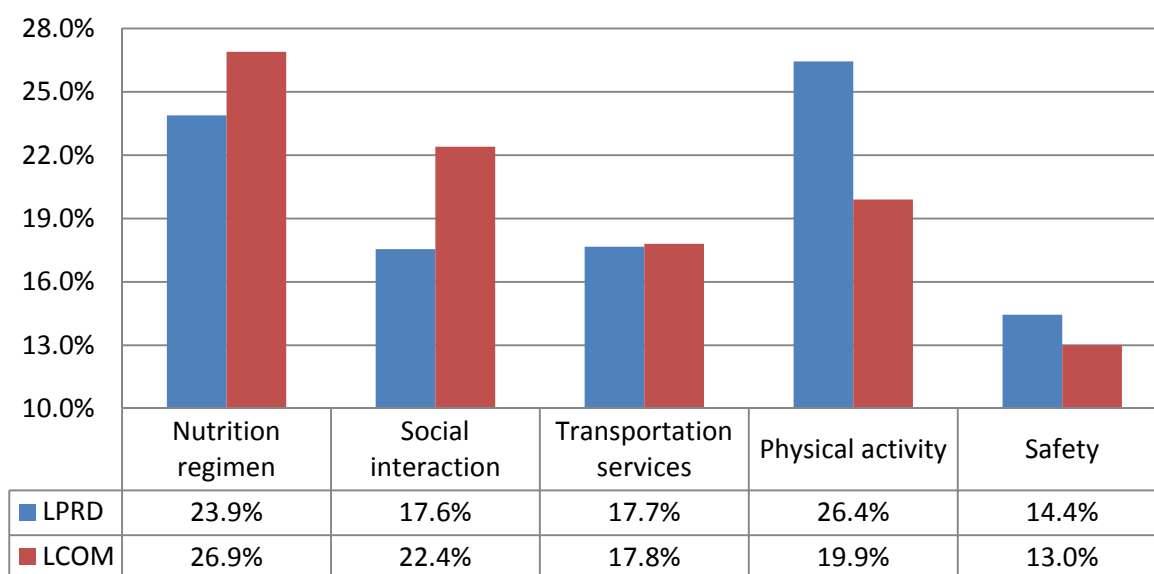
Recommendations for Future Actions and Studies
1. It is recommended that LPRD and LCOM use the MAUT findings from this report to guide near term efforts in examining why youth drop out from sponsored programs and activities. This is not only an issue for Liberty, but has been reported in other public park and recreation agencies. A template for carrying out this process can be provided by the GPRED Healthy Communities Research Group.
2. Additional MAUT groups should be conducted to determine if the same ratings are derived from other stakeholder groups such as parents, youth, ethnically diverse neighborhoods, etc.
3. A thorough review of current policies and their formal/informal policies employed by public service agencies and LPRD should be undertaken. The purpose of this effort would be to determine where policy and practice clearly are, at best, compatible, or at worst, incompatible. This would allow for modification or revision of current policy. Again, any recommendations should include stakeholders from across the community, led by the LPRD and/or a coalition of community members.

4. Under the leadership of LPRD, public health, and public schools, new policies and practices should be explored by the collection of agencies and their representatives to increase the effectiveness and efficiency of current efforts to reach the targeted youth population in Liberty.
5. Conduct periodic (quarterly or semi-annual) meetings to examine existing policies and practices. The intent is to understand what is working and what is not. Policies are the framework for practice. Practice is the platform for behavior and environmental change.

C. Partners for Youth in Liberty

As part of the training process for the **Surveillance and Management Toolkit,** staff members from Liberty were supplied with templates for collecting information the many and various partners that are currently working with LPRD for facilities and programs for this target age group. They include over 39 collaborative relationships with:

Retro Bowl	Eagle Fitness
Dance Line Image	Liberty Jazzercise
Elite Dance CO	Camp Branch Marina
CODE	Fun Run
Stars Unlimited	Amazing Play
Studio 10	St. James School
Liberty Hills Country Club	United Hapido
Edge Gymnastics	The Studio - Liberty Dance & Glee
Northland Rolladium	Liberty Youth Ballet
Mid-Continent Public Library	MelRoe's School of Dance
Image All Stars	Cardinal Hill Golf Course
Pleasant Valley Baptist Church	9Round Kansas City
Shoal Creek Golf Course	Title Boxing Club
Studio 10	Serenity on the Square
Anytime Fitness	Fit By Burn
Clayview Country Club	Combat Cross Fit
Curves Liberty	Boy Scouts

D. Volunteer Involvement

Similar to the analysis of Partnerships in the community, the HCRG provided templates for the LPRD staff and training to compile information regarding the use of volunteers in the templates. Each event or program that is provided for ages 10-14 was analyzed with the following questions:
- Program/Event Date
- # of Volunteers Utilized
- Current Total Volunteer Hours
- What factors would increase or decrease the # of volunteers?
- What would be the effect on program opportunities for youth if the # of volunteers changed?

Staff now have these templates and can use them for ongoing administrative comparisons and planning of resources.

1. Financial Value of Volunteer Time

According to *Independent Sector*, a non-profit organization that analyzes the national contribution of volunteer labor according to the requirements set forth by the Financial Accounting Standards Board (FASB), the value of volunteer time is based on the average hourly earnings of all production and nonsupervisory workers on private nonfarm payrolls (as determined by the Bureau of Labor Statistics). Independent Sector takes this figure for each state and increases it by 12 percent to estimate for fringe benefits. For Missouri in 2011 (the most current data available), the value of a volunteer hour is $19.00. Nationwide, the average in 2012 is currently $22.14 per hour. A summary of volunteer data is located in *Table 1*.

See http://independentsector.org/volunteer_time for more information.

Table 1: Summary of Collected Volunteer Data

Collected Volunteer Data	
Number of Events/Programs for Ages 10-14 using Volunteers	3
Number of Volunteers	1,156
Estimated Annual Volunteer Hours	29,859
Total 2011 value in dollars for Liberty	$567,321

IV. Local, Regional, and National Background Data and Trends

A. Liberty Demographics & Household Information

Demographics for Liberty were provided by the City based on 2010 US Census Bureau Data. A copy of the report has been provided to staff as a separate resource document. Additional information was compiled by the HCRG Team from information available from the US Bureau of Labor Statistics, the US Department of Labor, the Missouri Economic Development Corporation, and various additional resources (see Appendices). A summary of the most relevant information for this target age group is provided below. It is important to note that there is not much information available that is specific to the 10-14 age group in Liberty, but a "snapshot" of the community and a profile of living and demographic conditions can be compiled. ***Tables 2-5*** show demographic information in Liberty.

Table 2: Summary Demographics for Liberty – 2010

Liberty Summary Demographics	
Population	29,149
Number of Households	10,582
Avg. Household Size	2.6
Avg. Family Size	3.1
Median Age	37.5
Median Household Income	$61,884**
Mean Household Income	$80,307**
Per Capita Income	$30,364**
Civilian Labor Force	15,674*
Employed	14,451*
Unemployed	1,244*

* Missouri Economic Development Data as of August 2013
** 2010-2012 ACS 3 year estimates

Table 3: Age breakdowns for Household Breakdowns in Liberty 2010

Liberty Age Statistics	
Number of Households	**10,582**
Households: With Children	3,759
Age 0-4	1,955
Age 5-9	2,206
Age 10-14	2,223
Age 15-19	2,364
Age 20-24	1,851
Age 25-34	3,466
Age 35-44	4,111
Age 45-54	4,447
Age 55-59	1,795
Age 60-64	1,495
Age 65-74	1,725
Age 75-84	1,027
Age 85+	484

Source: 2010 U.S. Census. U.S. Census Bureau

Table 4: Residential Statistics

Liberty Residential Statistics	
Average Home Sale Price (2013)	$182,870
% Homeowner Occupied	75.30%
Mean Travel Time to Work	21.5 minutes *
Transportation to Work: Public	45
Transportation to Work: Drive/Carpool	1,120
Transportation to Work: Walk/Bike/Other	444
Work at Home	763

*2010-2012 ACS 3 year estimates

Table 5: Ethnicity Statistics

Liberty Ethnicity Statistics	
White	91.4%
African American	3.5%
Hispanic or Latino	4%
Asian	.9%
American Indian or Alaska Native	.5%
Hawaiian/Pacific Islander	.1%
Other	.8%

Source: 2010 U.S. Census. U.S. Census Bureau

"While this year's Rankings show some important improvements, we also see some very alarming trends – particularly diabetes and obesity – that, left unchecked, will put further strain on our country's already strained health care resources. At a time when the nation, states, and individual families are grappling with tightening budgets and growing health care expenses, this year's Rankings send a loud wakeup call that the burden of preventable chronic disease will continue to get worse unless we take urgent action."

Reed V. Tuckson, M.D., Board Member, United Health Foundation executive vice president and chief of medical affairs, UnitedHealth Group

Additional Information
- 92% of families live in homes where adults drive or carpool to work.
- 92% of residents in Liberty have a High School Diploma or Higher, with 36.8% having a Bachelor's Degree or Higher.*
- The unemployment rate as of August 2013 is 7.8%, which is higher than the state average of over 7.1%.

2010-2012 ACS 3 year estimates

B. Available Health Indicators

In the realm of public health, a variety of health indicators are tracked and monitored in communities. Most of these are not currently specific to the management of a typical parks and recreation department. Part of the Beta Site process is to review the available data for the specific community, and to determine which available health indicators are relevant and/or can be affected by the Department. The following sections review available data. During the recommendations phase, we will work together to identify the priorities for the LPRD.

1. State of Missouri Rankings
A number of rating systems and entities rank the State of Missouri low in terms of their health, well-being, and other factors.

According to ***America's Health Rankings***, Missouri is ranked the 42nd state with a -0.40 score below the national average. Based on 42 factors, the State of Missouri ranked in the top 10 on only one factor (Prenatal care), and was ranked 40th or worse on thirteen factors (including: cardiovascular deaths; cholesterol checks; annual dental visit; diet, fruits, and vegetables; obesity and strokes).

The United Health Foundation has ranked Missouri 42nd in its 2012 *State Health Rankings*, down from 40th in 2011.
- A high rate of high school graduations (83%, ranked 9th in the nation)
- Obesity prevalence is 30% (ranked 39th in the nation)
- Missouri is ranked 44th in the nation for public health spending per person ($46)
- 25% of the adult population smokes (ranked 42nd in the nation)

2. County Rankings
According to the ***County Health Rankings***, Clay County ranks as the **13th** in *Health Outcomes* (based on an equal weighting of one length of life [mortality] measure and four quality of life [morbidity] measures) and **10th** in Health Factors (based on weighted scores of four types of factors):
- Health behaviors (7 measures)
- Clinical care (6 measures)
- Social and economic (7 measures)
- Physical environment (5 measures) of 115 counties in Missouri

Table 6: Rank of Counties for Clay's as compared to 115 total Missouri Counties

Rank of Counties	#
Health Outcomes	**13**
Mortality – slightly better numbers related to premature deaths	**10**
Morbidity – better than average for overall health and birth weights	**29**
Health Factors	**7**
Health Behaviors – teen birth rates are lower than state average, while binge drinking is slightly higher and sexually-transmitted infections are lower in the County than state average	**10**
Clinical Care – there are more doctors per capita and more preventable hospital stays	**8**
Social & Economic Factors – the County has a lower than state average for children living in poverty and children living in single-parent households	**12**
Physical Environment – the county has higher than state average air quality, similar average for access to healthy foods, and lower than state average for access to recreational facilities	**31**

According to the national "Gallup-Healthways Well-Being Index," the Congressional District #4 that includes Liberty is in the lowest 4th and 5th quintiles for a variety of well-being factors, as compared to the rest of the state and the country.

Figure 3: Gallup Healthways Missouri Congressional District Rankings

Missouri Congressional District Rankings

		MO-01	MO-02	MO-03	MO-04	MO-05	State
Overall Rank	2012	219	43	131	414	220	38
	2011	341	96	358	277	327	43
Life Evaluation	2012	82	102	256	430	213	43
	2011	195	135	301	283	339	48
Emotional Health	2012	105	18	211	260	144	37
	2011	102	14	379	149	291	37
Physical Health	2012	154	57	249	362	165	38
	2011	160	85	279	321	140	30
Healthy Behavior	2012	397	274	341	410	355	43
	2011	357	362	430	374	363	48
Work Environment	2012	276	70	7	283	181	17
	2011	413	260	375	172	315	31
Basic Access	2012	320	4	124	293	261	30
	2011	336	2	115	264	279	31

Ranking from data collected January 2, 2012 - December 30, 2012
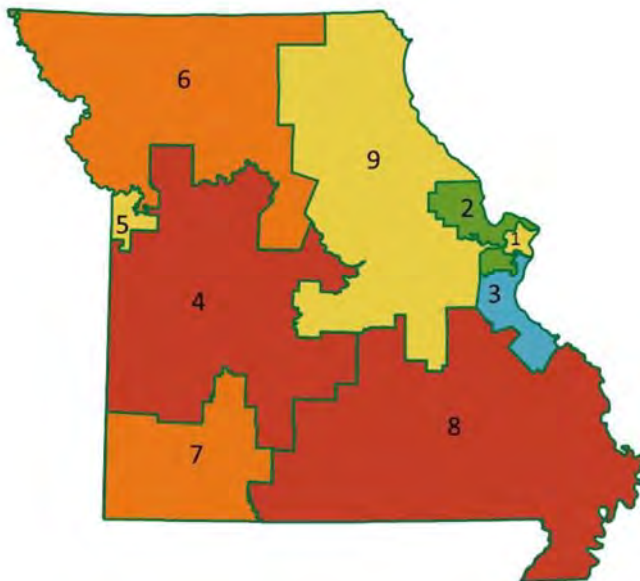
3. Additional Identified Health Factors
- The air quality of Clay County, Missouri is rated rather low as compared to national averages on several factors. The ozone grade was an "F" (A-F scale), and particulate pollution over a 24 hour period was rated "B" by the **American Lung Association**.
- In Clay County, mental disability was found to be most prevalent in the younger age groups, while physical disabilities occurred mostly in the older population. http://www.clayhealth.com/community-health-assessments/
- According to a 2012 report from the Health Care Foundation of Greater Kansas City, "one in every 10 adults in Clay County, Missouri has a serious mental illness (SMI)." Of these, it is believed that 40 percent of these cases are untreated. The estimated cost burden of untreated SMI in Clay County is $92 million each year. (Health Care Foundation of Greater Kansas City. *The Costs of Untreated Mental Illness in Clay County.* March 2012. Retrieved from http://hcfgkc.org/sites/default/files/cost-untreated-mental-illness-clay-county-missouri.pdf)
- On the **Gallup State of Well-Being: State, City & Congressional District Well-Being Report - Indiana (2012)** the State of Missouri ranks 38th of 50 states. The Gallup Healthways Well Being Index (WBI) is based on a sustained survey methodology that secures approximately 350,000 inputs per year. In "Overall Well-being," Missouri ranked 43rd in 2011 (down from 34th in 2010). Of particular note is that the state ranked 43rd in both "Life Evaluation" and "Healthy Behaviors." Ratings for the congressional districts are provided, and the ratings for the fourth district, which encompasses Clay County and Liberty are in the 5th quintile (lowest).

C. Clay County Public Health Center Community Health Improvement Plan (CHIP) 2013-2018

In late 2012, CCPHC and strategic partners completed the CHIP, which is a combination of major efforts completed by stakeholders across Clay County, including the larger number of stakeholders who participated in a community strategic planning effort called VISION NORTH 2010-2015, and The Kansas City Missouri Health Department and the stakeholders that participated in their Community Health Improvement Plan (CHIP). After a comprehensive review of the county wide health data sets, the following five priorities were selected based upon their current demonstrated ability of having the most impact on the morbidity and mortality of Clay County residents:
- Diabetes
- Heart Disease
- Cancer
- Accidents/Non-Intentional Injuries
- Chronic Obstructive Pulmonary Disease (COPD)

Through a strategic planning process, Vision North representatives also identified five key performance areas ("KPA") to focus solutions with the most impact, including **Community Wellness; Economic Development; Education; Transportation and Infrastructure; and Quality of Life.** CCPHC is supporting those KPAs, and most specifically, has opted to champion the framework, vision, and goals within the Community Wellness KPA as an opportunity to strengthen their local public health system using the *National Public Health Performance Standards Program – Model Standards* and the principles in NACCHO's *The Operational Definition of a Functional Health Department* as their guide. The three major goals are as follows.

Goal 1: Prevention Leading to Wellness
Goal 2: Education with an Emphasis on Communication
Goal 3: Access in the form of transportation, number of providers, affordability, and timeliness of service

Acknowledging the challenges associated with limited resources and funding, developing, and implementing successful place-based programs and policies that have a measurable impact on health, and building multi-disciplinary relationships to collaborate on new initiatives moving forward, CCPHC is forging ahead with targeted strategies to address the five chronic disease priorities in their CHIP. More information about their targeted goals and strategies contained in the CHIP is available in the Clay County Public Health Center's 2013–2015 Community Improvement Plan, and a copy has been provided to the LPRD staff for reference.

D. Liberty School District Youth Survey

Throughout Year One of the project, the project team at RED and the Liberty project staff and stakeholders in the City have been developing an online survey to be administered to students at the four middle schools within the Liberty School District in the spring of 2014. The survey is designed to gather anonymous information regarding self-reported height and weight, eating habits, social interaction, and recreational activities and frequency of activities of youth in Liberty. Results of the survey will help to establish a baseline of measurement and awareness of youth habits and activities as they relate to the project goals today, and help the project team, stakeholders, and community members develop informed and effective strategies and solutions moving forward into the second year of the project.

"Obesity now affects 17 percent of all children and adolescents in the United States. The percentage of adolescents and children who are obese tripled from 1980 to 2008. In 2008 alone, more than one-third of U.S. children and adolescents were overweight or obese. Obese children are more likely to become obese adults. Statistics show that children and adolescents who are obese have a 70% to 80% chance of becoming overweight or obese adults."

Center for Disease Control

E. National Obesity, Health, and Park and Recreation Data and Trends

A challenge for parks and recreation departments is to continue to understand and respond to the changing characteristics of those it serves. In this fast-paced society, it is important to stay on top of current trends impacting parks and recreation. The following information highlights relevant trends and data compiled from various sources. It is important to note that we do not yet have specific survey data from Liberty youth, so we must initially extrapolate from national and regional sources. The information listed below can help Liberty parks and recreation professionals respond to their community's changing needs. Sources are listed in *Appendix A* (with many sources now quoting similar statistics).

1. Health and Obesity Trends

According to the *Center for Disease Control (CDC)*, the annual status of America's health has declined 69 percent compared to the 1990s. Obesity continues to be a serious issue in America, growing at an epidemic rate—almost tripling since 1990. In fact, about one in every three adults is currently considered obese. This statistic illustrates the importance of intercepting the epidemic in youth. Overall, 35.7 percent, or more than a third of adults in the United States, are currently obese.

Obesity among Children and Adolescents

Obesity now affects 17 percent of all children and adolescents in the United States. The percentage of adolescents and children who are obese has tripled from 1980 to 2008. In 2008 alone, more than one third of U.S. children and adolescents were overweight or obese. Obese children are more likely to become obese adults. Statistics show that children and adolescents who are obese have a 70 to 80 percent chance of becoming overweight or obese adults.

In an effort to educate Americans and encourage them to take steps toward a healthier future, the *United Health Foundation* annually presents *America's Health Rankings®: A Call to Action for Individuals & Their Communities.*

America's Health Rankings has tracked the health of the nation for the past 22 years, providing a unique, comprehensive perspective on how the nation (and each state) measures up. The 2012 Edition of the Rankings suggests that our nation is extremely adept at treating illness and disease. However, Americans are struggling to change unhealthy behaviors such as smoking and obesity, which cause many of these diseases. Obesity continues to be one of the fastest growing health issues in our nation, and America is spending billions in direct health care costs associated with poor diet and physical inactivity.

As obesity in the United States continues to be a topic of interest for legislators and our government, there continues to be research suggesting that activity levels are stagnant among all age groups. The following are statistics that support this concern.

- Less than half of adults and 30 percent of youth (grades 9-12) engage in recommended levels of physical activity.
- 59 percent of American adults are sedentary.
- Children born now have a lower life expectancy than their parents.
- Children nationally spend 4.5 – 8 hours daily (30-56 hours per week) in front of a screen (television and/or computer).

The United Health Foundation also measures health disparities that the state faces. In Missouri, obesity is more prevalent among non-Hispanic blacks at 37.5 percent than Hispanics at 29.1 percent and non-Hispanic whites at 25.7 percent. Currently, 10.2 percent of Missouri residents have diabetes. For a more detailed look at this data, visit www.americashealthrankings.org/MO/2012 .

2. Healthy Lifestyle Trends

With the health care issue front and center, park and recreation departments are finding that they are in a position to be a catalyst in creating healthy lifestyles and communities. Steps such as assessments, policy creation, financial analysis, and management processes are occurring around the country to create and validate a method for building healthy communities, and departments are gaining credibility as a public health provider.

National Trends

In October, 2010 the Robert Wood Johnson Foundation's *Vulnerable Populations Portfolio* shared thoughts on how health is impacted by where and how we live, learn, work, and play. Information below demonstrates the connection that nonmedical factors play in where health starts before illness sets in.

Where We Live

Residential instability has adverse health impacts. Examples include:
- Homeless children are more vulnerable to mental health problems, developmental delays, and depression than children who are stably housed.
- Difficulty keeping up with mortgage payments may be linked to lower levels of psychological well-being and a greater likelihood of seeing a doctor.
- The connection between access to public transportation and health studies found that people who live in counties with high "sprawl indexes" were likely to have a higher body mass index than people living in more compact counties.
- Convenient, affordable, and available eating habits result from inability to move from place to place within the community. PolicyLink and the Food Trust, two nonprofits focused on expanding access to fresh foods where low-income people live, have found that, "decreased access to healthy food means people in low-income communities suffer more from diet-related diseases like obesity and diabetes than those in higher-income neighborhoods with easy access to healthy food, particularly fresh fruits and vegetables."
- Communities without crime are healthier. Researchers from the Baltimore Memory Study found that residents living in the most dangerous neighborhoods were nearly twice as likely to be obese as those living in the least dangerous neighborhoods.

Where We Work

The relationship between work and health is critical to creating productive environments.
- Investing in the right ways to support employees, businesses can help create a workforce that is less stressed and more content. The net result: a happier, healthier workforce which is more productive and yields better results.
- An approach such as "lifestyle leave" to take care of the inevitable personal and family needs that arise is a valuable asset for many of the parents. Programs which help provide employees with the peace of mind also help them to breathe and work more easily.
- Business leaders and employees alike should view work as a place of opportunity — a source of support, satisfaction, and motivation, which can offer mutual benefits when done right.

Where We Learn
Eight times more lives can be saved with education than with medical advances.
- Without graduating from high school, one is likely to earn less money and struggle to make ends meet, work longer hours and maybe even two jobs just to feed a family, and live in a compromised neighborhood without access to healthy food.
- Better educated people have more opportunities to make healthier decisions. They have the money and access necessary to buy and eat healthier foods.
- Data from the National Longitudinal Mortality Study indicates that people with higher education live five to seven years longer than those who do not finish high school.
- In South Carolina, leaders improved the health of citizens by strengthening their education system. A coalition of business and community leaders, politicians, educators, and parents came together to support a one-cent sales tax to fund education improvement.
- Schools are not just centers of teaching and learning, they are places that provide the opportunity to improve the health of all Americans.

Where We Play
Play is a profound biological process that shapes brain function.
- Play prompts us to be continually, joyously, physically active, combating obesity and enhancing overall health and well-being.
- Play can interrupt the damage done by chronic stress, and even gives the immune system some relief.
- Play is a basic need; a biological requirement for normal growth and development. Scientists associated with the National Institute for Play are united in their concern about "play under-nutrition," noting that the corrosive effects of this form of starvation gradually erode emotional, cognitive, and physiological well-being – a major aspect of being sedentary, obesity, and poor stress management can be readily linked to play starvation.
- Providing places to spend leisure time and recreate are critical to creating healthy communities.

The population is becoming more diverse. As demographics are experiencing an age and ethnic shift, so too are landscapes; daily lifestyles and habits changing. The number of adults over the age of 65 has increased; lifestyle changes have encouraged less physical activity.

3. Sports Participation
The **2012 National Sporting Goods Association Survey** on sports participation found some of the top ten athletic activities ranked by total participation included: exercise walking, exercising with equipment, camping, swimming, bowling, and working out at athletic clubs. Additionally, the following active, organized, or skill development activities remain popular: bicycle riding, hiking, running/jogging, basketball, golf, and soccer. *Table 7* further outlines the top twenty sports ranked by total participation in 2012 and the percent change from 2011.

Table 7: Top Twenty Sports Ranked by Total Participation in 2012

Sport	Total
1. Exercise Walking	102.1
2. Exercising with Equipment	57.7
3. Swimming	48.6
4. Camping (vacation/overnight)	45.2
5. Aerobic Exercising	44.8
6. Hiking	42.2
7. Running/Jogging	40.0
8. Bicycle Riding	39.3
9. Bowling	35.5
10. Workout at Club	35.2
11. Weight Lifting	31.1
12. Fishing (Freshwater)	30.8
13. Wrestling	28.4
14. Basketball	25.6
15. Yoga	22.9
16. Billiards/Pool	21.8
17. Target Shooting	21.7
18. Golf	21.1
19. Hunting with Firearms	19.4
20. Boating, Motor/Power	17.0

Source: NSGA 2012

Aquatics National Trends

According to the **National Sporting Goods Association (NSGA)**, swimming ranked fourth in terms of sports participation in 2009 and 2010. There is an increasing trend toward warm water indoor leisure and therapeutic pools. Additional amenities such as "spray pads" are becoming increasingly popular as well for all ages.

Youth Sports

Specific offerings for children's fitness are slowly increasing in health and fitness facilities. Facilities are offering more youth-specific exercise equipment. Individualized youth sports training opportunities are becoming more popular as well. For youth ages 7 to 11, bowling, bicycle riding, and fishing had the highest number of participants in 2010; however, ice hockey, mountain biking, and tennis saw the highest percent of increase of the sports in the survey in 2010. It is important to note that of the six mentioned sports above, ice hockey is the only team sport. In-line skating experienced the largest percentage decrease in participation, followed by scooter riding and fishing.

Another noteworthy trend is the increase in "pick-up" play in team sports. In recent years, the Sporting Goods Manufacturers Association *(SGMA)* noticed that participation in team sports has been driven by organized/sanctioned play. However, in 2008, there were seven team sports where "casual/pick-up" play exceeded organized/sanctioned play. Those sports were basketball, ice hockey, field hockey, touch football, lacrosse, grass volleyball, and beach volleyball. It is believed that this is the result of athletes and their families feeling the pinch of the economy. Many people are choosing the less expensive ways to play sports and stay active.

4. Nationwide Facility Trends

According to *Recreation Management* magazine's "2011 State of the Industry Report," national trends show an increased user base of recreation facilities. To meet that growing need, a majority of the 2011 State of the Industry Survey respondents (60.3%) reported that they have plans to build new facilities or make additions or renovations to their existing facilities over the next three years. Nearly a quarter (24.2%) of respondents said that they have plans to build new facilities, and just over a quarter (25.9%) said that they plan to add to their existing facilities. Another 43.6 percent are planning renovations.

The current national trend is toward "one-stop" indoor recreation facilities to serve all ages. Large, multi-purpose regional centers help increase cost recovery, promote retention, and encourage cross-use. Agencies across the U.S. are increasing revenue production and cost recovery. Multi-use facilities versus specialized space is a trend, offering programming opportunities as well as free-play opportunities. "One-stop" facilities attract young families, teens, and adults of all ages.

Also according to the report, parks and recreation respondents said that the average amount planned for construction for parks fell by 12.7 percent from an average of $3,907,000 in last year's survey to $3,411,000 this year. There was very little change in the types of features and amenities included in the facilities of the survey respondents from last year to this year. The most commonly found features include locker rooms (57.5% of respondents have locker rooms); classrooms and meeting rooms (57.4%); bleachers and seating (56.8%); outdoor sports courts for basketball, tennis, etc. (54.1%); and concession areas (53.9%).

Amenities and specialty parks that are still considered "alternative" but are increasing in popularity include the following:
- Climbing walls.
- Cultural art facilities.
- Green design techniques and certifications such as Leadership in Energy and Environmental Design (LEED). A recent Building Commissioners Association (BCA) survey indicated that 52 percent of the recreation industry survey respondents indicated they were willing to pay more for green design knowing that it would significantly reduce or eliminate the negative impact of buildings on the environment and occupants.
- Two of the emerging specialty parks include skate parks and adult fitness parks. The Sporting Goods Manufacturers Association estimates that there are about 1,000 skateboard parks in the United States*.*

5. Fitness and Health National Trends

There have been many changes in fitness programs in the last ten years. What clients wanted in 2000 is not necessarily what they want today. Fitness programs that have increased in popularity since 2000 include outdoor exercise, boot camp, personal training, post-rehabilitation, kids-specific fitness, and sport-specific training. Declining programs since 2000 include dance, health fairs, sports clinics, aerobics, stress-management classes, and weight-management classes. *(IDEA Health and Fitness Association)*

The ***American College of Sports Medicine's (***ACSM's) **Health and Fitness Journal** conducted a survey to determine trends that would help create a standard for health and fitness programming. ***Table 8*** shows survey results that focus on trends in the commercial, corporate, clinical, and community health and fitness industry. The Worldwide Survey indicates the following shift in fitness trends between 2009 and 2010.

Table 8: Worldwide Fitness Trends for 2009 and for 2010

2009	2010
1. Educated and experienced fitness professionals	1. Educated and experienced fitness professionals
2. Children and obesity	2. Strength training
3. Personal training	3. Children and obesity
4. Strength training	4. Personal training
5. Core training	5. Core training
6. Special fitness programs for older adults	6. Special fitness programs for older adults
7. Pilates	7. Functional fitness
8. Stability ball	8. Sport specific training
9. Sport-specific training	9. Pilates
10. Balance training	10. Group personal training

Source: American College of Sport Medicine

6. General Programming Trends

One of the most common concerns in the recreation industry is creating innovative programming to draw participants into facilities and services. Once in, participants recognize that the benefits are endless. According to *Recreation Management* magazine's, June 2011 "State of the Industry Report," the most popular programs, offered by more than half of survey respondents, include holiday events and other special events (64.3 %); fitness programs (61.1%); educational programs (60.4%); day camps and summer camps (56.3%); mind-body/balance programs such as yoga, tai chi, Pilates, and martial arts (51.4%); and youth sports teams (50.7%). Sports training was not in the top ten; however, golf instruction and tennis lessons are a fast paced trend.

"There's a direct link between a lack of exposure to nature and higher rates of attention-deficit disorder, obesity, and depression. In essence, parks and recreation agencies can and are becoming the 'preferred provider' for offering this preventative healthcare." Fran P. Mainella, former director of the National Park Service and Instructor at Clemson University.

The report also suggested that slightly less than a third (31.9%) of respondents indicated that they are planning to add additional programs at their facilities over the next three years. The most common types of programming they are planning to add include:

- Fitness programs (planned by 26.8% of respondents planning to add programs)
- Educational programs (25%)
- Teen programming (24%)
- Mind-body/balance programs (22.5%)
- Active older adults (20.9%)
- Day camps and summer camps (20.8%)
- Environmental education (20.3%)
- Individual sports activities (18.9%)
- Holiday events and other special events (18.6%)
- Sports tournaments or races (18%)

7. Multiculturalism and Marketing

Recent articles in parks and recreation have addressed multicultural and diversity issues in the leisure service profession. These articles are positive, because as the recreation field continues to function within a more diverse society, race and ethnicity will become increasingly important in every aspect of the profession. More than ever, recreation professionals will be expected to work with, and have significant knowledge and understanding of, individuals from many cultural, racial, and ethnic backgrounds.

Today the marketplace for consumers has dramatically evolved in the United States from a largely Anglo demographic, to the reality that the United States has shifted to a large minority consumer base known as "new majority."

The San Jose Group, a consortium of marketing communications companies specializing in reaching Hispanic and non-Hispanic markets of the United States, suggests that today's multicultural population of the United States, or the "new majority," is 107.6 million, which translates to about 35.1 percent of the country's total population. The United States' multicultural population alone could essentially be the 12th largest country in the world. Park and recreation trends in marketing and providing leisure services continue to emerge and should be taken into consideration in all planning efforts.

8. Natural Environments and Open Space – Economic & Health Benefits of Parks

There are numerous economic and health benefits of parks, including the following:
- Trails, parks, and playgrounds are among the five most important community amenities considered when selecting a home.
- Research from the University of Illinois shows that trees, parks, and green spaces have a profound impact on people's health and mental outlook. US Forest Service research indicates that when the economic benefits produced by trees are assessed, the total value can be two to six times the cost for tree planting and care.
- Fifty percent (50%) of Americans regard outdoor activities as their main source of exercise.

The Trust for Public Land has published a report titled: "The Benefits of Parks: Why America Needs More City Parks and Open Space." The report makes the following observations about the health, economic, environmental, and social benefits of parks and open space:
- Physical activity makes people healthier.
- Physical activity increases with access to parks.
- Contact with the natural world improves physical and physiological health.
- Residential and commercial property values increase.
- Value is added to community and economic development sustainability.
- Benefits of tourism are enhanced.
- Trees are effective in improving air quality and act as natural air conditioners.
- Trees assist with storm water control and erosion.
- Crime and juvenile delinquency are reduced.
- Recreational opportunities for all ages are provided.
- Stable neighborhoods and strong communities are created.

Researchers have long touted the benefits of outdoor exercise. According to a study published in the *Journal of Environmental Science and Technology* by the University of Essex in the United Kingdom, "*as little as five minutes of green exercise improves both mood and self-esteem.*" A new trend emerging in parks and recreation aims to enable people to reap these benefits by working out on outdoor fitness equipment.

This trend started in China as they prepared to host the 2008 Summer Olympics. Their aim was to promote a society that promoted physical fitness. The United States is now catching up on this trend, as park and recreation departments have begun installing "outdoor gyms." According to John Drew from ExerSkys, "*The equipment is designed to use resistance of the body and weight.*"

Equipment that can be found in these outdoor gyms is comparable to what would be found in an indoor workout facility, such as leg and chest presses, elliptical trainers, pull down trainers, etc. With no additional equipment such as weights and resistance bands, the equipment is fairly easy to install.

Outdoor fitness equipment provides a new opportunity for park and recreation departments to increase the health of their communities, while offering them the opportunity to exercise outdoors. Such equipment can increase the usage of parks, trails, and other outdoor amenities while helping to fight the obesity epidemic and increase the community's interaction with nature.

9. Outdoor Recreation

Local parks and recreation departments are a common place for residents to look when getting outside for leisure activities. It is often the mission of parks departments as well as private or non-profits to get more people outdoors.

The *Outdoor Foundation* released the "2010 Participation in Outdoor Recreation" report. The report highlights growth in nature based outdoor activities and continued decline in youth outdoor participation. The Foundation states that trends indicate the beginning of adjustments in American lifestyles brought about by a challenging economy, shifting demographics, and changing times. Their research brought the following key findings.

Participation in Outdoor Recreation
- **Return to Nature:** Nearly 50% of Americans ages six and older participated in outdoor recreation in 2009. That is a slight increase from 2008 and equates to a total of 137.8 million Americans.
- **Fitness and Health Benefits**: Outdoor participants rate their fitness level at 6.4 on a 10-point scale versus 4.9 for nonparticipants. In terms of health, outdoor participants rate their health level at 7.5 versus 6.6 for non-participants.
- **Preservation of Land**: The majority of Americans agree that preserving undeveloped land for outdoor recreation is important. A large percentage of outdoor participants also believe that developing local parks and hiking and walking trails is important and that there should be more outdoor education and activities during the school day.

Youth Participation

- **More Indoor Youth:** An overall downward slide in outdoor recreation participation among 6 to 12 year olds has been realized.
- **The Influence of Family:** Most youth are introduced to outdoor activities by parents, friends, family, and relatives.
- **Physical education in schools**: The importance cannot be understated. Among adults ages 18 and older who are current outdoor participants, 83% say they had PE in school between the ages of 6 and 12. That compares with just 70% of non-outdoor participants.

10. Governmental Role and Response

Collectively, these trends have created profound implications for the way local governments conduct business. Some local governments are now accepting the role of providing preventative health care through park and recreation services. The following are facts from the International City/County Management Association.

- 89% believe Parks and Recreation departments should take the lead in developing communities conducive to active living.
- Nearly 84% supported recreation programs that encourage active living in their community.
- 45% believe the highest priority is a cohesive system of parks and trails and accessible neighborhood parks.

In summary, the United States of America, its states, and its communities share the enormous task of reducing the health and economic burden of obesity. While numerous programs, policies, and products have been designed to address the problem, there is no magic bullet to make it go away. The role of public parks and recreation as a health promotion and prevention agency has come of age. What matters is refocusing our efforts to insure the health, well-being, and economic prosperity of our communities and its citizens.

11. Trends in Recreation and Park Administration

Municipal parks and recreation structures and delivery systems have changed, and more alternative methods of delivering services are emerging. Certain services are being contracted out, and cooperative agreements with non-profit groups and other public institutions are being developed. Newer partners include the health system, social services, the justice system, education, the corporate sector, and community service agencies. These partnerships reflect both a broader interpretation of the mandate of parks and recreation agencies and the increased willingness of other sectors to work together to address community issues. The relationship with health agencies is vital in promoting wellness. The traditional relationship with education and the sharing of facilities through joint-use agreements is evolving into cooperative planning and programming aimed at addressing youth inactivity levels and community needs.

Listed below are additional administrative national trends:

- Level of subsidy for programs is lessening and more "enterprise" activities are being developed, thereby allowing subsidy to be used where deemed appropriate.
- Information technology allows for better tracking and reporting.
- Pricing is often determined by peak, off-peak, and off-season rates.
- More agencies are partnering with private, public, and non-profit groups.

Agency accreditation

Agencies are identifying with a distinguished mark of excellence that affords external recognition of an organization's commitment to quality and improvement. Accreditation has two fundamental purposes: to ensure quality and to ensure improvement. This is achieved by an agency's commitment to 150 standards. There are currently 97 agencies that have received the **Commission for Accreditation of Park and Recreation Agencies (CAPRA) accreditation. Additional benefits of CAPRA accreditation include:**

- Boosts staff morale
- Encourages collaboration
- Improves program outcomes
- Identifies agency and cost efficiencies
- Builds high level of trust with the public
- Demonstrates promise of quality
- Identifies best management practices

E. Health and the Economy

As stated earlier, obesity among children and youth in developed countries has increased significantly over the past two decades. In the Unites States, this public health issue remains at the forefront of combatting numerous other chronic illnesses associated with overweight, obese, and morbidly obese individuals. The prevalence of overweight among children has tripled in the last 40 years. Although recent data suggests that childhood overweight rates have begun to plateau, 32 percent of youth aged 2 to 19 years are overweight or are at risk of becoming overweight (Koehly & Loscalzo, 2009).

The challenge of obesogenic behaviors is nested in sedentary lifestyles (physical inactivity), a nutritional regimen that adheres to caloric intake standards, and the intake of processed versus fresh foods. Often overlooked are the socio-psychological factors that are vital agents in being physically active (not just in competitive sports), socially connected, and engaged through social networks, strong abiding friendships, and maintaining the capacity to remain resilient. Overweight children are more likely to become parents of overweight, obese, or morbidly obese children (Thompson, Edelsberg, Colditz, Bird & Oster, 1999).

The period of 10-14 years of age is an important period in children's lives when they are exploring, learning, increasing their capacities (cognitive, physical, emotional, and social) to benefit from various experiences that will shape their adolescence, mid-life, adulthood, and later years. Public parks and recreation agencies should be at the center of creating a full range of opportunities with other agencies in the community to boldly address the obesity pandemic that will have serious health, employment, and economic consequences in the decades to come.

Accreditation is a distinguished mark of excellence that affords external recognition of an organization's commitment to quality and improvement. Accreditation has two fundamental purposes; to ensure quality and to ensure improvement. The National Recreation and Park Association administratively sponsors two distinct accreditation programs.

Health Consequences of Obesity
- Hypertension
- Osteoarthritis
- High cholesterol
- Type 2 diabetes
- Heart disease
- Stroke
- Gallbladder disease
- Sleep apnea
- Some cancers
- Complications of pregnancy
- Menstrual irregularities
- Depression
- Increased mortality

Source: Centers for Disease Control and Weight Control Information Network

1. Economic Impact of Obesity

Our health care system in the United States is among the most expensive in the world. Estimates by the Council of Economic Advisors indicate that 2009 spending in the U.S. health sector exceeded $2.5 trillion, or about 18 percent of our Gross Domestic Product (GDP). Health care spending is projected to reach 34 percent of GDP by 2040, absent significant cost containment. The U.S. spends a significant proportion of its GDP on health care (not prevention) than comparable countries without achieving better health (Roisch & Hankin, 2010).

According to Wang, L., Yang, Q., Lowry, R., & Wechsler, H. (2003), "*The potential health and economic implications of these trends are concerning for several reasons. Overweight children and adolescents are more likely to be overweight or obese adults. Obesity during adulthood is an important risk factor for several chronic disease conditions, including coronary heart disease, type 2 diabetes, hypertension, selected cancers, and musculoskeletal disorders, as well as all-cause mortality. The economic impact of obesity in the United States was approximately $99.2 billion in 1995, including $51.6 billion in medical costs and $47.6 billion in loss of productivity (6). Once obesity has been established in adulthood, the probability of successfully achieving an ideal body weight through voluntary weight loss may be low. In theory, therefore, prevention during childhood and adolescence is likely to have a significant impact on adult morbidity and mortality.*"

Mathers, C. & Loncar, D. (2009) utilized information from the Global Burden of Disease project and forecast that, "*The proportion of deaths caused by non-communicable diseases such as diabetes and heart disease could rise from 59% in 2002 to 69% in 2030. These could be conservative estimates if economic growth in low-income countries is lower than the forecasts used in these projections. Thus, future trends in unhealthy behaviors linked to childhood obesity will play a key role in determining whether these serious health problems are reversed.*" (Stroup, Johnson, Hahn & Proctor, 2009, 2) From 1979–81 to 1997–99, the rate of instances of individuals discharged from hospitals with obesity-associated diseases nearly doubled. According to Wang, Yang, Lowry & Wechsler (2003) "*The discharges of diabetes nearly doubled (from 1.43% to 2.36%), obesity and gallbladder diseases tripled (0.36% to 1.07% and 0.18% to 0.59%, respectively), and sleep apnea increased fivefold (0.14% to 0.75%). Ninety-six percent of discharges with a diagnosis of obesity listed obesity as a secondary diagnosis. Asthma and some mental disorders were the most common principal diagnoses when obesity was listed as a secondary diagnosis. Obesity-associated annual hospital costs (based on 2001 constant US dollar value) increased more than threefold; from $35 million (0.43% of total hospital costs) during 1979–1981 to $127 million (1.70% of total hospital costs) during 1997–1999.*"

F. Crime Rates

Through the neighborhood, stakeholder, and community outreach, crime in Liberty has not been identified as a key finding. Participants to date have reported that they feel Liberty is relatively safe, and aside from concerns with safety with respect to pedestrian and bicyclist activities, criminal activity has not been raised as a serious concern. The following table reflects crime statistics in the City from 2010 through 2012.

Table 9: Liberty Crime Statistics

Crime Type	2010	2011	2012
Homicide	2	0	0
Rape	9	1	9
Robbery	9	13	7
Assault	203	218	181
Burglary	102	95	113
Larceny	420	345	400
Motor Vehicle Theft	45	36	76
Arson	9	5	11
Driving While Intoxicated	132	126	120
Domestic Violence	76	81	74
Drug Arrests	107	118	121

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V. Financial Resources and Policy Analysis

A. Financial Analysis

The SMT includes a broad financial analysis as part of the Affordances Template. This template collects and provides detail on all of the programs and services the Department offers. Staff was trained on how to complete the template, and the information was compiled.

Analysis of the template indicates that there are many areas where revenues and expenses are not tracked separately for these program areas, so cost recovery determinations are not available. For those programs where they are available, the levels of cost recovery are varied, from 0% to 100% or more. This is typical of a public agency with a variety of program areas and services.

Cost Recovery
There is no standard national target for cost recovery (calculated as the amount of direct revenue collected vs. the expense) for parks and recreation services, but this is a growing area for management attention. Based on national numbers from various reports, the average cost recovery for public agencies across the country is 34 percent. The target in each individual community should be based on the expectation of that community, and its public's willingness to pay for these types of services.

Typically, parks, open space, and trails, have much lower cost recovery, and recreation departments have higher cost recovery (they usually charge fees for programs and facilities). Ranges vary, from zero for parks and trails to about five percent for large urban departments that have small community centers and many free programs, up to about 85 percent for some special districts that have large multi-purpose regional recreation facilities. While some facilities within agencies may have direct cost recovery goals greater than 100 percent (such as the Liberty recreation center and Fountain Bluffs sports complex, which are classified as enterprise funds), there are no known public agencies offering comprehensive public parks and recreation services overall that have total direct and indirect cost recovery of 100 percent or greater. If this could be done, they would most likely be offered on a private, for profit basis.

Liberty Parks and Recreation uses the Pyramid Methodology to determine and discuss appropriate cost recovery levels. Some staff has not been fully trained in this process, so additional training may be beneficial. There is a Revenue Policy that has been adopted that guides the operations and management of the Department.

Staff members report that there was a very strong focus on high cost recovery in earlier years (in fact many key facilities were/are tracked as enterprise funds), but that now decision makers are starting to adopt policies that also include availability of lower cost recovery programs and services that serve the general community. It may be beneficial for the Department to more fully utilize cost recovery tracking for all programs and services, and routinely have this policy reviewed and updated through consensus of decision makers, staff, key stakeholders, and the public. Typically (but not always), programs for youth, seniors, and targeted lower income areas may have lower cost recovery expectations.

The Pyramid Methodology – a Management Tool

Refining the subsidy and cost recovery philosophy is important as the City works to sustain services in both the short and long term. The *Pyramid Methodology* is an effective management tool to develop and articulate a subsidy and cost recovery philosophy.

The methodology helps articulate the level of benefit that services such as activities, facilities, and lands provide as they relate to the mission of an agency. Its design leads to the logical determination of core services, resource allocation, and subsidy/cost recovery goals, and future fees and charges. Establishing guidelines and a methodology for the determination of these critical operational issues is imperative to sound fiscal responsibility, governmental accountability, and decision-making. While Liberty currently tracks overall cost recovery, it can be helpful to look at specific categories within those divisions. For example, it may help to have a city-wide cost recovery expectation for entry-level educational classes. For most communities this means it does not necessarily matter whether that class is an entry-level birding class, an entry-level volleyball skills class, an entry-level pottery class, or an entry-level computer class. The City's residents do not care which division offers the class, and it is targeting the same level of participant, with a non-judgmental approach toward which leisure-time offering a resident prefers. Each class may have the same percentage goal for cost recovery, and prices are based first on that expectation of percentage of cost recovery over direct expenses. Prices are then adjusted for market acceptability (after and not before the overall ranking based on mission, community expectations, and willingness to pay). Additional information on the Pyramid Methodology has been provided in a separate Staff Resource Document.

> In Liberty, there is not a stated philosophy that youth programs should be more or less subsidized or have a higher level of cost recovery than other areas. One area for focus in Year Two for Liberty may be to have more focused discussions with decision makers related to updating the Revenue Policy to include clear definitions for expectations for programs for this age group, and using the Affordances and Financial Analysis tool each year to track performance related to those expectations.

Relationships with Community Partners

LPRD has a number of strong working relationships with community partners and groups throughout the City. Most notably, there is a close partnership with the Liberty School District, which has created clear guidelines around usage of shared equipment and the Community Center and middle school facilities, including access to gymnasiums and outdoor play fields in the cooperative use agreement drafted in 2010. LPRD has drafted clear guidelines with the Boy Scouts Council for its Eagle Scout and Gold Award projects in a City park, as well as with the Earth Riders Train Association (ERTA) for the Stocksdale Park Mountain Bike/Skills Park and Hiking Trails cooperative use agreement. LPRD has also taken on a significant effort to increase partnerships with local businesses to enhance park facilities and generate revenue that subsidizes the costs associated with the operation of recreation programming and special events with the sponsorship program and corresponding policies.

In addition to the various alternative providers previously listed, it is recommended that the City, and particularly, LPRD, foster a positive relationship with the various homeowners associations in the community, and consider exploring opportunities to share private trails and open spaces in order to maximize usage and connectivity by all residents, especially youth.

B. Policy Analysis

As part of the process, staff received a template for policy analysis. A summary list of all policies that may affect the provision of services for youth ages 10-14 are highlighted in *Appendix B*.

While there are several policies that appear to be most important for this age group, none have been highlighted thus far during the stakeholder engagement process as needing changes. From the HCRG perspective, we will review the policy list with the stakeholders at the Visioning sessions, and ask again if there are any known constraints or needs for addressing these policies. Of particular interest for confirmation are the following items noted in *Table 10.*

Table 10: LPRD Policy Analysis

Policy #	Topic	Description
Chapter 7, Article II	Amusements	Owner/operators are required to have background checks; safety regulations related to the structure/housing for amusements and amusement facilities. Hours are limited to 10am-10pm on school nights and extends to 11pm for summer weeknights
Chapter 7, Article VII	Public Dances	Requires adults to be present
Chapter 15, Article I	Arcades	Requires permits, limits locations near schools and churches, prohibits weapons, prohibits gambling, limits minors without a parent present or parental authorization, limits hours of operation, requires background checks on personnel
Chapter 22, Section 22-66	Smoking Ordinance	Keeps the air clear near children's activities in parks
Chapter 20, Article XI	Pedestrians	Includes skateboarding and rollerblading; affects how walking can occur in and along roadways
Chapter 22, Section 22-7	Offenses	Prohibits riding bicycles on sidewalks in business district
Chapter 22, Section 22-47	Offenses	Limits "pick-up" style games in neighborhoods, especially if no park land is close by
Chapter 22-A-1	Park Hours	Limits park hours to 6am to 10pm daily

Positive Policies in Liberty

Most public policies are crafted to prohibit, remove, restrict, or otherwise serve as notice of punitive actions for those who violate their intent or code. These policies are often directly focused on those citizens who access or use public parks and recreation assets (facilities-natural or built) and affordances (programs and services). At issue is the negative nature of these policies as exemplified by the prohibition of skateboarding, bicycles, scuba diving, model airplanes, etc. More specifically, policies that govern behavior of participants involved in public operated facilities are often stated in a punitive manner. The context of these policies, many of which are longstanding, is to notify or alert customers or those who use public park and recreation assets and affordances that they will be punished for violation of the policies. Further, these policies assert that they are necessary for public safety, management of risk, and legal protection for the public agency.

Positive policies are framed by the premise that it is the responsibility of each patron, user, guest, and customer to be integral to the process of policy formulation, adoption, and enforcement. The positivistic policy approach is nested in the premise that public policy is for the greater good of all citizens, professional staff, and management. The RED project team will explore ways in which necessary policy priorities can be restated or reframed into a more positive format, which will encourage and engage youth and families in Liberty to be physically active and healthy while affirming their positive behaviors instead of restricting or punishing negative behaviors and/or activities.

Below are recommendations for moving forward with developing a positive policy framework for LPRD, and will be vetted during the visioning and action planning process in Year One as a goal for Year Two:

1. **Focus on the results of nominal group findings and the two highest rated factors** (i.e. nutrition regimen, social interaction, or physical activity). Transportation (another key factor in the nominal group process in Liberty). The Healthy Communities Research Group (HCRG) uses a nominal group process based on the multi-attribute utility technique (MAUT) to obtain ratings of key factors and their indicators. These data are tabulated and reflect the priorities of a diverse panel of community agency representatives including schools, health care, law enforcement, youth services, and the park and recreation agency staff.

2. **Draft an agency internal positive policy related to social interaction** as this is deemed essential to both developing a nutritional regimen and physical activity.

3. **Articulate how and when the policy would be implemented and by whom.** Management may choose to use selected test sites that are closest to the target population of 10-14-year-old overweight, obese, or morbidly obese youth.

4. **Secure approval of the draft policy from key stakeholders**: parents, stakeholders, youth groups, parks and recreation staff, etc.

5. **Train staff in techniques of practicing positive policies.** This would require selected staff and management, in consultation with GPRED HCRG staff, to develop a set of best practices that create a positive and welcoming environment at the selected sites, programs, or activities.

6. **Modify signage and other messaging media to reflect a positive and safe environment.**

7. **Customize programs, activities, and services** to optimize parent and child perception of the potential for success, acceptance (regardless of their physical capacity).

8. **Maintain a diverse enrollment of children** (e.g.) normal weight as well as overweight to avoid undue attention to children who are overweight and advance cooperative, positive, tolerant behaviors of all participants.

9. **Offer an array of opportunities** (e.g.) sport, cultural, social, civic, environmental, and indoor/outdoor to ensure that there are a variety of opportunities for these children to select activities for exploration and potentially a lifetime of engagement.

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VI. Assets and Affordances Analysis

The purpose of this analysis is to determine how the available assets (facilities and parks) and affordances (programs and services) in Liberty are provided for this specific age-group (ages 10 -14). A digital copy of the Affordances template has been provided to staff as a resource.

A. Background for Assets and Affordances Analysis

The process used for this analysis included the assembly of a detailed inventory of public and semi-public physical assets and affordances available for use by the target population in Liberty. These are further defined below.

<u>Definitions</u>
Part of this project is to identify consensual definitions of the language for analysis and assessment and to determine which characteristics of the inventoried assets and affordances are most relevant when conducting analysis on contributors to a "healthy community." Our common general working definitions include:

Assets – Public facilities and lands that are available for healthy recreation and/or active use by the target age group. Assets are also referred to as *components* in this study.

Affordances – An affordance is an <u>action</u> that an individual can <u>potentially</u> perform in his or her <u>environment</u>. For this project, we have included activities, programs, and services that are publicly available for action by a member of the target age group. By common definition, assets can also be considered one additional form of affordances, but we have purposefully kept the physical assets (parks, playgrounds, trails, etc.) separate from the available programs and services so they can be managed and analyzed separately.

Characteristics – Each asset and affordance has a set of characteristics which provide additional information. The characteristics used for the assets and affordances in this project are further described and discussed in following sections.

Composite-Values Level of Service (LOS) Analysis – This is the process used to inventory and analyze the assets and affordances, including quantity, location, and various qualities of each. The process utilizes MS Excel, MS Access, and common GIS software. The composite-values based LOS analysis process used by GreenPlay and Design Concepts is proprietary, and known as "**GRASP®**" (Geo-referenced Amenities Standards Process). It has been somewhat automated through creation of additional software code and template design for efficiency in data collection and analysis. The usage of the GRASP® methodology has been licensed to GP RED for this project. *See **Appendix C** for a detailed history and overview of Composite-Values Based Level of Service Analysis.*

B. Creating the Assets Inventory

The inventory of assets was created to serve the City in a number of ways, including for this study. It can be used for a wide variety of planning and operations tasks, such as future strategic and master plans. Currently, the assets inventory only includes public parks, recreation, and trails assets managed by the Parks and Recreation Department, along with those school facilities and identified alternative providers that are open to usage for recreation outside of school hours or to the general public. Assets of other types may be inventoried and added to the digital dataset at a later time, if desired.

The following map shows the study area and key locations of properties. Shading on the map delineates two subareas that were defined as part of the analysis. Larger Maps are located in *Appendix C*.

Map A: System Map

City of Liberty, MO
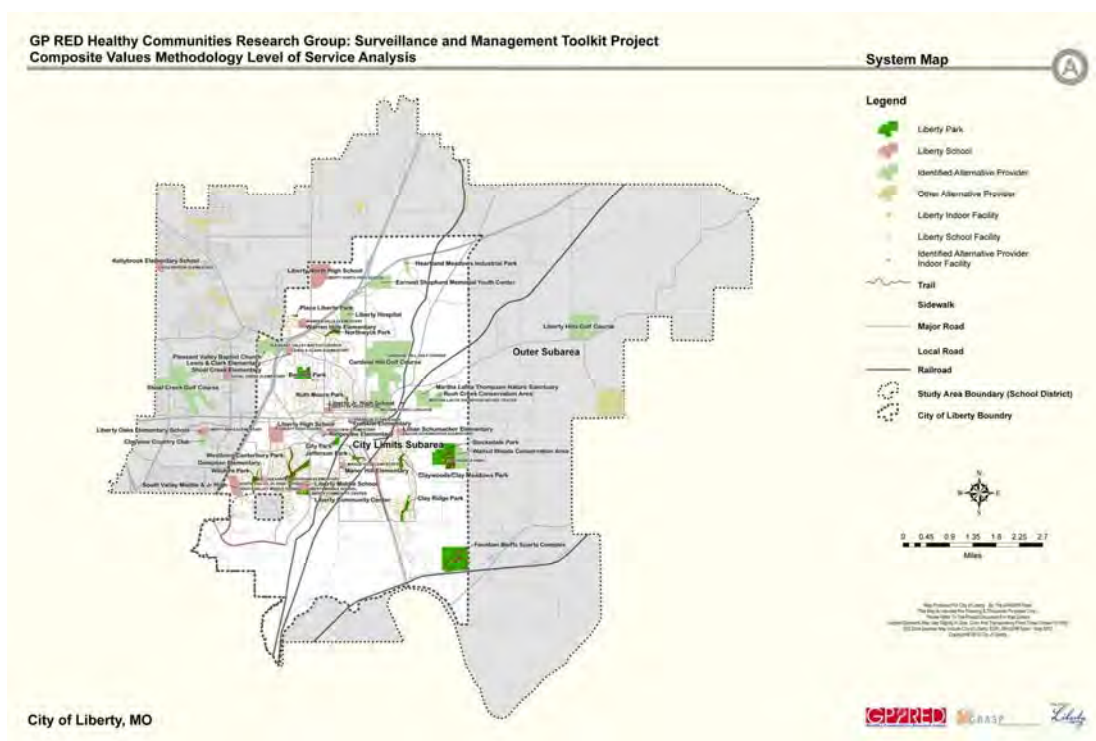
C. Assets Context

The current inventory available to the target age groups includes the following main features:

Inventory of Existing Assets
In planning for the delivery of parks and recreation services, it is useful to think of parks, trails, indoor facilities, and other public spaces as components, combined to create an infrastructure. This infrastructure allows people to exercise, socialize, and maintain a healthy physical, mental, and social wellbeing. The infrastructure is made up of components that support this goal. Components include such amenities as playgrounds, picnic shelters, courts, fields, indoor facilities, and other elements that allow the system to meet its intended purpose.

A description of this **Composite-Values Methology (CVM)** process is included in **Appendix B.**

For Assets, the following information was inventoried:
- Component type and location
- Evaluation of component functionality
- Evaluation of comfort and convenience features
- Evaluation of park design and ambience
- Site photos
- General comments

The inventory team used the following three tier rating system to evaluate each component on such things as the condition of the component, its size, or capacity relative to the need at that location, and its overall quality:

    B = Below Expectations (1)
    M = Meets Expectations (2)
    E = Exceeds Expectations (3)

The setting for a component and the conditions around it affect how well it functions, so in addition to scoring the components, each park site or indoor facility was given a set of scores to rate its comfort, convenience, and ambient qualities. This includes traits such as the availability of restrooms, drinking water, shade, scenery, etc. Below is an example of the park map and data collection template used during the process.

The Final Inventory Atlas includes all scoring and is provided as a staff level document. This atlas includes all outdoor locations, indoor facilities, and components in the level of service analysis.

Community Parks
Liberty's larger parks provide a variety of experiences to residents. In general, these parks offer sports fields, playgrounds, and picnic facilities. Onsite parking is available at all locations. They are listed as follows with a brief discussion:

Bennett Park

This north central park provides a wonderful setting within a residential part of town. While the park provides a large variety of opportunities it is beginning to show its age and would benefit from various updates. Highlighted by six very nice tennis courts, this park also offers playgrounds, picnic, shelters, a trail with fitness course, a ballfield, and a skate park.

City Park

This centrally located park provides a variety of recreation opportunities including ballfields, a destination playground, a water spray ground, picnic shelters, and horseshoes. The park is bordered on the south by Highway 291 which limits pedestrian access from the south.

Liberty Community Center (Outdoors)

Outdoor amenities at the Liberty Community Center generally support the indoor facility. The outdoor pool and spray ground are accessed through the center. Also available are sand volleyball and a multi-purpose field.

Stocksdale Park

Stocksdale ranks as the highest scoring Community Park in the system and offers a wide variety of opportunities for recreation. Its more rural location on the eastern city limits makes this a drive-to destination type park, but the amenities stand up to those expectations. Highlighted by an abundant network of trails and a bikes skills course, this park also offers a very popular dog park. Stocksdale is also home to a high quality horseshoe complex and indoor horseshoe facility.

Sports Complex

Fountain Bluff Sports Complex on the Southeastern edge of town offers a variety of recreation opportunities. Similar to Stocksdale Park, this is also a drive-to destination, primarily for organized sports teams using the ball fields and multi-purpose field complexes. There are, however, popular fishing ponds located throughout the site. Fountain Bluffs is the highest ranking park in community level of service but limited walkable access hinders its neighborhood scoring.

Neighborhood Parks

These small parks are located throughout the community and are generally within walking distance of residential neighborhoods. Most of these small parks offer play equipment, open turf, and a wooded area. Generally, parking is limited to street parking. These parks differ from greenways and linear parks primarily by the presence of a significant street frontage in at least one portion of the park. These parks include:

Northwyck Park

Place Liberte Park

Ruth Moore Park

Wilshire Park

Greenways and Linear Parks

Liberty has a number of linear parks and greenways. Generally, these parks offer similar amenities to neighborhood parks but often suffer from lack of street frontage and welcoming access. Situated behind homes and in drainage areas, these parks offer immediate neighborhood access but limited community level of service. These include the following:

Clay Ridge Park

Claywoods/Clay Meadows Park

Jefferson Park

Westboro/Canterbury Park

Westboro/Canterbury is the single exception to a limited access linear park. This location offers numerous neighborhood access points and a small parking lot. It is by far the most desirable and used of parks in this category.

Indoor Facilities

The City has one primary indoor facility that provides space for a variety of programming. The physical assets represented by this facility have been inventoried, and the programmed uses that it serves are addressed in the Affordances section of this report.
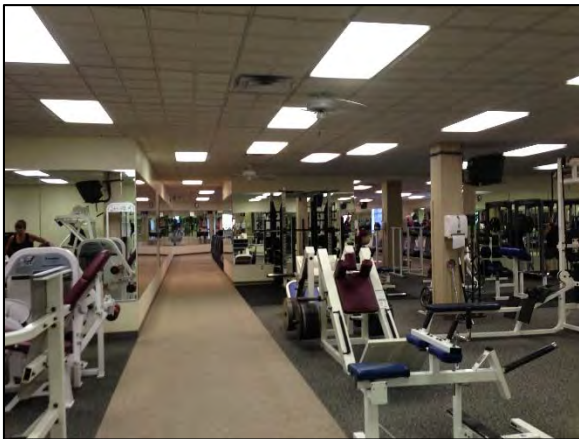
Also included in the indoor inventory is the Indoor Horseshoe facility at Stocksdale Park.

Schools

A partnership with schools is a great way to increase level of service through the use of public facilities outside of school hours. For the purposes of this study, schools were considered as both indoor and outdoor recreation providers based on the availability to the public. Schools are also important facilities for the provision of affordances as discussed later in this document. Generally, elementary schools and middle schools provide more access than high schools due to school programming needs. For the purposes of this analysis, elementary schools, middle schools, and high schools with public access are discounted by 50 percent.

Identified Alternative Providers

Several alternative providers were identified as important partners in recreation opportunities throughout the study area. Location and inventory of these providers is important not only to the overall level of service provided to residents but also in the avoidance of duplication of services.

Cardinal Hill Golf Course

Clayview Country Club

Earnest Shepherd Memorial Youth Center

Heartland Meadows Industrial Park

Liberty Hills Golf Course

Liberty Hospital

Martha Lafite Thompson Nature Sanctuary

Pleasant Valley Baptist Church

Rush Creek Conservation Area

Shoal Creek Golf Course

Walnut Woods Conservation Area

William Jewell College

Other Providers
There is also significant level of service provided by Home Owners Associations (HOAs). These have been located for reference, but a full inventory and scoring was not completed on these facilities. Many of these locations also were observed to contain significant trails throughout the subdivisions.

D. Affordances Inventory

Composite-Values Methodology (CVM) LOS for Affordances is a relatively new process in the industry, and there are no industry standards. GreenPlay and Design Concepts have completed this type of inventory on a parks and recreation master planning level for other communities (usually as part of an overall Level of Service Analysis) including the specific community of Bloomington, Indiana, and this target age group for its Healthy Communities project warrant goals as the Alpha Project Site. South Bend, Indiana, also participated as a Beta Site.

To begin the inventory, the team met to start identifying which Affordances would need to be inventoried, how Liberty staff would gather the information, and which characteristics would be necessary. The **Affordance Inventory Collection Template** in MS Excel has been updated and provided for this project to include additional characteristics that the Project Team deemed potentially important for this target age group and project type. It is worthy to note that the characteristics desired by the Healthy Communities team are not always completely aligned with the definitions and characteristics that can be analyzed using GIS-based CVM LOS. This will later be discussed in detail. In addition, the information desired for this type of analysis is not always the type of information typically collected by a City Parks and Recreation Department as part of their ongoing daily, or even annual, reporting.

The City of Liberty Parks and Recreation Department is a high-functioning agency, with progressive staff who understands the value of good management and planning practices. That being said, the study of affordances is in its infancy in this industry, and even computerized registration software packages are not collecting the information needed to comprehensively analyze data regarding affordances for a specific target age group. Even so, the staff and the project team worked diligently to gather information and define characteristics that are relevant for Healthy Community Contributors from public parks and recreation.

An MS Excel Spreadsheet with a list of programs and services offered by the Parks and Recreation Department was created (see the full spreadsheet in *Appendix D*). The list was organized by program areas (similar to components used in the assets analysis) used by the target age group, and include the following.

Aquatics Services
Swim Lessons
Adaptive Aquatics
Swim Clinics
Team Conditioning
Lifeguard Training
Splash Camp
Lap Swim

Fitness
Fitness Testing
Personal Trainers
Speed and Agility Training

Theater
Theater Classes
Summer Band

Ancillary Services
LCC Meeting Room Rentals
LCC Theatre Rental
LCC Pool Rental
LCC Basketball Court Rental

Day Camps
Active Kids Camp
Youth Tech Computer Camps

Non-Programmed/Drop-In Use
LCC Annual Memberships
LCC Summer Passes
LCC Daily Passes

Sports
Tennis Lessons
Softball
Fast Pitch Softball
Baseball
Flag Football
Soccer
Basketball
Volleyball
Cheerleading

Special Events
Baseball
Bucky Dent Baseball Camp
Easter Bash
Spring Shootout
Diamond Classic
American Past-time
Midwest Showdown
Pepsi Hardball
KC Sports NIT
Liberty Bash-KC Sports
KC Sports Blowout
Memorial Day Super NIT
Global World Series
"A" World Series
USSSA Fall State
Basketball
January Jam
Fastpitch Tournaments
MSP Spring
ASA VIP Series
Soccer
Sand Soccer

Golf Services
Golf Lessons

Programmed Classes
Martial Arts
Dog Obedience
Chess Lessons
Chess Leagues
Dance

This inventory is designed to be expandable and dynamic for the agency, so that it can be used to analyze other affordances for other project warrants and age groups, if desired, in the future. In addition, in any community, the inventory and analysis can be expanded to include additional affordance program/service areas such as alternative providers of services (YMCA, Faith Based Groups, Boys and Girls Clubs, etc.) and other Healthy Living Contributors (availability of healthy foods, transportation options, medical and mental health locations, etc.), if desired.

In addition to the list of groups, the affordances were also identified by pre-defined applicable characteristics. Some of these characteristics are helpful from a mapping/location standpoint, some are more administrative information, and many are qualifiers that help determine if this is a primary or secondary healthy community contributor for the target age group.

Table 11 shows the definitions for affordance characteristics. The green areas indicate those characteristics that are locational for mapping. The pink cells indicate administrative, financial, participation, and/or multiple categories. The yellow cells represent more detailed analysis for reasoning behind motivation for participation beyond financial or availability criteria.

Table 11: Affordance Characteristic Definitions

Affordance Characteristics Definitions	
Characteristic	**Definitions**
Map ID	# = Location in GRASP® dataset; For those with multiple sites, use additional rows; C = community wide availability
Catchment	Target service area: 1 = neighborhood (1 mile), 2 = local (3 miles) 3 = City-wide (5 miles), 4 = Regional (7 miles)
Target Age Group 10-14-Year-Olds	0 = all, 1 = < 10, 2 = 10-14, 3 = 15-24, 4 = 25-55, 5 = >55
Season	Seasons offered: 0 = all, 1 = Winter, 2 = Summer, 3 = Fall, 4 = Spring
Frequency/Year	Number of times offered per year, for multiple separate seasons, use additional rows, or YR for year-round
Duration	Length of session per offering in hours or weeks (e.g.: 2 hours 8 weeks, etc.); format = # plus (H = hours: W = weeks)
Participation Units	Number of participant units (individual contact points) per year
Con/Non-Con	C = Consequential: a win/lose, competitive activity; N = Non-Consequential: non-competitive
% Adherence	% of repeat participants (retention rates)
Cancellation Rate	% of cancelled sessions offered
Waiting List	Y = this offering typically has a wait list; N = this offering typically does not have a wait list
Social	Y = program or service provides a social benefit
Physical	Y = program or service provides a physical benefit
Cognitive	Y= program or service provides a cognitive benefit
Environmental	Y = program or service provides a benefit to the community environment (conservation, preservation, or other)
Indirect Economic	Y = program or service provides a substantial indirect economic benefit to the community (may or may not for the direct agency)
Healthy Living Contributor	Y = program or service provides a contribution to Healthy Living for target market
Fee Per Unit	Fee charged to user per unit of offering
Unit Fee Quartile	Quartile of fee ranking relative to agency offerings per unit; 0 = free, 1 = 1-25%, 2 = 26-50%, 3 = 51-75%, 4 = 76-100%
% On Scholarship	% of participants participating through use of scholarship funds
Cost Per Unit	Direct cost to agency to provide a unit of service
Agency Provided	Y = this program or service is programmed and offered by the project agency
Partnered/ Facilitated	Y = this program or service is offered by a partner, and facilitated by the agency through a formal partnership or agreement
Rental	Y = this program or service is offered by another entity, merely renting or utilizing agency land or facilities

E. GRASP® Perspectives

An analytical technique known as *Composite-Values Methodology* (CVM) was used to analyze levels of service (LOS) provided by assets and affordances in Liberty. The proprietary version of CVM used is known as GRASP®. The process used analytical maps known as *Perspectives* to study LOS across the City. Level of Service Perspectives show how well the community is served by any given set of components by utilizing maps to graphically display values, along with quantified measurement spreadsheets. This quantification system provides a benchmark against which a community can determine how well it is doing providing services in relation to the community's goals, both presently and over time.

1. Perspectives for Assets

Perspectives were generated to evaluate the assets available to residents, along with charts provided to provide quantitative data. To generate the Perspectives, all assets in the dataset were used. This is because all assets in the inventory were deemed appropriate for services to this age group (99.8%).

To produce the Perspectives, each inventoried component has been assigned a service value, or GRASP® score, and a catchment area (or buffer) based on a radius from the component. The catchment area is the distance within which a majority of people using the component might reasonably be expected to come. Scores for the component's value to the surrounding neighborhood that were recorded in the inventory process were used. The images below show a one mile and half mile catchment placed on the Liberty Community Center as an example. *Note: the level of service value doubles within one half mile of the center.*
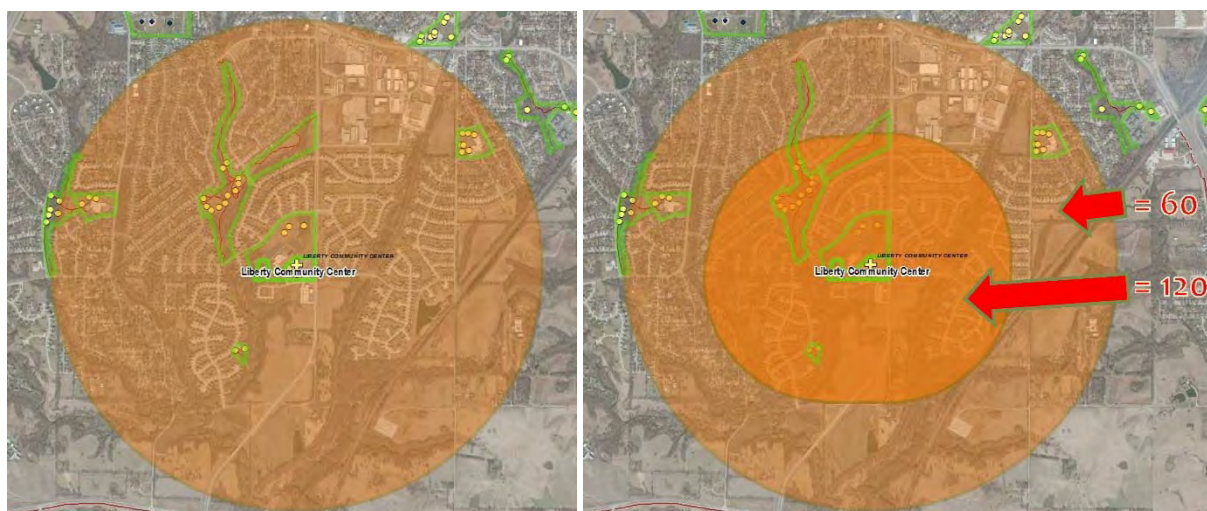
When service areas, along with their scores for multiple components, are plotted on a map, a picture emerges that represents the cumulative service provided by that set of components upon the geographic area. Where service areas for multiple components overlap, a darker shade results from the overlap. Darker shades indicate locations that are served by a combination of more components and/or higher quality ones. The shades all have numeric values associated with them, which means that for any given location on a GRASP® Perspective, there is a numeric GRASP® Level of Service score for that location and that particular set of components. Larger perspectives have been provided in ***Appendix C***. The image below is an example of how multiple parks influence the level of service for any given area within the catchments.
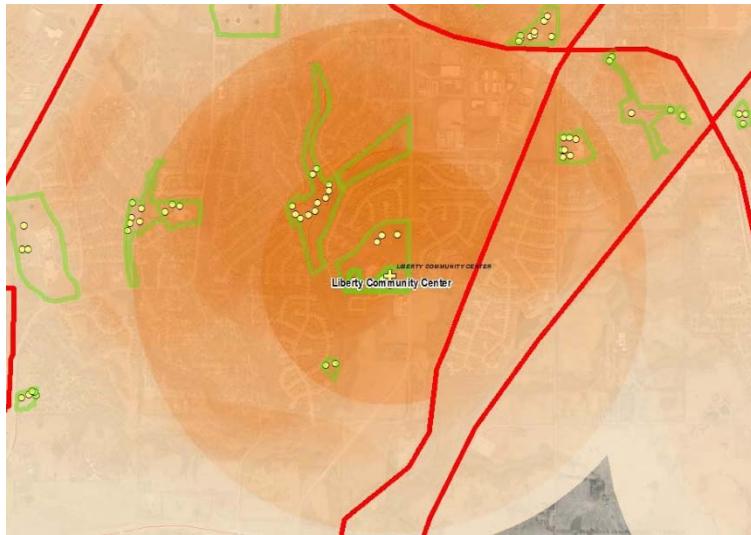
For purposes of more detailed analysis and to compare one part of Liberty to another, the study area was divided into two sub-areas. These are shown on the Perspectives and labeled as City of Liberty and Outer Sub-Area (meaning outside of the city).
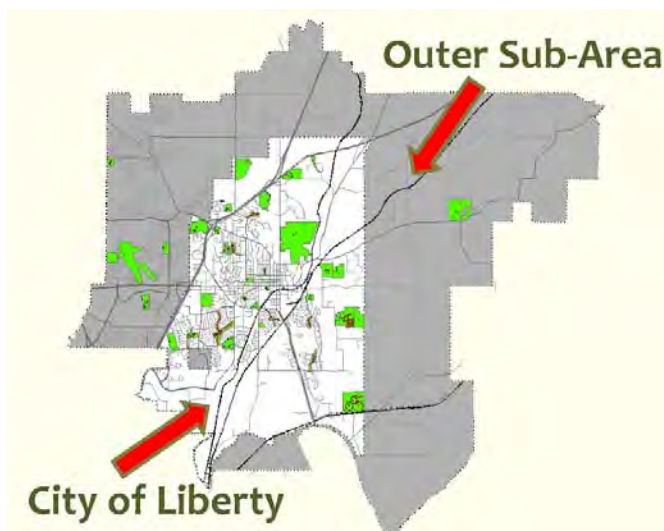
Table 12 shows the population and size statistics for the subareas and the entire study area. Because population is used in some of the LOS analyses, an estimated population for the Target Age Group of the study was determined. This number was also used to calculate the Population per Acre, so that the population density of 10-14-year-olds could be used in the LOS calculations as well.

Table 12: Liberty Subarea Statistics

Subarea	Total Acres	2012 Population	2017 Population	2012 Population Per Acre	Age 10-14 2012 Population	Age 10-14 2017 Population
City of Liberty	18489	29,814	31,193	1.61	2,235	2,223
Outer Study Area	34672	26,227	28,853	0.76	2,448	2,749
Study Area	*53161*	*56,041*	*60,046*	*1.05*	*4,683*	*4,972*

Based on ESRI Business Analysis Online and 2010 US Census data (http://bao.esri.com)

Each Perspective is a model of the service being provided across the study area. The model can be further analyzed to derive statistical information about that service in a variety of ways. The results of these are described in the text that follows.

Perspective A: Access to All Components
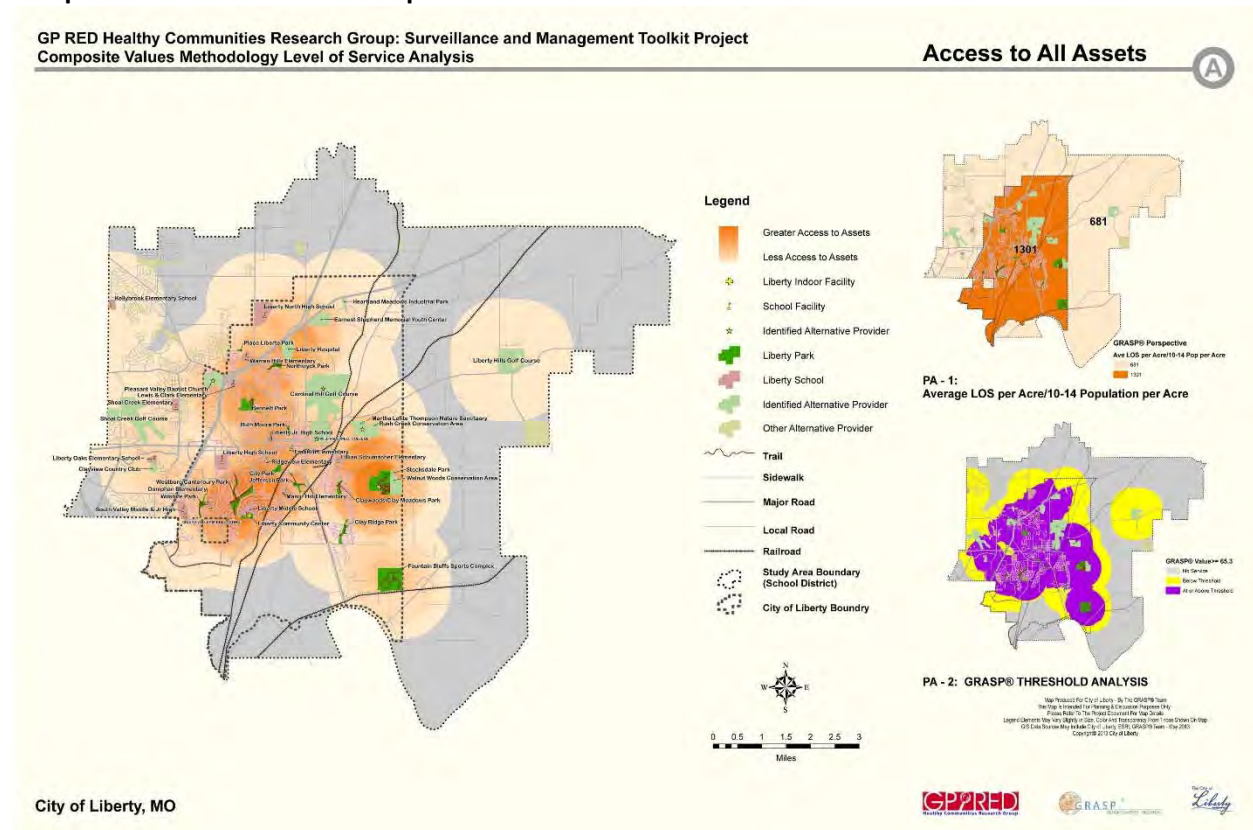
Perspective A models access to all components by all transportation modes. One-mile buffers have been placed around each component and shaded relative to the component's GRASP® score. This represents a distance from which convenient access to the component can be achieved by normal means such as driving or bicycling. In addition, the one-half mile buffer shows the distance that a resident can reasonably walk in 15 minutes. Scores are doubled within the one-half mile buffer to reflect the added value of walkable proximity, since most healthy individuals can reach a location on their own by walking, even if they do not drive or ride a bicycle.

Table 13 shows the statistical information derived from *Perspective A*.

Table 13: Statistics for Perspective A

	Percent of Total with LOS	Average LOS per Acre Served	Avg. LOS Per Acre / 10-14 Population per acre	GRASP® Index
City of Liberty	89%	157	1301	213
Outer Study Area	40%	48	681	53
Study Area	57%	107	1220	130

The first column of numbers shows the percentage of each planning area that has at least some service (LOS >0) based on the service areas used in the analysis. Coverage of service for the City of Liberty is much higher than the more rural outer study area as expected.

The second column of numbers shows the average numerical value of LOS for the total area with service within each planning area. Average LOS in the outer study area is about 1/3 of what is shown for the City of Liberty.

The third column shows the results of dividing the number from the previous column (Average LOS per Acre Served) by the population density of the target group (10-14-year-olds) in that planning area.

PA - 1:
Average LOS per Acre/10-14 Population per Acre
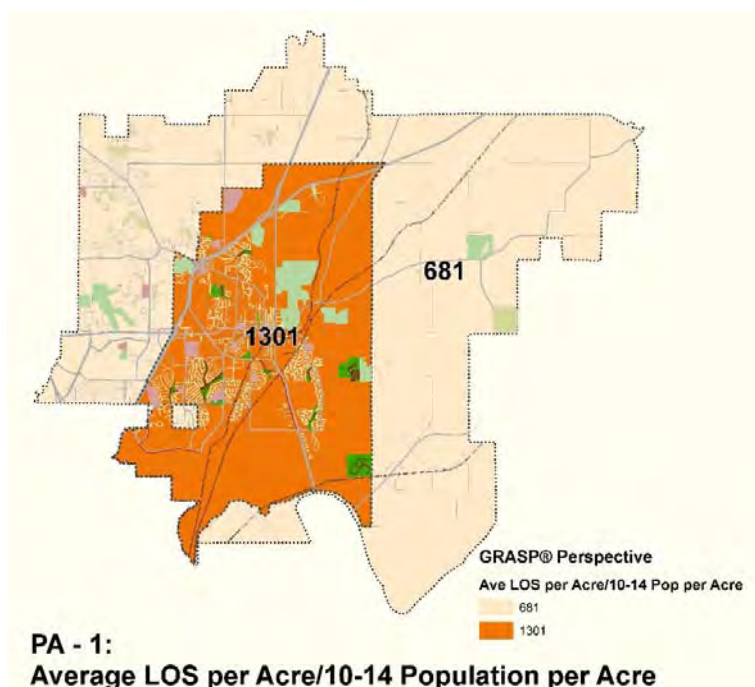
The inset map **PA-1** also shows the results of this calculation. Higher numbers indicate a higher LOS for the target population within that area. Again, we see that the 10-14-year-olds in the City of Liberty are much better served than those outside the city.

The GRASP® Index shown in the next column is from a simple numerical calculation that involves dividing the total numerical value of all of the components physically located within the planning area by the Target Group population of that area, in thousands. The difference between the GRASP® Index and the previous number is that the GRASP® Index reflects the total value of assets in a planning area in relation to the number of people they serve, while the previous number relates the *density* of service per acre to the *density* of people per acre. It also allows service from assets outside the planning area to be accounted for, while the GRASP® Index does not.

While it is not surprising that Liberty Parks and Recreation is providing a higher level of service to the 10-14-year-old age group within the City, it is interesting that even when considering population density, the age group appears to have significant lack of access outside the city when compared to within the city limits.

Threshold Analysis

Bracketing of the GRASP® values allows a threshold to be set and gaps in service more easily identified. Because the primary goal of this GRASP® assessment is to determine neighborhood level of service, determining what "neighborhood level of service" means in Liberty is important. For the purposes of this study, it was determined that the average overall GRASP® score for the following parks was applicable. After placing a premium on walkable access to neighborhood parks, the value used to bracket the analysis was determined to be 65.3 GRASP® points.

LOCATION	Classification	GRASP Overall Score	Score with Premium for Walkability
Clay Ridge Park	Linear Park	24.2	48.4
Claywoods Clay Meadows Park	Linear Park	17.6	35.2
Jefferson Park	Greenway	26.4	52.8
Northwyck Park	Neighborhood Park	24.2	48.4
Place Liberte Park	Neighborhood Park	17.6	35.2
Ruth Moore Park	Neighborhood Park	38.4	76.8
Westboro Canterbury Park	Greenway	79.2	158.4
Wilshire Park	Neighborhood Park	33.6	67.2
Proposed Average used in Threshold/Gap Analysis:			**65.3**

Therefore, the values on Perspective A were bracketed to show where LOS is above or below a threshold. The result is shown on map **PA-2** (the inset map with purple and yellow). On this map, areas that have at least some service are shown in yellow. Areas that are shown in purple have LOS that exceeds the threshold score of **65.3** that was described earlier.

Liberty Parks and Recreation Department
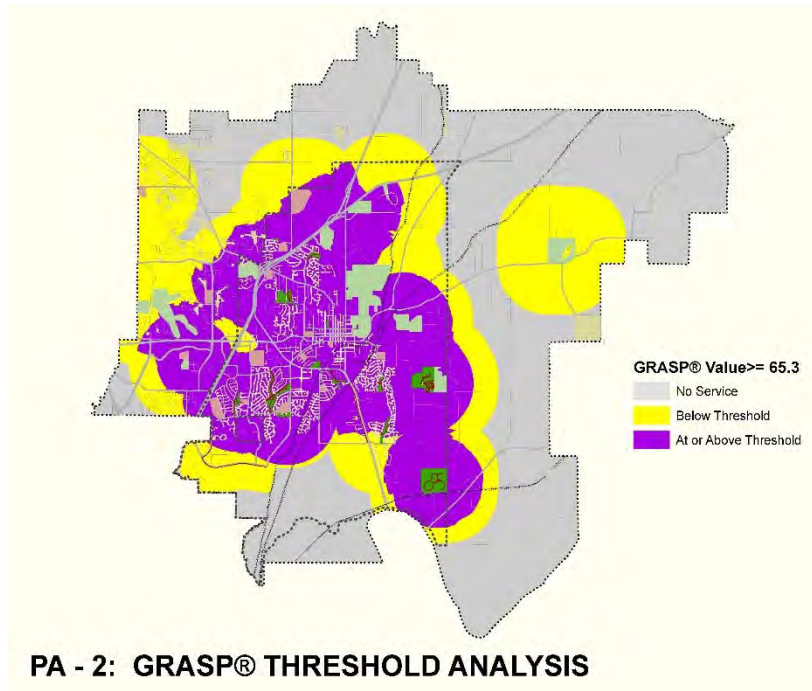
PA - 2: GRASP® THRESHOLD ANALYSIS

Sometimes this is best represented in a pie chart (see below).
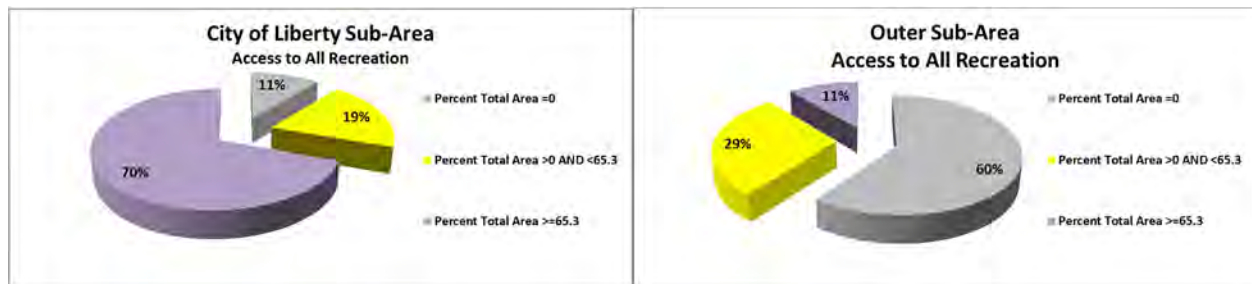
A conclusion that may be drawn from this Perspective is that while the numbers of residents in the target population are similar between the two subareas, the children have much higher access to recreation opportunities if they live within the city limits, even when considering a one mile catchment.

Perspective B: Walkable Access to All Components

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Access to All Walkable Assets

City of Liberty, MO
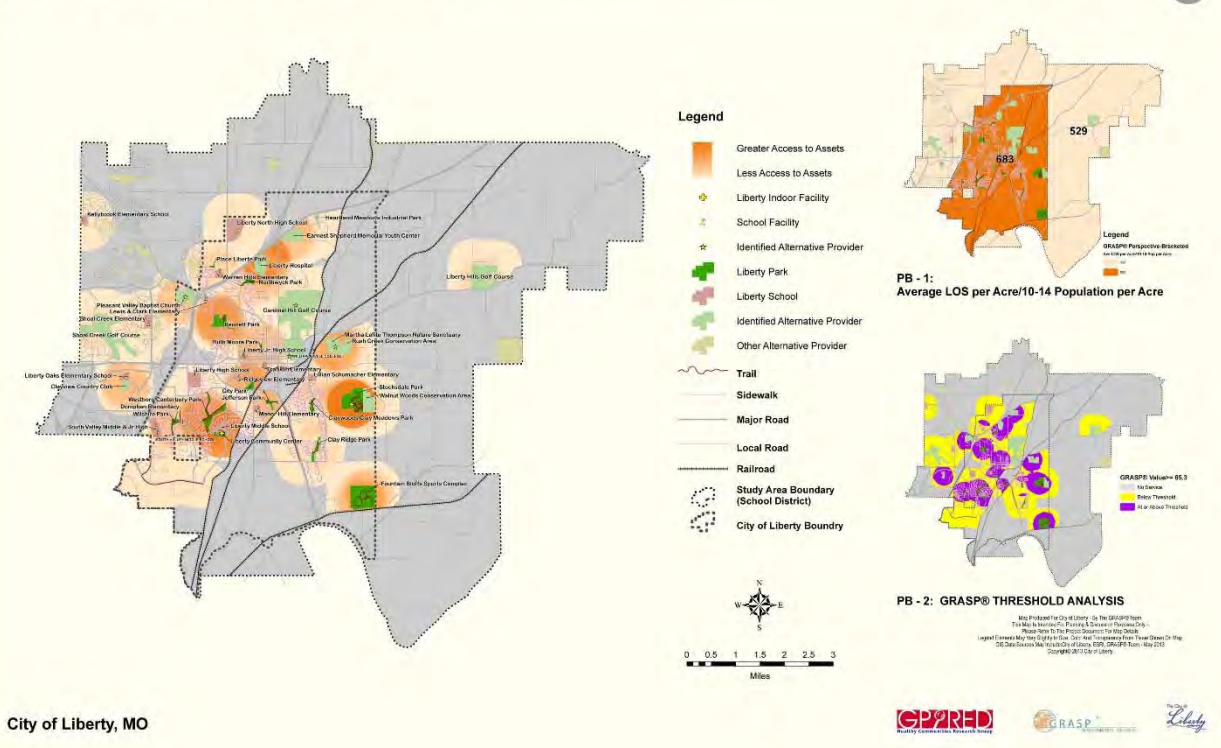
Perspective B is intended to show the LOS available across Liberty if walking is the only method of transportation to assets. Only the one-half mile buffers were used, to reflect the distance that a resident can reasonably walk in fifteen minutes. Scores are doubled within the one-half mile buffer to reflect the added value of walkable proximity, allowing direct comparisons to be made between this Perspective and *Perspective A*. Major pedestrian barriers were identified and confirmed by staff.
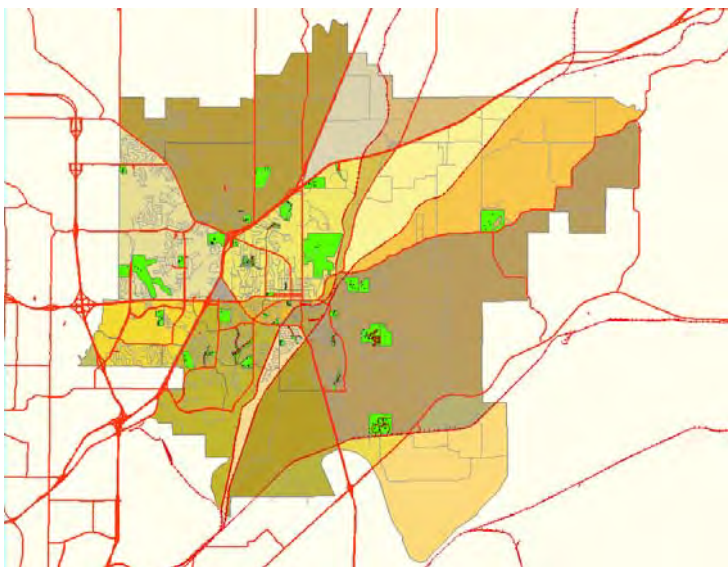
These barriers truncate walkable level of service provided by a facility. The following image is a good example of how walkable level of service is truncated around the Liberty Community Center and other adjacent parks.
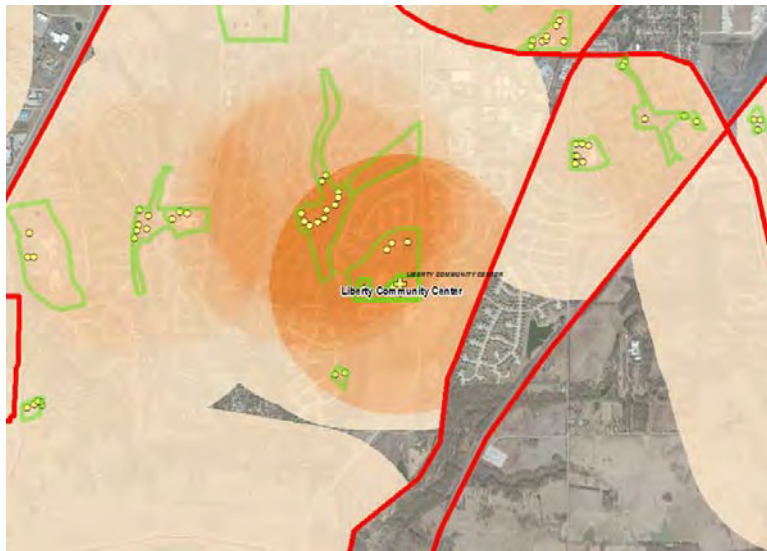
While proximity within a one-half mile radius is an effective way of looking at large scale master planning and walkability, this method is not intended to guarantee walkable access. Using the one-half mile radius also takes into account that travel within that catchment may not be a straight line between point A and point B. Further investigation and more localized planning efforts may be required based on specific sites or locations. This may include (but is not limited to) rural settings or areas without pedestrian friendly streets or adequate sidewalks. This is known to be a concern in several areas in and around Liberty, for example, Stocksdale Park and Fountain Bluff Sports Complex.

Table 14 shows the statistical information derived from Perspective B.

Table 14: Statistics for Perspective B

	Percent of Total with LOS	Average LOS per Acre Served	Avg. LOS Per Acre / 10-14 Population per acre	GRASP® Index (10-14)
City of Liberty	89%	157	1301	213
Outer Study Area	40%	48	681	53
Study Area	57%	107	1220	130

The numbers in each column are as described in the explanation for **Perspective A**. The most obvious difference between this Perspective and Perspective A is that the LOS for a person who must walk to get to assets is lower than the LOS enjoyed by someone who can drive. This is particularly significant for the demographic cohort that is the target of this study. Many in this age group can walk a reasonable distance to a destination on their own, but none can drive there themselves, and all must depend on someone else to provide motorized transportation.

PB - 1:
Average LOS per Acre/10-14 Population per Acre
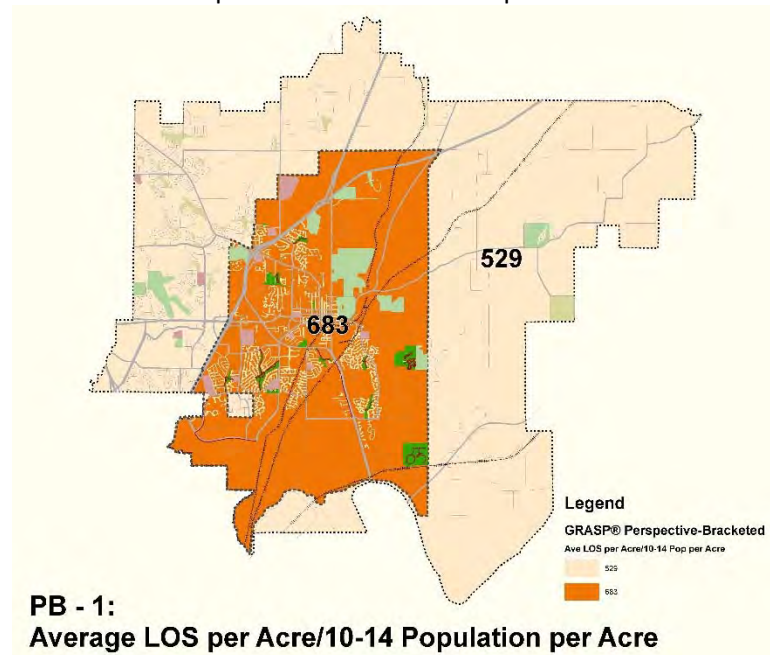
Similar to PA-1, PB-1 shows a higher level of service for within the city limits when compared to the outer sub-area even when correcting for population density.

PB - 2: GRASP® THRESHOLD ANALYSIS
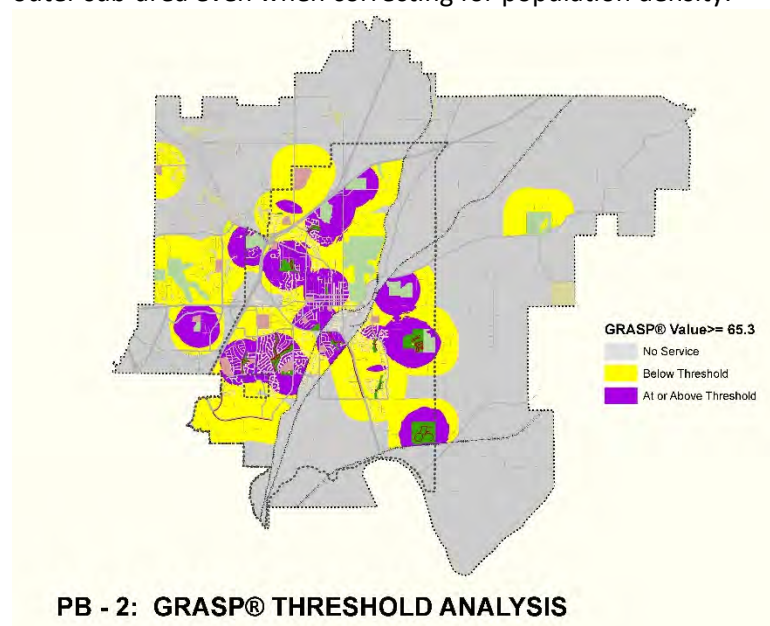
The areas shown in yellow on the inset map **PB-2** are areas of opportunity, because they are areas where land and assets that provide service are currently available, but the value of those does not add up to the threshold. It may be possible to improve the quantity and quality of those assets to raise the LOS without the need for acquiring new lands. Again, the pie charts represent the percentages of each sub area that fall into the categories of At or Above Threshold, Below Threshold, or No Current Service.

City of Liberty Sub-Area
Walkable Access to All Recreation

- Percent Total Area =0 — 35%
- Percent Total Area >0 AND <65.3 — 38%
- Percent Total Area >=65.3 — 27%

Outer Sub-Area
Walkable Access to All Recreation

- Percent Total Area =0 — 85%
- Percent Total Area >0 AND <65.3 — 13%
- Percent Total Area >=65.3 — 2%

> ### Key Conclusions: Assets
> A key conclusion from the Asset Perspectives is that proximity and transportation are significant factors in the provision of service, especially for the target population. Within the City of Liberty, the provision of assets is reasonably distributed but is not always within walking distance. This is reasonable if everyone has equitable and adequate access to motorized transportation. However, because more than half of the target population lives outside of the City of Liberty, proximity to recreation opportunities are fewer and more likely provided by alternative providers. Access for these population assets is therefore more difficult and automobile dependent. One way to increase overall LOS is to add assets where there are concentrations of the 10-14 population which happens to be outside of the City. However, a more realistic approach is to increase partnerships for service in areas where localized population density is high but service is low. This situation is most likely to occur in the Northwest and West subdivisions, but may occur elsewhere as well. Further analysis, and a review of the information received from surveys, focus groups, and other sources may be needed to help identify these locations.

2. Perspectives for Affordances

As noted earlier, once the affordance inventory is compiled and validated, there are a variety of analysis Perspectives that can be produced, depending on the issues to be examined, and the combination of characteristics and/or qualifiers that need to be included.

For this project, the team chose to produce three (3) Perspectives to show how the graphic depiction and quantitative analysis changes when different component (Program/Service Areas) and characteristics for the Affordances are used.

1. **Affordances Composite Perspective for the Target Age Group** – This includes all affordances listed in the dataset (similar to the Composite Perspective for Assets, but for Affordances).
2. **Affordances Sub-Analysis – Walkability for the Target Age Group** – This includes all affordances, but only a one-third mile (not the one-mile) buffer. This shows a realistic representation of what areas have service from affordances within a ten minute walk – a key qualifier for this non-driving age group.

3. **Affordances Sub-Analysis – Consequential Activities Only –** This Perspective includes all affordances deemed to have consequential characteristics (like a win/lose aspect or some other specific consequence from participation) as an example of how various types of programs might be available in different parts of the City.

Key Findings from these Affordances Perspectives

By reviewing the Perspectives, it is possible to see where higher and lower levels of service are being provided from a given set of affordances. Decisions can then be made regarding the appropriateness of the levels of service and whether or not to change the system in some way to alter levels of service in various locations. Larger versions of these Perspectives have been provided to Department staff.

Perspective C: Access to All Affordances
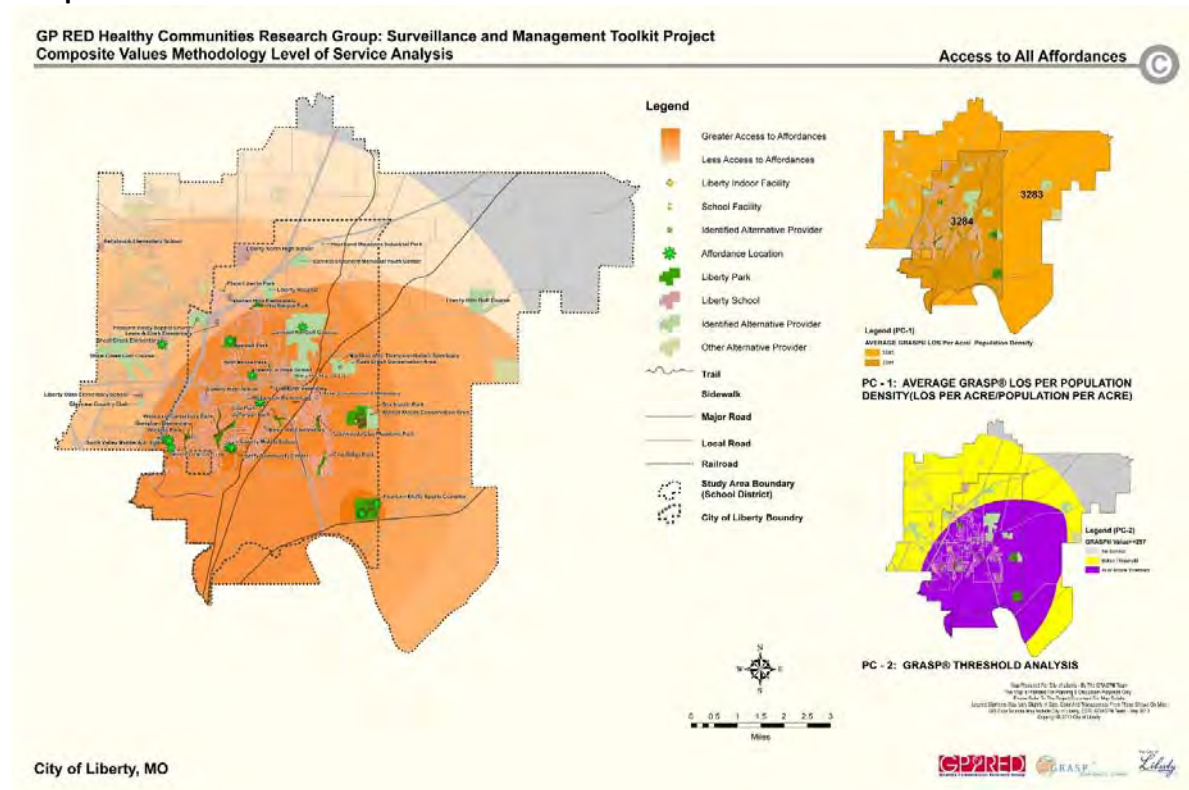
Perspective C graphically depicts the availability of affordances based on the service catchment areas of each affordance. Access is lowest in the northern part of the study area with most of the services and programs being offered in the central or southern part of the study area. The following chart gives the statistics from this Perspective.

Table 15: Statistics for Perspective C

	Percent of Total with LOS	Average LOS per Acre Served	Avg. LOS Per Acre / 10-14 Population per acre	GRASP® Index
City of Liberty	100%	397	3284	200
Outer Study Area	82%	232	3283	2
Study Area	88%	297	3371	97

Note that in the case of all affordances, **100** percent of the City and **82 percent** of the outer sub area has at least some access for this target age group. For the threshold mapping on this Perspective, (purple and yellow map, **PC2**), the threshold used is the average LOS value for the entire study area, which is 297.

PC - 2: GRASP® THRESHOLD ANALYSIS
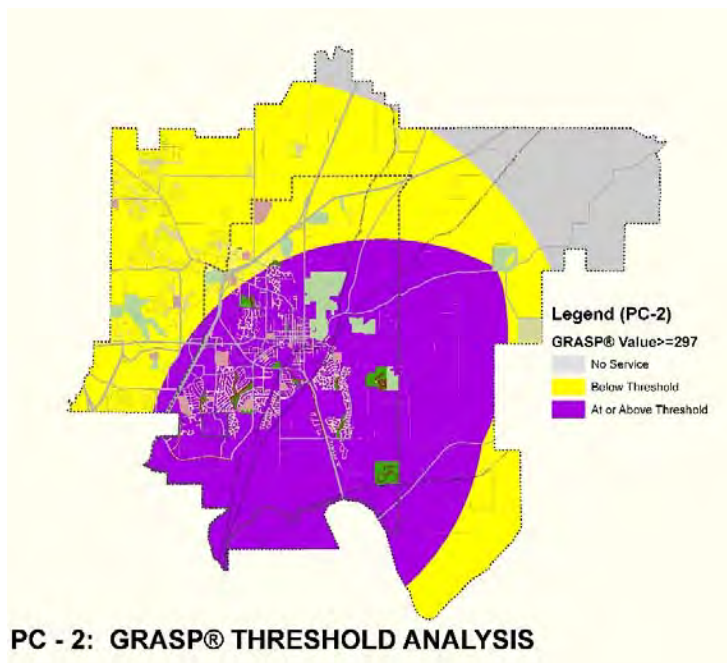
This value is not intended to be a target for LOS, but should instead be used as a benchmark against which current conditions can be evaluated. As conditions change in Liberty, the threshold value may change as well.

Analysis on the threshold shows that **81 percent** of the City meets or exceeds the threshold value. To increase service for affordances overall, it is probably not a function of just adding more locations, but adding programs and spaces for programs to the locations that are currently being used.

When analyzing the two sub areas, **in PC1**, based on average level of service and adjusting for population density, we see that the two subareas are almost identical. This is strongly influenced by the fact a majority of the affordances have large catchment areas intended to attract participants from a city or regional distance.

Legend (PC-1)

AVERAGE GRASP® LOS Per Acre/ Population Density

3283
3284

PC - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY(LOS PER ACRE/POPULATION PER ACRE)
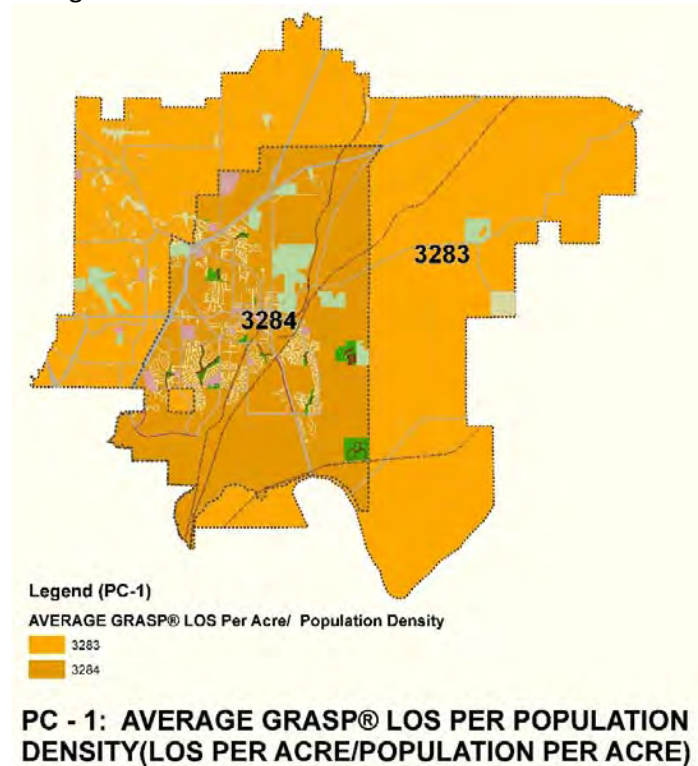
Perspective D: Walkable Access to All Affordances

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Walkable Access to Affordances

City of Liberty, MO
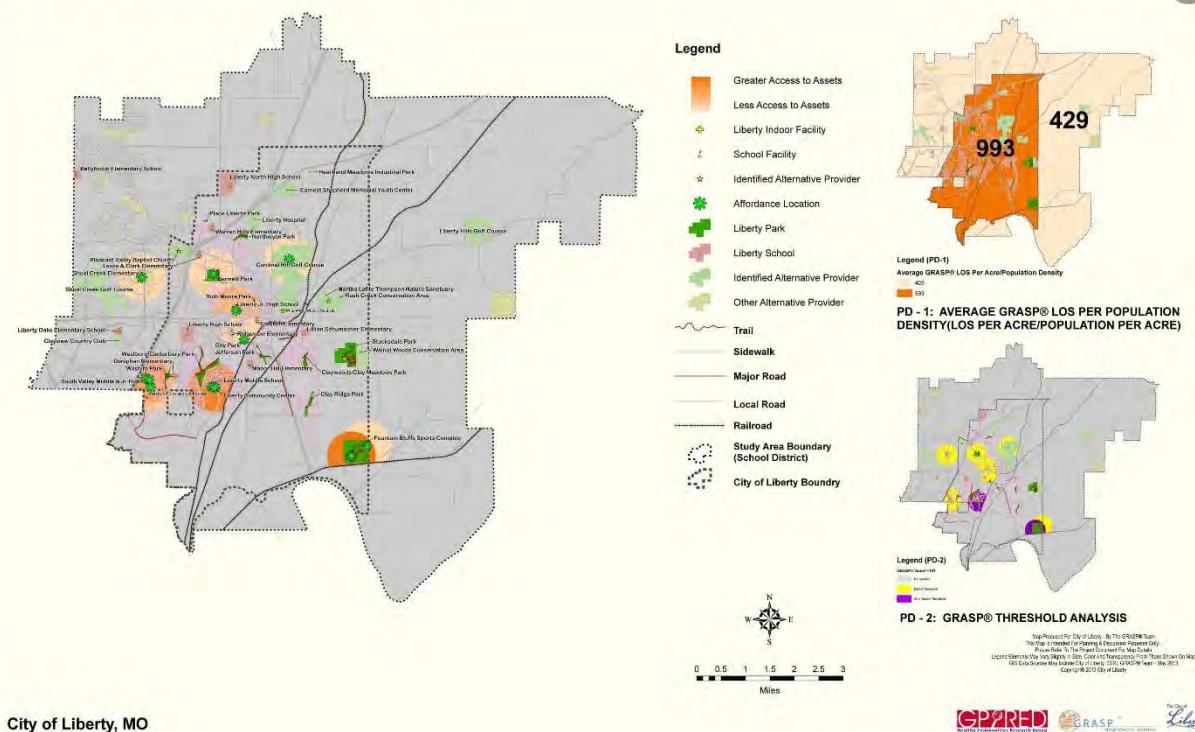
The **Affordances Perspective depicting Walkability** (the ability to walk to an affordance within one-half mile or less) is significantly different. Walkable service to affordances is very spotty and low in value. Note that youth from the majority of the study area cannot walk to affordances and must rely on transportation. Additional analysis could examine the role that public transportation plays for this age group. The quantitative scoring is as follows.

Table 16: Statistics for Perspective D

	Percent of Total with LOS	Average LOS per Acre Served	Avg. LOS Per Acre / 10-14 Population per acre	GRASP® Index
City of Liberty	15%	120	993	200
Outer Study Area	2%	30	429	2
Study Area	7%	101	1146	97

This means that only **15 percent** of the City and **two percent** of the outer sub area has walkable access to affordances available for this target age group.

The threshold value (based on average value of LOS for all areas with service on the map) for this Perspective is only 101 compared to the value of 297 in the previous Perspective. (Map PD2) Only **four percent** of the City of Liberty, and none of the outer sub area, is above the threshold score, as demonstrated on the following page.
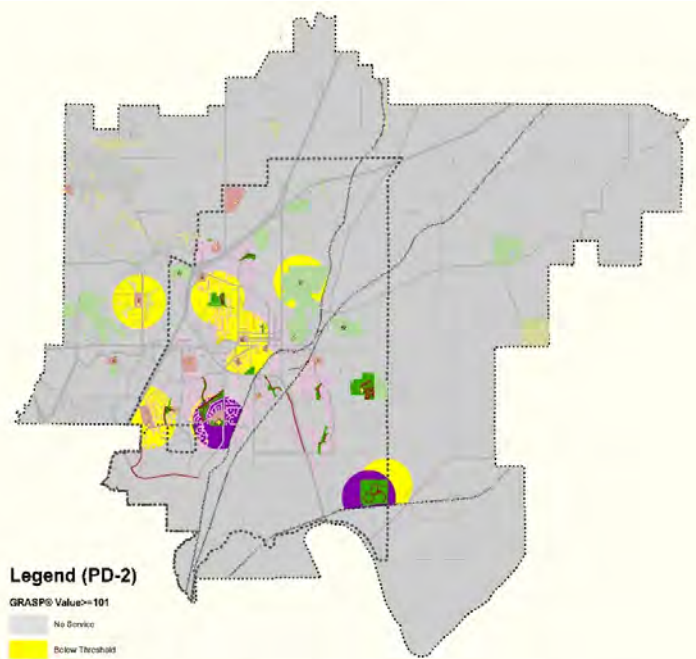
Legend (PD-2)

GRASP® Value>=101

- No Service
- Below Threshold
- At or Above Threshold

PD - 2: GRASP® THRESHOLD ANALYSIS

Legend (PD-1)

Average GRASP® LOS Per Acre/Population Density

- 429
- 993
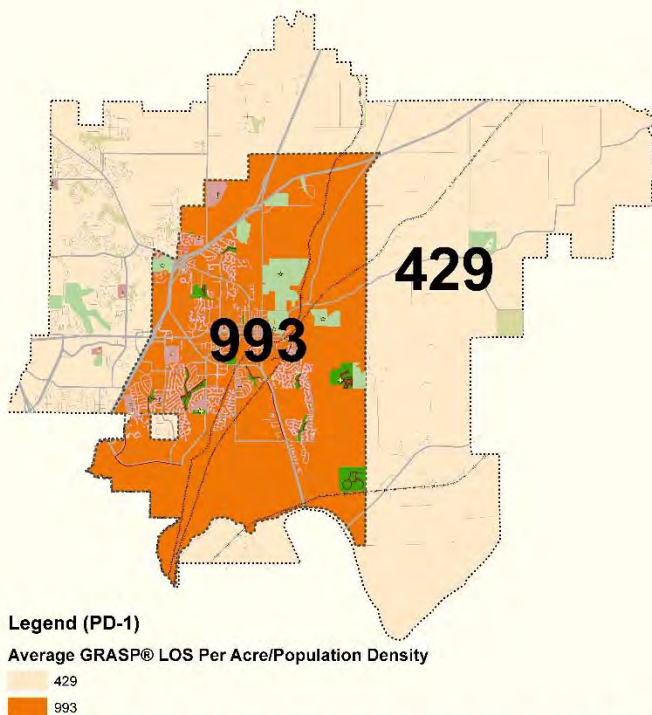
PD - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY(LOS PER ACRE/POPULATION PER ACRE)
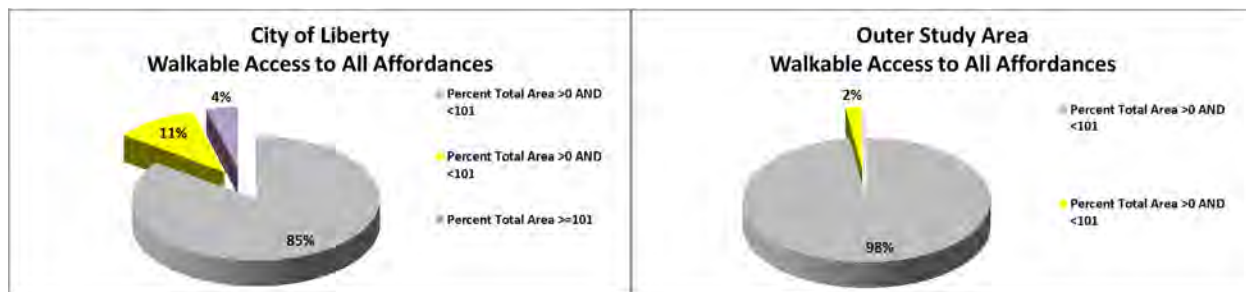
From this analysis, it appears that in order to increase service, adding programs and services at current locations alone will not suffice. Locations or transportation would also need to be added for greater access.

Perspective E: Access to All Consequential Affordances
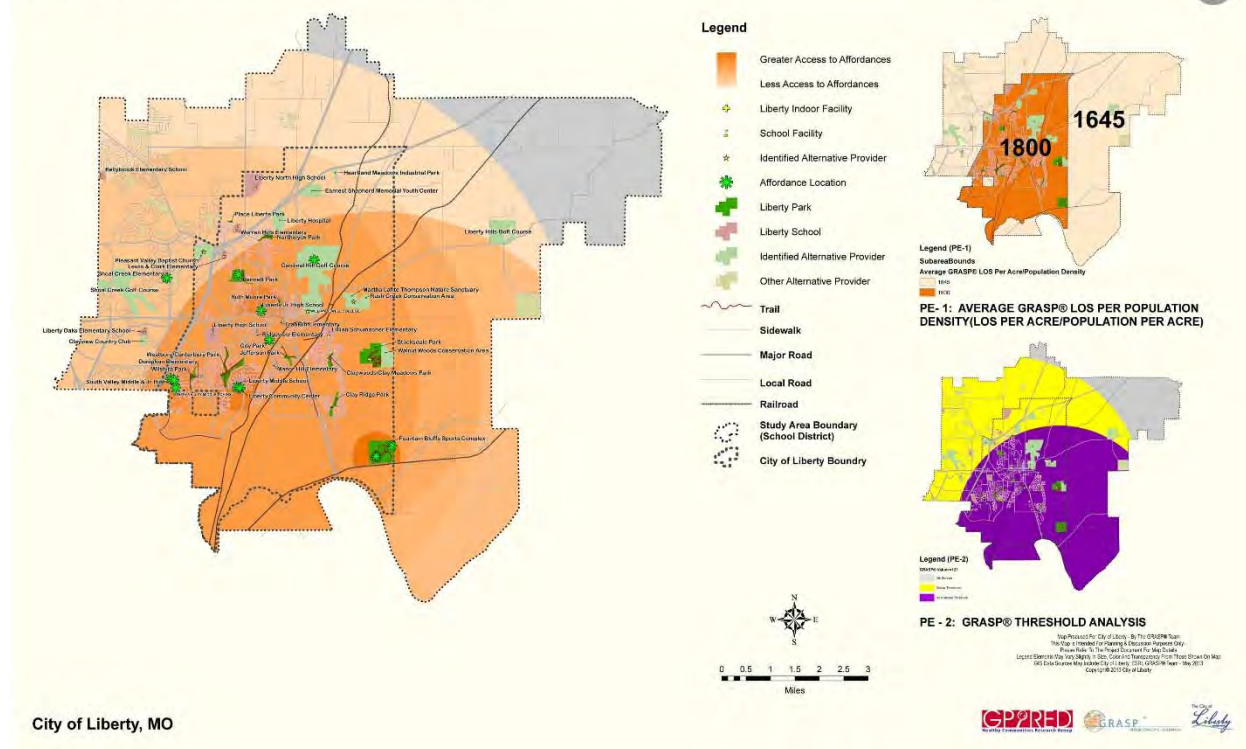
The **Affordances Perspective depicting Consequential Affordances** is interesting in that it accurately, graphically portrays the locations of more competitive activities (centered around sports fields and similar venues).

Legend (PE-1)

SubareaBounds

Average GRASP® LOS Per Acre/Population Density

▢ 1645
■ 1800

PE- 1: AVERAGE GRASP® LOS PER POPULATION DENSITY(LOS PER ACRE/POPULATION PER ACRE)
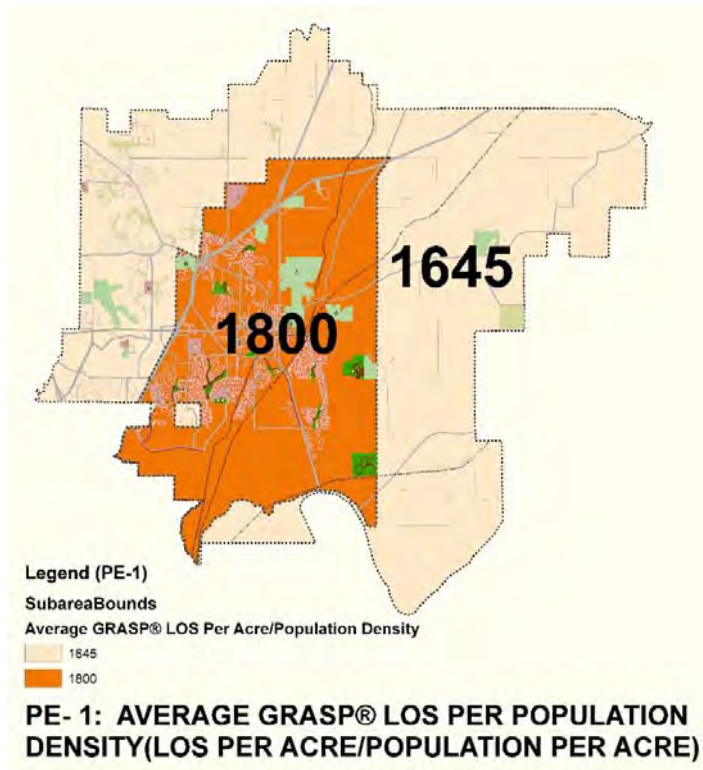
The quantitative analysis of this Perspective shows that **100 percent** of the City's locales have some access to consequential affordances for the target age group, and **66 percent** of those areas are above the threshold score (average score for those areas having service).

Legend (PE-2)

GRASP® Value>=121

▢ No Service
▢ Below Threshold
■ At or Above Threshold

PE - 2: GRASP® THRESHOLD ANALYSIS
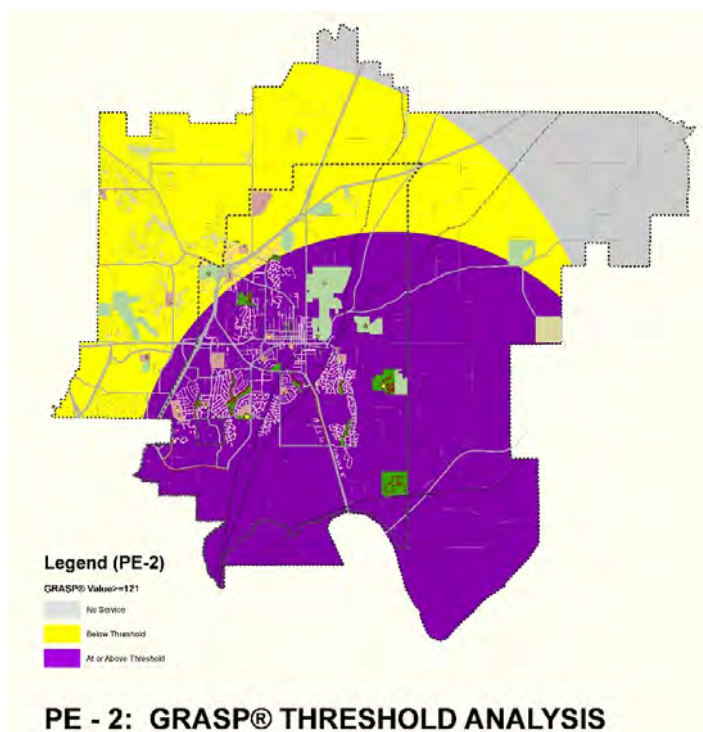
Table 17: Statistics for Perspective E

	Percent of Total with LOS	Average LOS per Acre Served	Avg. LOS Per Acre / 10-14 Population per acre	GRASP® Index
City of Liberty	100%	218	1800	113
Outer Study Area	82%	116	1645	0
Study Area	88%	156	1773	54

Comparing this Perspective with the others provides an example of how mission or determination of focus on specific program areas can be analyzed. Given time and resources, analysis can also be completed for any given specific or combination of affordance characteristics within the compiled dataset.
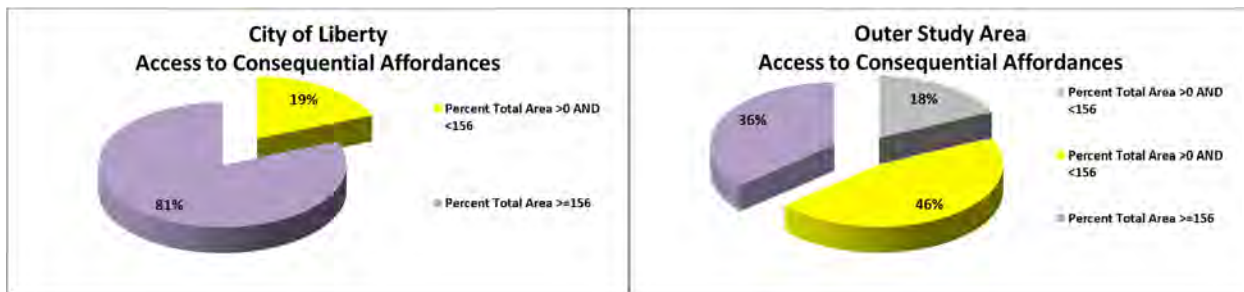
Affordances Perspectives: Key Conclusions

The affordances Perspectives suggest two guiding principles to follow in order to enhance service for the target age group in Liberty. First, if transportation is not an issue, adding new locations for the provision of affordances is not necessary. Service coverage is already at 100 percent for the study area. In that case, adding programs at existing locations (if capacity at those locations allows) would be as effective as adding new locations, unless there was a specific localized need to address somewhere in the community. However, if independent access (i.e. walking, biking, public transit, etc.) is a goal, then it is more important to extend service coverage by adding new locations for affordances than it is to just add affordances at existing locations. **Some combination of new locations and new programs is the likely solution, and the analyses above can help decide where to add new affordances and locations.**

3. Summary Tables

The following set of tables display the statistics from all Perspectives in one place for comparison. Green highlighting shows the highest value in each set of numbers, and yellow highlighting shows the lowest.

Service Coverage Summary - Percent With Service

	P-A: Assets Composite	P-B: Assets Walkability	P-C: Affordances Composite	P-D: Affordances Walkability	P-E: Affordances Conseq
City of Liberty	89%	65%	100%	15%	100%
Outer Study Area	40%	15%	82%	2%	82%
Study Area	57%	33%	88%	7%	88%

LOS. Summary - Avg. LOS Per Acre Served

	P-A: Assets Composite	P-B: Assets Walkability	P-C: Affordances Composite	P-D: Affordances Walkability	P-E: Affordances Conseq
City of Liberty	157	83	397	120	218
Outer Study Area	48	37	232	30	116
Study Area	107	69	297	101	156

LOS Summary - Avg. LOS Per Acre / Population 10-14 Per Acre

	P-A: Assets Composite	P-B: Assets Walkability	P-C: Affordances Composite	P-D: Affordances Walkability	P-E: Affordances Conseq
City of Liberty	1301	683	3284	993	1800
Outer Study Area	681	529	3283	429	1645
Study Area	1220	781	3371	1146	1773

LOS. Summary - GRASP® Indices

	P-A: Assets Composite	P-B: Assets Walkability	P-C: Affordances Composite	P-D: Affordances Walkability	P-E: Affordances Conseq
City of Liberty	213	213	200	200	113
Outer Study Area	53	53	2	2	0
Study Area	130	130	97	97	54

4. More on Reading and Utilizing the GRASP® Perspectives

Different Perspectives can be used to determine levels of service throughout the community from a variety of views. These Perspectives can show a specific set of components, depict estimated travel time to services, highlight a particular geographic area, or display facilities that accommodate specific programming. It is not necessarily beneficial for all parts of the community to score equally in the analyses. The desired level of service for any particular location will depend on the type of service being analyzed and the characteristics of the particular location. Commercial, institutional, and industrial areas might reasonably be expected to have lower levels of service for parks and recreation opportunities than residential areas. Levels of service for retail services in high density residential areas should probably be different than those for lower density areas.

Used in conjunction with other needs assessment tools (such as needs surveys and a public input process), Perspectives can be used to determine if current levels of service are appropriate in a given location. If so, plans can then be developed that provide similar levels of service to new neighborhoods. Conversely, if it is determined that different levels of service are desired, new planning can differ from the existing community patterns to provide the desired LOS.

Each Perspective shows the cumulative levels of service across the study area when the buffers for a particular set of components are plotted together. As previously stated, darker shades represent areas in which the level of service is higher for that particular Perspective. It is important to note that the shade overlying any given point on the Perspective represents the cumulative value offered by the surrounding park system to an individual situated in that specific location, rather than the service being provided by components at that location to the areas around it.

The larger scale map in each of the Perspectives shows the GRASP® buffers with an infinite tone range that shows the nuances of service that is being provided to the community. At this scale, it is easier to see the differences in services provided by parcels, facilities, program areas, and individual components. The complete Perspective series is set to the same tone scale, so they can be compared side by side for shading.

Different score breaks were used on the inset maps so that each set of components is being evaluated based on the expectations for each Perspective. For this reason, individual Perspective scores cannot typically be compared relative to each other.

In addition to the inventory and analysis above, Liberty Parks has been actively adding more activities and asset upgrades since the initiation of the HCRG in early 2013, as noted below, that were not necessarily included in the initial inventory process.

New Parks Initiatives since March 2013

Ruth Moore Community Garden
The new community garden consists of nine raised beds and a large tilled garden. The raised beds are available for lease by neighborhood residents. The tilled bed is maintained by volunteers, with the harvest going to Meals on Wheels or local food banks.

Trail Connector to Northwyck Park
A new trail segment has been installed between Northwyck Park and Wyckwood Drive, thus allowing residents in the Wyckwood subdivision direct access to the park. The trail is currently gravel, but will be upgraded to an eight-foot wide chat trail this winter. A wooden bridge was installed by an Eagle Scout to cross a small creek that was a barrier in the past.

Stocksdale Park Disc Golf Course
An 18-hole disc golf course has been under construction for the past several months. Final work is being done on tee pad installation, brush clearing, and grass seeding. The course will be ready for play in early 2014, and it will officially open in the spring of 2014.

Commit to Get Fit – Fall – 10,000 Hours One Minute at a Time
The fall healthy initiative is all about getting active. The City of Liberty intends to reach its goal of 10,000 hours of activity on the traveling hour glass. Gardening, mowing, cleaning house … even shopping counts as activity – there are no restrictions. As long as residents are off the couch and moving, they can be counted as participants. This challenge is intended to encourage residents to jumpstart a new, healthy lifestyle. Activity will be reported every week. Daily logging is required on www.myfitnesspal.com. Totals will be accumulated and tracked each week to show the overall progress toward the goal of 10,000 hours. Participation is free, and people can either participate alone, or join a small group for some extra support.

The Event kick off was scheduled on Sunday, September 8th, from 1:00 – 6:00 p.m. at the Liberty Community Center. It featured free healthy snacks, fitness demonstrations, and health assessments.

Free Value added programs:
- Sunday, September 22, "Tuckered Out with Tucker," WJC Tucker Leadership Lab
- Saturday, October 5, Healthy Snacks, Matt w/Team Heart
- Saturday, October 12, Pumpkin Workout @ Carolyn's Country Cousins Pumpkin Patch
- Sunday, October 13, Free Fitness Workout, Todd Munk, Fitness Coordinator
- Wednesday, November 6, "Healthy Holidays Food Taste Testing" with HyVee Dietician Rachelle Hochgraber

Healthy Cooking for Two
This program is aimed at empty-nesters who may have to adapt their meal preparation routine. Participants are treated to a cooking demonstration for making healthy meals for two, and recipes are provided so class members can make these meals at home.

Wellness Wednesdays
Liberty Silver Center partnered with Focus Health & Gentiva to offer free blood pressure screenings and health presentations the third Wednesday each month.

Easy Striders Walking Club
LPRD now offers its new Easy Striders Walking Club, which is a part of the American Heart Association of walking clubs. The club provides a good way for people to expand their workout group and meet new people, while improving their health. The group meets up once a week at the Liberty Community Center and explores different areas by foot.

Pickle Ball (coming fall 2014)

Commit to Get Fit Winter/Spring 2014
The City of Liberty is challenging residents to create a healthier community in the 2nd annual Winter/Spring Commit to Get Fit *"12 Weeks, 1,200 pounds, 120 inches"* Weight Loss Challenge. Participants can join the challenge with a group or on their own. The program encourages weight loss and healthy lifestyle changes by helping them be accountable and providing support. Prizes will be awarded to the top losers at the conclusion of the twelve week program. This challenge is intended to help residents to jumpstart a new, healthy lifestyle in 2014. The program is available to 13-14-year-olds with parent or adult guardian. Otherwise, program participants must be at least age 15 years of age as of January 1, 2014.

Session I – Those who choose to participate alone can register for free and receive the pre- and post-measurements, weekly Commit to Get Fit healthy e-newsletter, participate in the value added programs, and participate in the end-of-program party/awards ceremony. They will also be included in the highest individual weight loss and best individual body fat percentage lost categories for prize winnings.

Session II and III – Each team member will receive a Weight Loss Challenge shirt, 12 week membership to the Liberty Community Center, weekly fitness class and weigh-in with weekly exercise plans to follow, nutrition seminars discussing healthy dieting and nutrition requirements, pre-post body fat percentage by hand held OMRON analyzer, pre-post body girth measurements of upper torso (chest and back), arm, waist, and thigh, weekly Commit to Get Fit healthy e-newsletter, and value added fitness events. Team maximum is six. Everyone participating in this session will register individually.

Sessions I, II, and III – An end of contest party will be held on Friday, April 11 to award the prize to the highest overall weight lost (total team), highest individual weight loss, and best individual body fat percentage lost.

Free Nutrition seminars:
Saturday, January 18, 10:00 a.m.
Thursday, February 13, 7:00 p.m.
Saturday, March 15, 1:00 p.m.

VII. Next Steps

A. Findings and Visioning Workshops

On October 16, 2013, members of the HCRG team worked with Liberty staff and stakeholders to present the findings of the works thus far, along with facilitating sessions designed to start to identify and come to consensus on the recommendations for *Year One*.

Wednesday, October 16th meetings
10:00 a.m. to noon with all staff
1:00-3:30 p.m. with stakeholders and partners
6:00 with public stakeholders and partners

The draft outline agenda for these meetings is:
1. Review and Methodology – A Brief Presentation
2. Overview of Findings
3. Overview of Assets and Affordability Inventories and Analyses
4. Visioning – Focus Areas for Discussions
5. Strategic Goals – Action Plan and Indicators

1. Questions to Consider as We Move Forward and Key Focus Areas for the Discussions
Based on the findings from this process thus far, it appears that some initial questions for discussion for visioning and Recommendations should be (in no particular order):

- There are many non-profit and other organizations offering services in Liberty – How can LPRD facilitate the improved availability of programs and services by partners and other agencies for this target age group? For example, from the conversations held in March and June, stakeholders shared that there were yoga studios and other businesses in Liberty that youth found appealing, but could not safely access unless driven by an adult. Is there an opportunity to explore partnerships to bring some of those activities to the Community Center or other easily accessible facilities?

- Liberty School District has a wellness policy that outlines basic guidelines for creating a wellness committee, nutrition guidelines, nutrition and physical education, and other school based activities. Is there an opportunity to articulate clear shared City and District goals for youth that increase healthy food options and availability, enhance physical education and activities during the day, explore a shared Safe Routes to School program and funding strategy with the City, and engage youth in the process of developing these goals? Is there any potential to explore Farm to School education and school gardens aligned with educational strategies?

- The findings show that walkable access to assets and programs are a challenge in many parts of the City. The assets inventory and analysis concluded that there are many viable trails and open spaces held under the jurisdiction of private homeowners associations throughout Liberty that may serve as valuable connections. Given that connectivity was voiced as a significant barrier to youth, should this be an area of focus to address walkability and connectivity – providing safe alternative transportation routes? If so, what is the low-hanging fruit? How do we increase that in the coming five years? Given that the City has not drafted policies or regulations supportive of complete streets, is this a near-term goal to explore?

- Community and stakeholder input suggest that various assets and affordances within Liberty would benefit from upgrades to facilities and enhancements to the parks and trails, including more shade trees and structures, and non-organized, non-competitive activities and programming that appeal to families and youth. How much funding is available within the CIP budget, and if there is not sufficient funding currently, how can Liberty staff advocate for additional dollars to strengthen the budget?

- Review of the Unified Development Ordinance did not produce any strong language regarding regulation of pedestrian and bicycle access into any allowed uses within the zoning districts. Is there language within the Street Design guidelines or in another regulatory document being used by the City to mandate construction and context-sensitive design for sidewalks and/or bike lanes in every zone district, where appropriate?

- Availability of nutritious food options is a key factor for this study. What type of stance or guidelines should the Department create related to food availability, vending machine policies, and food brought in for events or meetings? One observation that was repeatedly voiced during the stakeholder meetings is the over-abundance of fast-food chains in Liberty, along with a lack of healthy food options. How can Liberty identify strategies to increase healthy food vendors through policies, economic development incentives, mobile food vendor regulations and promotion, and encouragement of farmer's markets and community gardens?

- The Department's perceived strengths include providing sports and drop-in programs and day camps. Given that walkable access to programs is a key issue, what areas should be the focus for enhanced programming?

- We now have a lot of warrant information and the basic assets and affordances information. How do we get more community-specific information and better financial tracking in Year Two?

- How do we improve the culture in Liberty to empower youth and engage parents? There are several advocacy professionals and/or groups operating throughout the school district: Discovery Middle School – Peer Helpers & Breakfast Club, Liberty High School – Breakfast Club, and Liberty North High School – Prevention Coordinator Advocate. How can we bring these groups into the discussion for input?

- Obtaining information to make informed and evidence-based decisions – in an age of information explosion, it is essential to secure data that informs and engages managers, service providers, and partners of needs, best practices, outcomes, and impact of the services provided to community residents. There has been a notable lack of community-based input on the project from families and youth in Liberty. Stakeholders are concerned that valuable input is not being furnished, but efforts to advertise for events held during the project team site visits are not garnishing an audience. What other methods or strategies can be employed to bring this contingent of the community to the table?

- The largest age groups in the City of Liberty are those ages 22-54, followed by 5-13. Planning for the next ten years suggests a growing demand for focus on programs and services for young adults and Baby Boomers. What can LPRD do to plan and implement programming and enhanced assets for these groups, especially from ages 5 to 13?

- Policy review and analysis (formal and informal) – At the core of planning, management, and decision making are positive policies that create an agency and community climate directed at individual and collective wellness, improved service levels, direct understanding of their impact on personal health, and overall contribution to the "healthy community" as measured by selected indicators. Does the stakeholder team in Liberty agree that there is opportunity in the policy framework of the City and the School District to explore positive policy development? Since there are no Parks and Recreation Department policies relating to character building, should this be a consideration of LPRD to develop these policies?

- Access, inclusion, and capacity building of all children and youth – In the healthiest of communities, there are few barriers to accessing services, programs, and especially physical and natural places to sustain an active lifestyle. Further, the measure of a healthy community should be directed at outcomes that are aimed at increasing the physical, emotional, intellectual, cultural, and social capacities of the target population. Is there strong support from the project stakeholders to examine methods to address the continuum of options that will support healthy development of youth in Liberty? Given the concerns voiced in June, are there opportunities to explore public campaigns to encourage reduced screen time for youth, while encouraging them to get outdoors for physical activity, relaxation, and education?

B. Recommendations and Strategic Action Plan and Desired Outcomes

Following the Findings/Visioning sessions, the HCRG will draft the Action Plan and modeling scenarios for Year One. The recommendations will be designed to be SMART:
- Specific
- Measurable
- Achievable
- Relevant
- Time-specific

The discussions will focus on not only the tasks to be completed, but also the desired outcomes and performance measurements, who will do the task (responsibility), how much funding may be needed, and the timeline for completion.

LPRD – Draft Warrant for Action - Sample				
To Increase Active Living among 10-14-Year-Olds – What Actions Will be Initiated				
Sample Action	Measures/Outcomes	Responsibility	Funding?	Timeline
Adopt and Communicate Purpose Statement	Initiative has purpose and is communicated			
Gather Youth-Specific Data				
Track Financials for this Age Group Separately				
Identify policy opportunities to increase connectivity for bikes and pedestrians				

1. Stakeholder Consensus on Priorities for Action

It appears that Liberty is prepared to engage other stakeholders and agencies in a campaign to reduce youth obesity. In this regard, it would be our recommendation to work closely with stakeholders and alternative providers to determine ways to improve connectivity for youth to access programs, facilities, and assets in Liberty safely by walking, biking, or other forms of active transportation.

2. Stella® Modeling

This Beta Site project is being used to create, test, and validate the potential use of systems thinking and management tactics (Stella® 9.1). The software program is employed to provide stakeholders, managers, and other policy makers to simulate the effects of collaborative efforts to strategically increase physical activity, nutritional behaviors, and positive social engagement in Liberty for youth. This approach represents pioneering management and policy actions that are expected to allow surveillance of the effects of programs, services, campaigns, policies, assets, etc. It is suggested that 4-5 small modules be simulated and tested in Year Two. These will be developed with the LPRD and its collaborators based on prioritized themes and critical factors expected to produce behavioral change, policy, and management efficiency and effectiveness. Specific factors from the Action Plan will be chosen for this modeling, and the potential results shared as part of the recommendations for Year Two and future evaluation. More will be discussed on this process during the Visioning and recommendations phase of the project.

3. Implementation and Evaluation

Following creation of the recommendations and fully determining the Warrant for Future Action, we will work with staff to determine the following: a) composition of a formal coalition or organizational structure (e.g.) alliance, initiative, etc. and its charter to insure full engagement across the municipality and sustainability over time; b) assist in focusing the strategic planning efforts to focus on prioritized efforts versus trying to be all things in a short period of time; c) training on how to use systems thinking and modeling to measure impact, manage in real time, increase effectiveness and efficiencies, and d) utilize information to influence policies pertinent to children and youth. As well, we will assist the LPRD and newly established organization in its implementation, surveillance of impact, and measurement of outcome achievement in years Two and Three. This will include ongoing Updates the HCRG Surveillance and Management Toolkit with Other Beta Sites

As noted, this project is to help Liberty move forward in implementing an Active Living and Healthy Community Initiatives for reducing obesity for ages 10-14 in Liberty. It is also a Beta Test Project for the Healthy Communities Surveillance and Management Toolkit. We would request team members and staff from LPRD to record thoughts and suggestions related to the process and outcomes, so that we may continue to validate and improve the experience and methods for use with other communities.

Appendix A: References, Resources, and Websites

Note: Some items in this reference list are from M. Joseph Sirgy, Professor at Virginia Tech, sirgy@vt.edu; Also, materials from Compton, D. & Muehlenbein (eds) (2010). **Healthy communities: The surveillance and management toolkit workbook**. Bloomington: Indiana University are incorporated in this document.

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American College of Sport Medicine

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http://www.cdc.gov/Features/ObesityAndKids/ <accessed, December 8, 2011>

IDEA Health and Fitness Association

International City/County Management Association, 2004

P&R Magazine, May 2008

Outdoor Industry Foundation, <outdoorindustry.org/news.association>

Pew Internet and American Life Project, July 7, 2010

Sporting Goods Manufacturer's Association, October 2009

United Health Foundation

Additional Healthy Communities Relevant Contacts

National

The Coalition for Healthier Cities and Communities
c/o Hospital Research and Educational Trust
One North Franklin
Chicago, Illinois 60606
tel: (312) 422-2635
fax: (312) 422-4568
healthy@aha.org
http://www.healthycommunities.org

The Healthcare Forum Healthier Communities Summit and Community Forums
425 Market Street
San Francisco, California
tel: (415) 356-4300
fax: (415) 356-9300

The National Civic League
The Alliance for National Renewal
1445 Market Street, Suite 300
Denver, Colorado 80202
tel: (303) 571-4343
fax: (303) 571-4404

VHA, Inc.
Community Health Improvement
220 East Las Colinas Boulevard
Irving, TX 75039-5500   (972) 830-0000
http://www.vha.com

Wellness Councils of America Community Health Plaza
Suite 311
7101 Newport Avenue
Omaha, Nebraska 68152
tel:(402) 572-3590
fax: (402) 572-3594

U.S. Department of Health and Human Services

Office of Disease Prevention and Health Promotion
Healthy Communities Initiative
200 Independence Avenue SW.
Room 738G
Washington, DC 20201
tel: (202) 401-7780
fax: (202) 205-9478

Health Resources and Services Administration
Parklawn Building
5600 Fishers Lane
Rockville, Maryland 20857
tel: (301) 443-2460

National Center for Chronic Disease Prevention and Health Promotion (CDC)
Planned Approach to Community Health, Prevention and Health Promotion
4770 Buford Highway, NE.
Mailstop K-45
Atlanta, Georgia 30341-3724
tel:(770) 488-5426
fax: (770) 488-5964

Office of Minority Health Resource Center
P.O. Box 37337
Washington, DC 20013-7337
tel: (800) 444-6472
fax: (301) 589-0804

State Level

AHEC/Community Partners Healthy Communities Massachusetts Network
24 South Prospect Street
Amherst, MA 01002
tel: (413) 253-4283
fax: (413) 253-7131
e-mail: TOWO@aol.com
http://ctb.lsi.ukans.edu

California Healthy Cities Project
P.O. Box 942732
Mail Station 675
Sacramento, CA 94234-7320
tel: (916) 327-7019
fax: (916) 324-7763
e-mail: chcp@ccnet.com

Colorado Healthy Communities Network
1127 Pennsylvania
Denver, Colorado 80203
tel: (303) 813-1001
fax: (303) 813-1005
e-mail: msturn@rmi.net

The New Mexico Partnership for Healthier Communities
c/o New Mexico Department of Health/PHD/HPB
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110
tel: (505) 827-2963
fax: (505) 827-0021

Healthy Boston
Room 967, Boston City Hall
Boston, Massachusetts 02201
tel: (617) 635-3140
fax: (617) 634-3353

South Carolina Department of Health and Environmental Control
Healthy Community Initiative
2600 Bull Street
Columbia, SC 29201
tel: (803) 734-8870
fax: (803) 734-5042
e-mail: dhec/hcindex.htm
http://www.state.sc.us/
Note: Visit the coalition website for information of other states atwww.healthycommunities.org

International

World Health Organization
27 Via Appia
Geneva, Switzerland
tel: 011 41 22 791 2111
fax: 011 41 22 791 0746

WHO Regional Office for Europe, World Health Organization Healthy Cities Project
8 Scherfigsvej
DK-2100 Copenhagen, Denmark
tel: 011 45 31 29 01 11
fax: 011 45 31 18 11 20

Pan American Health Organization
Regional Office of the World Health Organization
525 23rd Street, NW.
Washington, DC 20037
tel: (202) 974-3000
fax: (202) 974-3604

International Healthy Cities Foundation
One Kaiser Plaza, Suite 1930
Oakland, California 94612
tel: (510) 271-2660
fax: (510) 271-6814
e-mail: hcities@uclink2.berkeley.edu

Appendix B: GRASP® Composite Values Level of Service Analysis: History and Methodology

A. Level of Service Analysis

Analysis of the existing parks, open space, trails, and recreation systems are often conducted in order to try and determine how the systems are serving the public. A Level of Service (LOS) has typically been defined in parks and recreation master plans as the capacity of the various components and facilities that make up the system to meet the needs of the public. This is often expressed in terms of the size or quantity of a given facility per unit of population.

Brief History of Level of Service Analysis
In order to help standardize parks and recreation planning, universities, agencies, and parks and recreation professionals have long been looking for ways to benchmark and provide "national standards" for how much acreage, how many ballfields, pools, playgrounds, etc., a community *should* have. For example, in 1906 the fledgling "Playground Association of America" called for playground space equal to 30 square feet per child. In the 1970s and early 1980s, the first detailed published works on these topics began emerging (Gold, 1973, Lancaster, 1983). In time "rule of thumb" **capacity** ratios emerged with 10 acres of parklands per thousand population becoming the most widely accepted standard application. Other normative guides also have been cited as "traditional standards," but have been less widely accepted. In 1983, Roger Lancaster compiled a book called, Recreation, Park and Open Space Standards and Guidelines, that was published by the National Park and Recreation Association (NRPA). In this publication, Mr. Lancaster centered on a recommendation "that a park system, at minimum, be composed of a core system of parklands, with a total of 6.25 to 10.5 acres of developed open space per 1,000 population." (Lancaster, 1983, p. 56) The guidelines went further to make recommendations regarding an appropriate mix of park types, sizes, service areas, and acreages, and standards regarding the number of available recreational facilities per thousand population. While the book was published by NRPA and the table of standards became widely known as "the NRPA standards," for Level of Service Analysis, **it is important to note that these standards were never formally adopted for use by NRPA**.

Since that time, various publications have updated and expanded upon possible "standards" – several of which have also been published by NRPA. Many of these publications did benchmarking and other normative research to try and determine what an "average LOS" should be. It is important to note that NRPA and the prestigious American Academy for Park and Recreation Administration, as organizations, have focused in recent years on accreditation standards for agencies, which are less directed towards outputs, outcomes, and performance, and more on planning, organizational structure, and management processes. The following table gives some of the more commonly and historically used "capacity standards."

Common Historically-Referenced LOS Capacity "Standards"

Activity/ Facility	Recommended Space Requirements	Service Radius and Location Notes	Number of Units per Population
Baseball Official	3.0 to 3.85 acre minimum	¼ to ½ mile Unlighted part of neighborhood complex; lighted fields part of community complex	1 per 5,000; lighted 1 per 30,000
Little League	1.2 acre minimum		
Basketball Youth High school	2,400 – 3,036 vs. 5,040 – 7,280 s.f.	¼ to ½ mile Usually in school, recreation center, or church facility; safe walking or bide access; outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings	1 per 5,000
Football	Minimum 1.5 acres	15 – 30 minute travel time Usually part of sports complex in community park or adjacent to school	1 per 20,000
Soccer	1.7 to 2.1 acres	1 to 2 miles Youth soccer on smaller fields adjacent to larger soccer fields or neighborhood parks	1 per 10,000
Softball	1.5 to 2.0 acres	¼ to ½ mile May also be used for youth baseball	1 per 5,000 (if also used for youth baseball)
Swimming Pools	Varies on size of pool & amenities; usually ½ to 2-acre site	15 – 30 minutes travel time Pools for general community use should be planned for teaching, competitive, and recreational purposes with enough depth (3.4m) to accommodate 1m to 3m diving boards; located in community park or school site	1 per 20,000 (pools should accommodate 3% to 5% of total population at a time)
Tennis	Minimum of 7,200 s.f. single court area (2 acres per complex	¼ to ½ mile Best in groups of 2 to 4 courts; located in neighborhood community park or near school site	1 court per 2,000
Volleyball	Minimum 4,000 s.f.	½ to 1 mile Usually in school, recreation center or church facility; safe walking or bide access; outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings	1 court per 5,000
Total land Acreage		Various types of parks - mini, neighborhood, community, regional, conservation, etc.	10 acres per 1,000

Sources:
David N. Ammons, Municipal Benchmarks - Assessing Local Performance and Establishing Community
      Standards, 2nd Ed., 2002
Roger A. Lancaster (Ed.), *Recreation, Park and Open Space Standards and Guidelines* (Alexandria, VA: National
      Recreation and Park Association, 1983), pp. 56-57.
James D. Mertes and James R. Hall, *Park, Recreation, Open Space and Greenways* Guidelines, (Alexandria, VA:
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When developing community plans, it is important to realize that the above standards can be valuable when referenced as "norms" for capacity, but not necessarily as the target standards for which a community should strive. Each community is different, and there are many varying factors which are not addressed by the standards above. For example:

- Does "developed acreage" include golf courses? What about indoor and passive facilities?
- What are the standards for skateparks? Ice Arenas? Public Art? Etc.?
- What if the agency is an urban land-locked community? What if the agency is a small town surrounded by open Federal lands?
- What about quality and condition? What if there are multiple ballfields, but they haven't been maintained in the last ten years?
- And many other questions….

B. GRASP® Composite-Values Method (CVM) for Level of Service Analysis

In order to address these and other relevant questions, a new methodology for determining Level of Service was developed. It is called a **Composite-Values Methodology** (CVM) and has been applied in many communities across the nation since 2001 to provide a better way of measuring and portraying the service provided by parks and recreation systems. Primary research and development on this methodology was funded jointly by GreenPlay, LLC, a management consulting firm for parks, open space, and related agencies, Design Concepts, a landscape architecture and planning firm, and Geowest, a spatial information management firm. While Composite-Values Methodology can be utilized by anyone, the proprietary trademarked name for the **CVM process** that these three firms use is called **GRASP® (Geo-Referenced Amenities Standards Process).** The **GRASP®** name for the methodology for analysis is proprietary, but the CVM process is generic, and the software used is common and typical for most agencies. The data and information collected is owned and can be updated and managed by the agency for ongoing usage.

For CVM analysis, capacity is only part of the LOS equation. Other factors are brought into consideration, including *quality*, *condition*, *location*, *comfort*, *convenience*, and *ambience*. To create GRASP® inventory and analysis, parks, trails, recreation, open space, and any other relevant amenities and properties being studied are looked at as part of an overall infrastructure for a community made up of various components, such as playgrounds, multi-purpose fields, passive areas, etc. The methodology inventories characteristics that are part of the context and setting of a component. They are not characteristics of the component itself, but when they exist in proximity to a component they enhance the value of the component.

The characteristics of components include:

Quality   The service provided by anything, whether it is a playground, soccer field, or swimming pool is determined in part by its quality. A playground with a variety of features, such as climbers, slides, and swings provides a higher degree of service than one with nothing but an old teeter-totter and some "monkey-bars."

Condition   The condition of a component within the park system also affects the amount of service it provides. A playground in disrepair with unsafe equipment does not offer the same service as one in good condition. Similarly, a soccer field with a smooth surface of well-maintained grass certainly offers a higher degree of service than one that is full of weeds, ruts, and other hazards.

Functionality   Functionality is a measure of how well something serves its intended purpose, and is a result of its quality and condition.

Location   To receive service from something, you need to be able to access it. Therefore, service is dependent upon proximity and access. All components are geographically located using GPS coordinates and GIS software.

Comfort   The service provided by a component is increased by having amenities. For example, outdoor components are often enhanced by attributes such as shade, seating, and a restroom nearby. Comfort enhances the experience of using a component.

Convenience   Convenience encourages people to use a component, which increases the amount of service that it offers. Easy access and the availability of trash receptacles, bike rack, or nearby parking are examples of conveniences that enhance the service provided by a component.

Ambience   Simple observation will prove that people are drawn to places that "feel" good. This includes a sense of safety and security, as well as pleasant surroundings, attractive views, and a sense of place. For example, a well-designed park is preferable to poorly-designed one, and this enhances the degree of service provided by the components within it.

Capacity is still part of the LOS analysis and the quantity of each component is recorded as well. By combining and analyzing the composite values of each component, it is possible to measure the service provided by a parks and recreation system from a variety of perspectives and for any given location. Typically this begins with a decision on **"relevant components"** for the analysis, collection of an accurate inventory of those components, analysis and then the results are presented in a series of maps and tables that make up the analysis of the study area.

Data for Analysis and Making Justifiable Decisions

All of the data generated from the GRASP® evaluation is compiled into an electronic database that is then available and owned by the agency for use in a variety of ways. The database can help keep track of facilities and programs, and can be used to schedule services, maintenance, and the replacement of components. In addition to determining LOS, it can be used to project long-term capital and life-cycle costing needs. All portions of the information are in standard available software and can be produced in a variety of ways for future planning or sharing with the public.

It is important to note that CVM analysis not only provides accurate LOS and facility inventory information, but also works with and integrates with other tools to help agencies make decisions. It is relatively easy to maintain, updatable, and creates easily understood graphic depictions (analysis maps and/or "Perspectives") of issues. Combined with a needs assessment, public and staff involvement, program, and financial assessment, CVM analysis allows an agency to make defensible recommendations on priorities for ongoing resource allocation, along with capital and operational funding.

C. Inventory Data Collection Process

A detailed inventory of relevant components for the project is conducted. The inventory locates and catalogues all of the relevant components for the project, and evaluates each one as to how well it was serving its intended function within the system. The planning team first prepares a preliminary list of existing components using aerial photography and the community's Geographic Information System (GIS). Components identified in the aerial photo are given GIS points and names according to a list of standard components.

Next, field visits are conducted by the consulting and project team staff to confirm the preliminary data and collect additional information. Additionally, indoor facilities are scored and for the purposes of this study, each relevant space is considered a component and is scored based on its intended function. During the field visits and evaluations, any missing relevant components are added to the data set, and each component is evaluated as to how well it meets expectations for its intended function. During the site visits the following information is collected:

- Component type and location
- Evaluation of component functionality
- Evaluation of comfort and convenience features
- Evaluation of park design and ambience
- Site photos and general comments

After the inventory is completed, it is given to the project team for final review and approval for accuracy.

D. Standardized Process for Scoring Components

Component Scoring
The approved inventory is the basis for the creation of values used in analysis. Each component received a functionality score that is related to the quality, condition, and ability of the space to meet operational and programming needs.

For the GRASP® process, the range of scores for each component is as follows:

- **Below Expectations (BE)** – The component does not meet the expectations of its intended primary function. Factors leading to this may include size, age, accessibility, or others. Each such component is given a score of **1** in the inventory.
- **Meeting Expectations (ME)** – The component meets expectations for its intended function. Such components are given scores of **2.**
- **Exceeding Expectations (EE)** – The component exceeds expectations, due to size, configuration, or unique qualities. Such components are given scores of **3.**
- If the feature exists but is not useable because it is unsafe, obsolete, or dysfunctional, it may be listed in the feature description, and assigned a **score of zero (0).**

If a feature is used for multiple purposes, such as a softball field that is also used for T-Ball or youth soccer games, it is scored only once under the description that best fits the use that for which the component is designed.

Neighborhood and Community Scoring
Components are evaluated from two perspectives: first, the value of the component in serving the immediate neighborhood, and second, its value to the entire community.

Neighborhood Score
Each component is evaluated from the perspective of a resident that lives nearby. High scoring components are easily accessible to pedestrians in the neighborhood, are attractive for short and frequent visits, and are unobtrusive to the surrounding neighborhood. Components that do not have a high neighborhood score may not be located within walking distance of residents, may have "nuisance features" such as sports lighting, or may draw large crowds for which parking is not provided.

Community Score
Additionally each component is evaluated from the perspective of residents in the community as a whole. High scoring components in this category may be unique components within the parks and recreation system, have a broad draw from throughout the community, have the capacity and associated facilities for community-wide events, or are located in areas that are accessible only by car.

Indoor Components
Indoor components are generally thought to be accessible to the entire community, partially because it is often not financially feasible to provide indoor facilities at a walking distance from every distance from each residence. Additionally, indoor facilities often provide programs and facilities that are geared to the community as a whole, or in larger communities, are intended for a region of the community. For these reasons, unless a detailed indoor analysis is completed, indoor facilities are given only one score.

Modifiers (Comfort and Convenience Features) Scoring

Outdoor Modifiers
Besides standard components, this inventory also evaluates features that provide comfort and convenience to the users. These are things that a user might not go to the parks specifically to use, but that may enhance the user's experience by making it a nicer place to be and include: drinking fountains, seating, BBQ grills, dog stations, security lighting, bike parking, restrooms, shade, connections to trails, park access, parking, picnic tables, and seasonal and ornamental plantings. These features are scored as listed above with the 1-3 system. In this case it is not important to get a count of the number or size of these components; instead the score should reflect the ability of the item to serve the park.

Indoor Modifiers
For indoor facilities, the comfort and convenience features change slightly to reflect the characteristics of the building. Building modifier categories include: site access, setting aesthetics, building entry function, building entry aesthetics, overall building condition, entry desk, office space, overall storage, and restrooms and/or locker rooms.

Activity and Sports Lighting
This modifier accounts for lighting that allows for component use in the evening/night hours and is applied to the quantity of the component as it affectively expands the capacity of the component. This modifier does not apply to security lighting.

Shade
Like Activity and Sports lighting, shade can be added to outdoor components to extend use beyond normal hours or seasons.

Design & Ambience Scoring
Using the same rating system that is used for components and modifiers, the quality of Design and Ambience is scored. Good design not only makes a place look nice, it makes it feel safe and pleasant, and encourages people to visit more often and stay longer

Trails and Greenways Scoring
Trails and/or greenways can be scored as independent parcels or as individual components within another parcel. The former type of trail receives its own set of scores for modifiers and design and ambiance. The trail in the latter situation takes on the modifiers and design and ambiance of the larger park in which it resides. Multi-use trails are assumed to consist of three components including one active component, one passive component, and the parcel itself. Because traveling the length of any given trail is time consuming, trail information is often collected with the aid of staff.

For the purposes of most studies, a list of trails is obtained to provide a reasonable dataset that offers some park and recreational value to the public. While no specific listing of components at each greenway or trail is generated, it is assumed that each greenway provides a value equivalent to three (3) components. Think of these as one active component (walking, running, biking, etc.), one passive component (quiet contemplation along the trail), and one experiential component (observing nature, perhaps art and interpretive signage).

These three components and the parcel are assumed to be meeting the expectations (scores 2) of the community in the same way that park components meet expectations. The other parts to the GRASP® score relate to the comfort and design of the location, and are called modifiers. The aesthetic and recreational standards for greenways are typically similar to those for parks, so modifiers at greenways are generally assigned a value of meeting expectations (score 2). Multi-use trails that typically are adjacent to major roads are assumed to have less aesthetic and recreational standards and are therefore assigned a value of below expectations (score 1). The final component in the GRASP® score is the ownership modifier. This is a percentage that is applied to the score that relates to the general public's ability to access the facility.

This translates into the following formula for calculating the GRASP® score:

Trails or Greenway Scoring

(Component number + Parcel) x Component score x (Comfort x Design) x ownership = GRASP® score or
(3 +1) x 2 x 2.2 x 1 = 17.6

Multi-Use Trail Scoring
(Component number + Parcel) x Component score x (Comfort x Design) x ownership = GRASP® score or
(3 +1) x 2 x 1.1 x 1 = 8.8

In the GRASP® Perspectives, that value is assigned to the location where each trail is found and buffered accordingly. This value also is included in computations for the GRASP® Indices that are calculated along with each Perspective.

Ownership Modifier
This modifier is generally weighted with a percentage that is applied to the GRASP® score after other modifiers have been applied. It accounts for access and control of components that are provided by alternative providers. For example, in most cases components that are owned and managed by schools are given a 50% weighted ownership modifier, which halves the GRASP® score to account for the limited access that the neighborhood has to school facilities (it's only open to the public outside of school hours).

E. Calculating GRASP® Functional Scores

Once the components are inventoried and scored, calculations can be made for any combination of components to derive average scores, scores per combinations of various components, scores per sub-areas, etc., depending on the key issues being studied and objectives for the project. These are very helpful for analyzing area comparisons and setting of target scores for component service and agency target standards.

For example, a total composite GRASP® score for each individual component is determined by using the following formula:

(total component score) x (adjusted modifier score) x (design and ambiance score) x (ownership modifier) = Composite GRASP® Score

These individual scores can be additively combined in various ways to examine service from various subsets of the agency's system.

F. GRASP® Perspectives and Target Threshold Scores

GRASP® scores are often used to create analysis maps to show how the study area is being served for parks and recreation benefits. These maps are called Perspectives, because each one provides a certain perspective on the way service is being provided. Types of Perspectives include heat maps, threshold maps, and composition maps, as well as others.

On heat maps, the numerical value of LOS available to a person at any given location is represented by an orange tone. Where the tone is darker, the available LOS is higher. Locations on the map with no orange tone (i.e a grey tone) have no service. Heat maps can be produced from any set of components in the inventory. For example, if the intent is to measure the relative LOS available for seniors, then a heat map can be generated using only those components in the inventory that relate to seniors.

Heat maps can be further analyzed to determine where the LOS on them falls above or below a certain threshold. The threshold may vary, and can be set to represent an assumed "target" value for LOS, or can be the median, average, or other value for the Perspective. On the threshold maps, colors are used to show whether any given location is above or below the threshold value.

The types of Perspectives used to analyze and depict the community's LOS will depend upon the key issues being studied.

Typical and Standard GRASP® Perspectives
Below are some types of Perspectives typically used to analyze service in an area.

Neighborhood Composite
This Perspective depicts service from a neighborhood point of view. Multiple buffers (or "catchment areas") are used to reflect multiple ways of travelling to reach components. The threshold for this Perspective is typically the value that results from being within 1/2 mile of 4 recreation components and one recreational trail.

Walkability (same as Neighborhood Composite but with only 1/2 mile buffers)
The threshold scores for this Perspective are normally the same as for the Neighborhood Composite.

Perspectives showing Neighborhood LOS for one component
The threshold here is equivalent to being within 1/2 mile of the selected component, and assumes that the component, modifiers, and design and ambiance are meeting expectations.

Note: Aside from meeting a single goal, the mix of components also needs to be considered. For example, a home that is within 1/2 mile away from four tennis courts and no other amenities would meet the basic numeric standard, but not the intent of the standard. Composition analyses are another type of Perspective that is used to analyze the mix of options available to residents.

On a composite map, selected components are grouped into categories and the map shows how many categories are represented by at least one component within a given proximity to any location on the map.

G. GRASP® Project Technical Standards for GIS Data

The GRASP® Team utilizes the most up to date computer hardware and software to produce and enhance project-based GIS data. The following technical details are standard with all GRASP® Team projects.

- All GRASP® Team GIS workstations employ Microsoft® Windows® operating systems. All project files conform to PC-based architecture and extension naming standards.
- The GRASP® Team employs ESRI® ArcGIS™ 9.3 for all GIS applications. Final project GIS data is submitted to the client in Microsoft® Access™-based Geodatabase (*.mdb) Feature Class format and/or Shapefile (*.shp/*.dbf/*.shx) format. ArcMap™ Layer files (*.lyr) are submitted to ease client replication of all project map legend formats. The GRASP® Team will not resubmit original client source data that has not undergone enhancement.
- All final GIS datasets (deliverables) area submitted to the client using the geographic coordinate system(s) from the original client source data. The GRASP® team will assign a coordinate system that is most appropriate for the client location if the client does not require a predetermined standard coordinate system. Most GRASP® project data is submitted in State Plane Coordinates (Feet) with a NAD83/NAD83 HARN datum.
- All GRASP® Perspectives and Resource Maps (deliverables) are submitted to the client in standard PDF and JPEG formats. The project PDFs are high resolution, print-ready files for scalable print operations. Most project map-based PDFs are 300dpi, 36"x54" images. The project JPEGs are lower resolution digital presentation-ready files for insertion into Microsoft® Office® productivity suite applications – MS Word®, MS Power Point®, etc. Most project map-based JPEGs are 300dpi 4"x6" images.

Appendix C: GRASP® Maps and Perspectives

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Access to All Assets

Ⓐ

Legend

- Greater Access to Assets
- Less Access to Assets
- ✚ Liberty Indoor Facility
- ♪ School Facility
- ★ Identified Alternative Provider
- Liberty Park
- Liberty School
- Identified Alternative Provider
- Other Alternative Provider
- 〜 Trail
- Sidewalk
- Major Road
- Local Road
- ┼┼┼┼ Railroad
- Study Area Boundary (School District)
- City of Liberty Boundry

Map labels
Kellybrook Elementary School
Liberty North High School
Heartland Meadows Industrial Park
Earnest Shepherd Memorial Youth Center
Place Liberte Park
Liberty Hospital
Warren Hills Elementary
Northwyck Park
Pleasant Valley Baptist Church
Lewis & Clark Elementary
Shoal Creek Elementary
Shoal Creek Golf Course
Cardinal Hill Golf Course
Bennett Park
Liberty Hills Golf Course
Ruth Moore Park
Martha Lafite Thompson Nature Sanctuary
Rush Creek Conservation Area
Liberty Jr. High School
WILLIAM JEWELL COLLEGE
Liberty Oaks Elementary School
Clayview Country Club
Liberty High School
Franklin Elementary
Ridgeview Elementary
Lillian Schumacher Elementary
Stocksdale Park
Walnut Woods Conservation Area
Westboro/Canterbury Park
City Park
Jefferson Park
Doniphan Elementary
Wilshire Park
Manor Hill Elementary
Claywoods/Clay Meadows Park
South Valley Middle & Jr High
Liberty Middle School
SOUTH VALLEY MIDDLE SCHOOL
Liberty Community Center
Clay Ridge Park
Fountain Bluffs Sports Complex

PA - 1:
Average LOS per Acre/10-14 Population per Acre

681
1301

GRASP® Perspective
Ave LOS per Acre/10-14 Pop per Acre
681
1301

PA - 2: GRASP® THRESHOLD ANALYSIS

GRASP® Value>= 65.3
No Service
Below Threshold
At or Above Threshold

N W E S
0 0.5 1 1.5 2 2.5 3
Miles

Map Produced For City of Liberty - By The GRASP® Team
This Map Is Intended For Planning & Discussion Purposes Only -
Please Refer To The Project Document For Map Details
Legend Elements May Vary Slightly In Size, Color And Transparency From Those Shown On Map
GIS Data Sources May Include: City of Liberty, ESRI, GRASP® Team - May 2013
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City of Liberty, MO

GP RED Healthy Communities Research Group
GRASP DESIGN CONCEPTS GREENPLAY
The City of Liberty

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Access to All
Walkable Assets

Ⓑ

Legend

Greater Access to Assets

Less Access to Assets

✚ Liberty Indoor Facility

♪ School Facility

★ Identified Alternative Provider

Liberty Park

Liberty School

Identified Alternative Provider

Other Alternative Provider

〰〰 Trail

Sidewalk

Major Road

Local Road

╪╪╪╪╪ Railroad

Study Area Boundary
(School District)

City of Liberty Boundry

529

683

Legend
GRASP® Perspective-Bracketed
Ave LOS per Acre/10-14 Pop per Acre
529
683

PB - 1:
Average LOS per Acre/10-14 Population per Acre

GRASP® Value>= 65.3
No Service
Below Threshold
At or Above Threshold

PB - 2: GRASP® THRESHOLD ANALYSIS

Map Produced For City of Liberty - By The GRASP® Team
This Map Is Intended For Planning & Discussion Purposes Only -
Please Refer To The Project Document For Map Details
Legend Elements May Vary Slightly In Size, Color And Transparency From Those Shown On Map
GIS Data Sources May Include:City of Liberty, ESRI, GRASP® Team - May 2013
Copyright© 2013 City of Liberty

N
W   E
S

0   0.5   1   1.5   2   2.5   3
Miles

City of Liberty, MO

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Access to All Affordances

Legend

- Greater Access to Affordances
- Less Access to Affordances
- ✤ Liberty Indoor Facility
- School Facility
- ☆ Identified Alternative Provider
- ✳ Affordance Location
- ◆ Liberty Park
- ◆ Liberty School
- ◆ Identified Alternative Provider
- ◆ Other Alternative Provider
- ∿ Trail
- Sidewalk
- Major Road
- Local Road
- Railroad
- Study Area Boundary (School District)
- City of Liberty Boundry
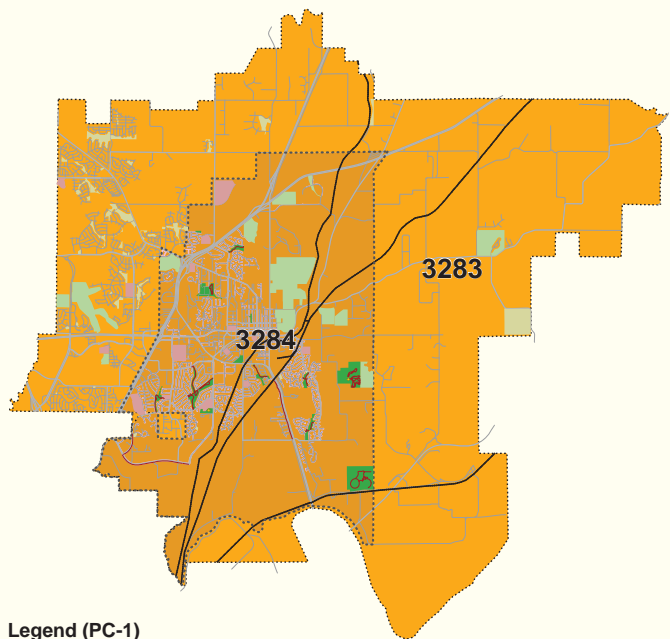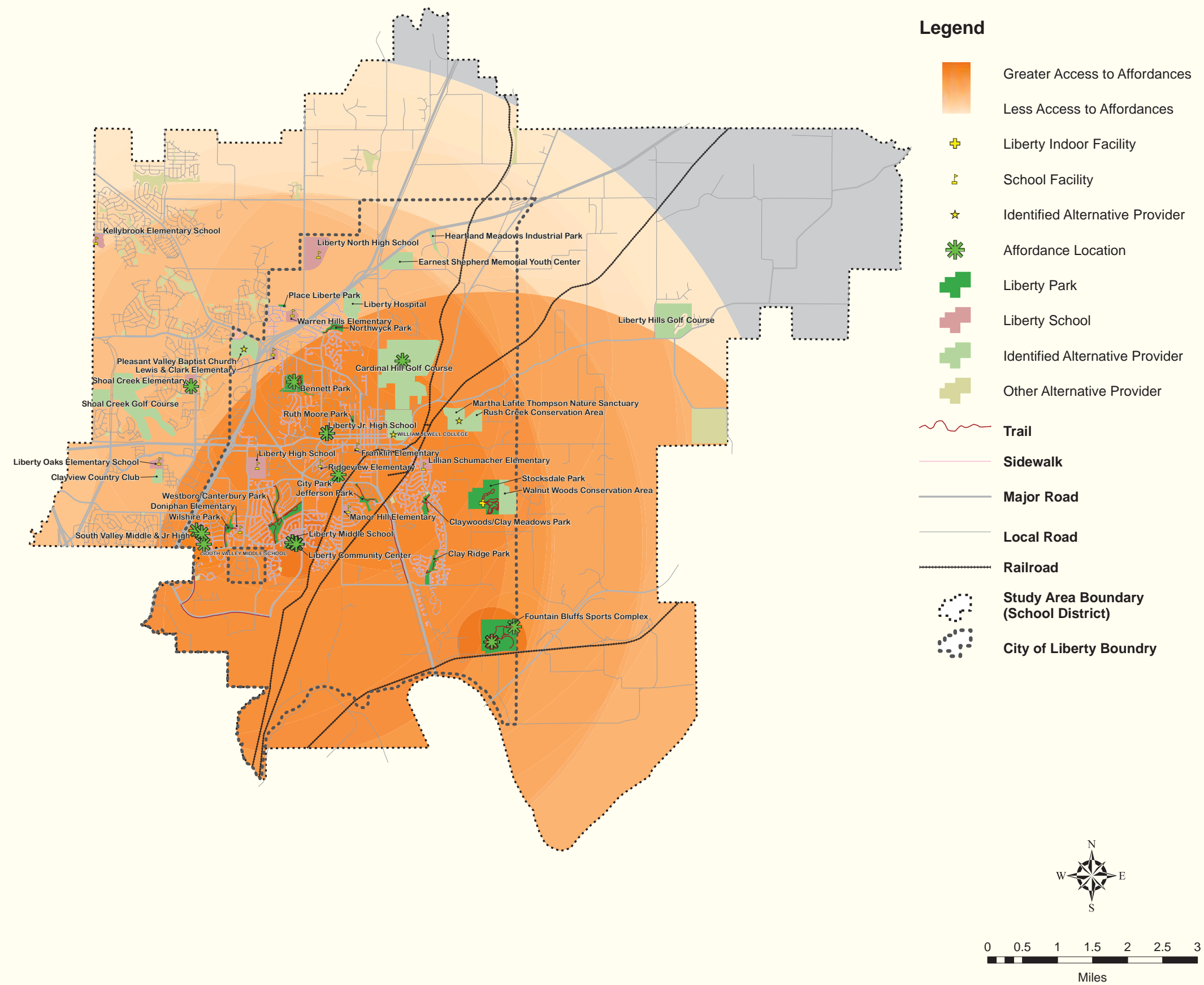
Legend (PC-1)
AVERAGE GRASP® LOS Per Acre/ Population Density
- 3283
- 3284

PC - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY(LOS PER ACRE/POPULATION PER ACRE)
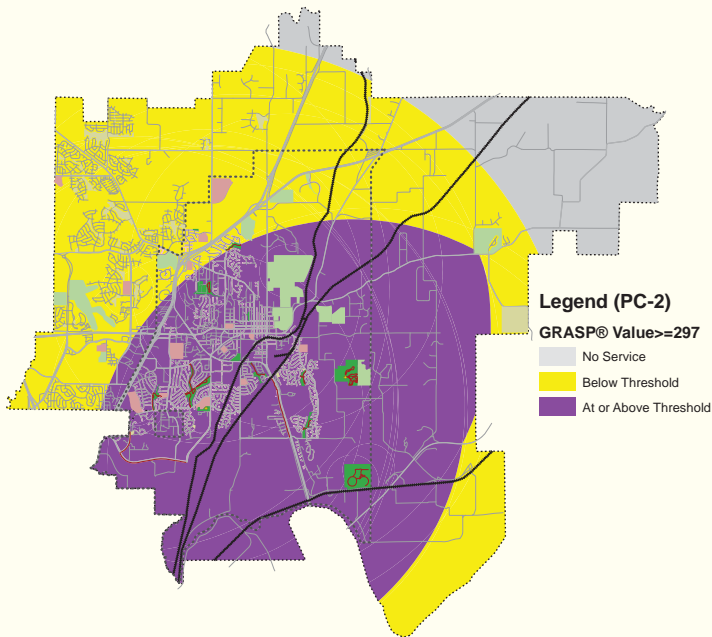
Legend (PC-2)
GRASP® Value>=297
- No Service
- Below Threshold
- At or Above Threshold

PC - 2: GRASP® THRESHOLD ANALYSIS

Kellybrook Elementary School
Liberty North High School
Heartland Meadows Industrial Park
Earnest Shepherd Memorial Youth Center
Place Liberte Park
Liberty Hospital
Warren Hills Elementary
Northwyck Park
Liberty Hills Golf Course
Pleasant Valley Baptist Church
Lewis & Clark Elementary
Cardinal Hill Golf Course
Shoal Creek Elementary
Bennett Park
Shoal Creek Golf Course
Martha Lafite Thompson Nature Sanctuary
Ruth Moore Park
Rush Creek Conservation Area
Liberty Jr. High School
WILLIAM JEWELL COLLEGE
Liberty Oaks Elementary School
Liberty High School
Franklin Elementary
Clayview Country Club
Ridgeview Elementary
Lillian Schumacher Elementary
Stocksdale Park
City Park
Walnut Woods Conservation Area
Westboro/Canterbury Park
Jefferson Park
Doniphan Elementary
Manor Hill Elementary
Claywoods/Clay Meadows Park
Wilshire Park
South Valley Middle & Jr High
Liberty Middle School
SOUTH VALLEY MIDDLE SCHOOL
Liberty Community Center
Clay Ridge Park
Fountain Bluffs Sports Complex

N W E S

0   0.5   1   1.5   2   2.5   3
Miles

City of Liberty, MO

GP RED Healthy Communities Research Group   GRASP DESIGN CONCEPTS GREENPLAY   The City of Liberty

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Map Labels

Kellybrook Elementary School
Liberty North High School
Heartland Meadows Industrial Park
Earnest Shepherd Memorial Youth Center
Place Liberte Park
Liberty Hospital
Warren Hills Elementary
Northwyck Park
Liberty Hills Golf Course
Pleasant Valley Baptist Church
Lewis & Clark Elementary
Shoal Creek Elementary
Cardinal Hill Golf Course
Bennett Park
Shoal Creek Golf Course
Martha Lafite Thompson Nature Sanctuary
Rush Creek Conservation Area
Ruth Moore Park
Liberty Jr. High School
WILLIAM JEWELL COLLEGE
Liberty Oaks Elementary School
Liberty High School
Franklin Elementary
Lillian Schumacher Elementary
Clayview Country Club
Ridgeview Elementary
Stocksdale Park
Walnut Woods Conservation Area
Westboro Canterbury Park
City Park
Jefferson Park
Doniphan Elementary
Wilshire Park
Manor Hill Elementary
Claywoods/Clay Meadows Park
South Valley Middle & Jr High
Liberty Middle School
SOUTH VALLEY MIDDLE SCHOOL
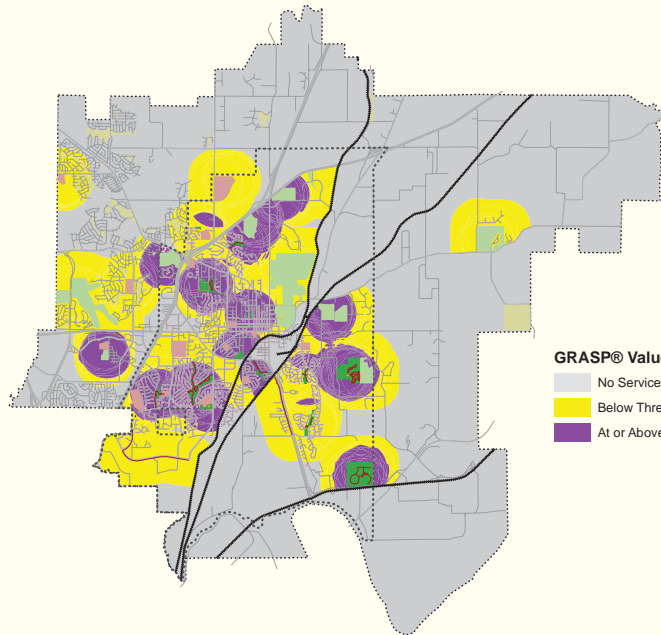Liberty Community Center
Clay Ridge Park
Fountain Bluffs Sports Complex

Legend

- Greater Access to Assets
- Less Access to Assets
- Liberty Indoor Facility
- School Facility
- Identified Alternative Provider
- Affordance Location
- Liberty Park
- Liberty School
- Identified Alternative Provider
- Other Alternative Provider
- Trail
- Sidewalk
- Major Road
- Local Road
- Railroad
- Study Area Boundary (School District)
- City of Liberty Boundry

PD - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY (LOS PER ACRE/POPULATION PER ACRE)

993

429

Legend (PD-1)
Average GRASP® LOS Per Acre/Population Density
- 429
- 993

PD - 2: GRASP® THRESHOLD ANALYSIS

Legend (PD-2)
GRASP® Value>=101
- No Service
- Below Threshold
- At or Above Threshold

0 0.5 1 1.5 2 2.5 3
Miles

N E S W

City of Liberty, MO

GP RED Healthy Communities Research Group
GRASP DESIGN CONCEPTS GREENPLAY
The City of Liberty

GP RED Healthy Communities Research Group: Surveillance and Management Toolkit Project
Composite Values Methodology Level of Service Analysis

Access to Consequential Affordances

Ⓔ

Legend

- **Greater Access to Affordances**
- **Less Access to Affordances**
- ✚ Liberty Indoor Facility
- ♪ School Facility
- ★ Identified Alternative Provider
- ✳ Affordance Location
- ▮ Liberty Park
- ▮ Liberty School
- ▮ Identified Alternative Provider
- ▮ Other Alternative Provider
- 〰 Trail
- —— Sidewalk
- —— Major Road
- —— Local Road
- ┅┅ Railroad
- ⋯ Study Area Boundary (School District)
- ⋯ City of Liberty Boundry

Map labels (main map): Kellybrook Elementary School; Liberty North High School; Heartland Meadows Industrial Park; Earnest Shepherd Memorial Youth Center; Place Liberte Park; Liberty Hospital; Warren Hills Elementary; Northwyck Park; Pleasant Valley Baptist Church; Lewis & Clark Elementary; Shoal Creek Elementary; Cardinal Hill Golf Course; Shoal Creek Golf Course; Bennett Park; Martha Lafite Thompson Nature Sanctuary; Rush Creek Conservation Area; Ruth Moore Park; Liberty Jr. High School; WILLIAM JEWELL COLLEGE; Liberty High School; Franklin Elementary; Lillian Schumacher Elementary; Liberty Oaks Elementary School; Ridgeview Elementary; Stocksdale Park; Walnut Woods Conservation Area; Clayview Country Club; Westboro/Canterbury Park; City Park; Jefferson Park; Doniphan Elementary; Wilshire Park; Manor Hill Elementary; Claywoods/Clay Meadows Park; South Valley Middle & Jr High; SOUTH VALLEY MIDDLE SCHOOL; Liberty Middle School; Liberty Community Center; Clay Ridge Park; Fountain Bluffs Sports Complex; Liberty Hills Golf Course

1800   **1645**

Legend (PE-1)
SubareaBounds
Average GRASP® LOS Per Acre/Population Density
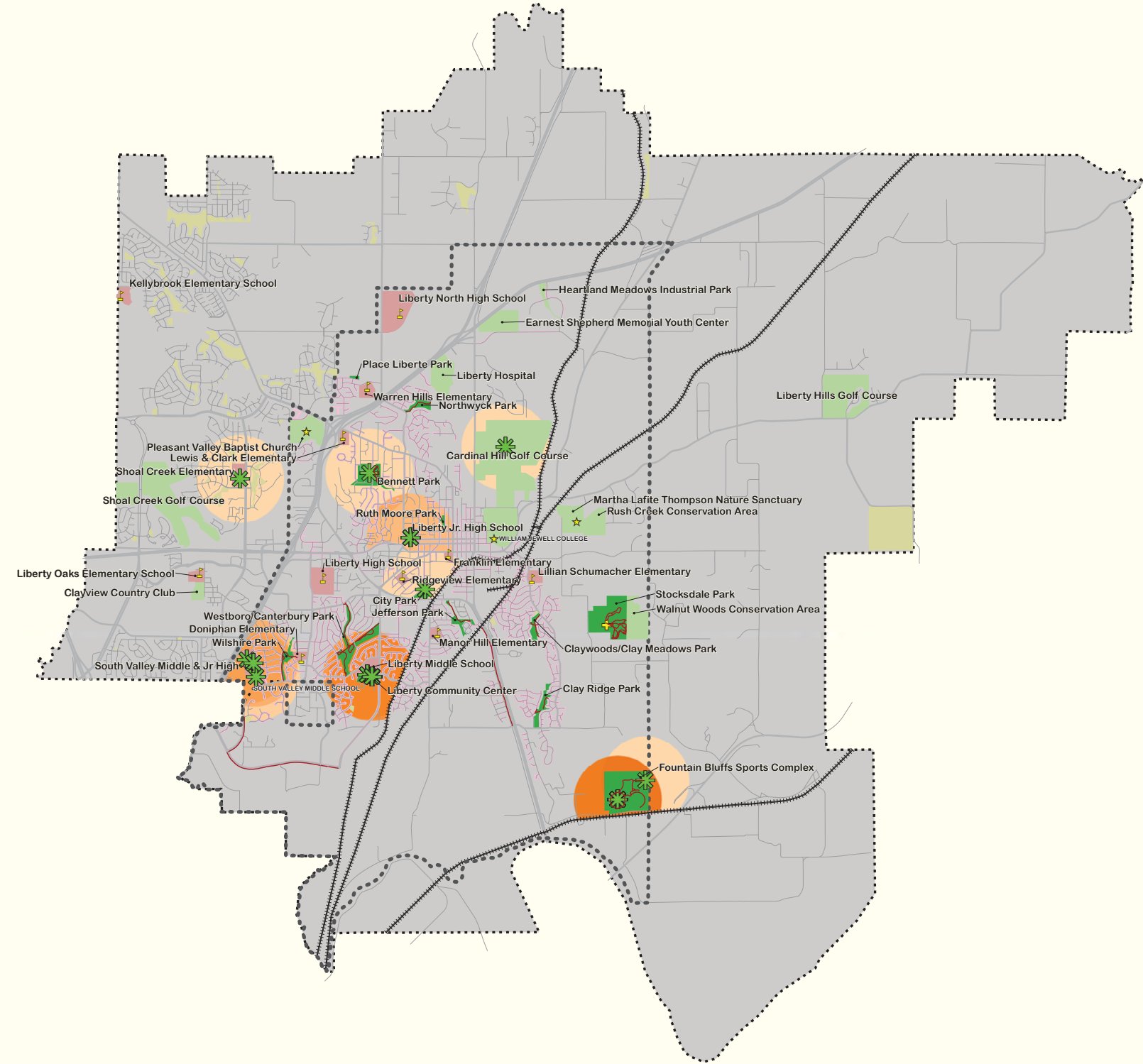- 1645
- 1800

PE- 1: AVERAGE GRASP® LOS PER POPULATION DENSITY(LOS PER ACRE/POPULATION PER ACRE)

Legend (PE-2)
GRASP® Value=121
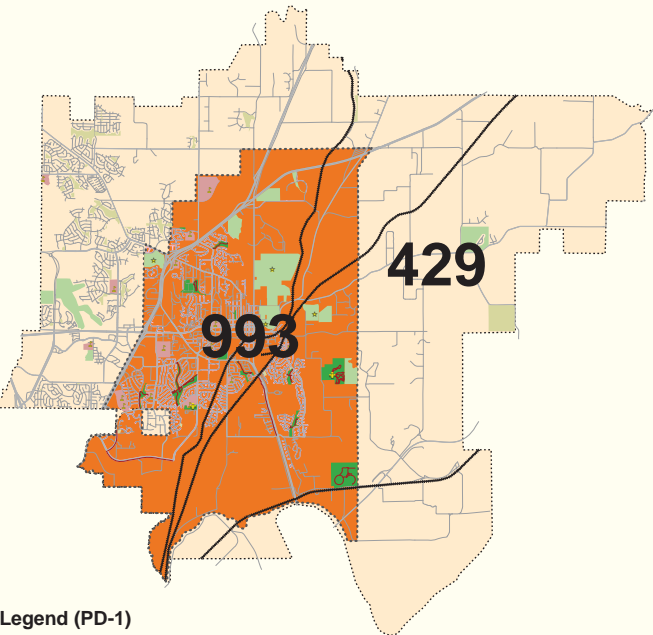- No Service
- Below Threshold
- At or Above Threshold

PE - 2: GRASP® THRESHOLD ANALYSIS

N W E S

0 0.5 1 1.5 2 2.5 3
Miles

City of Liberty, MO

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Appendix D: Liberty Policy Inventory

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Note: Definitions of most components can be found on tab "Outdoor Component List"
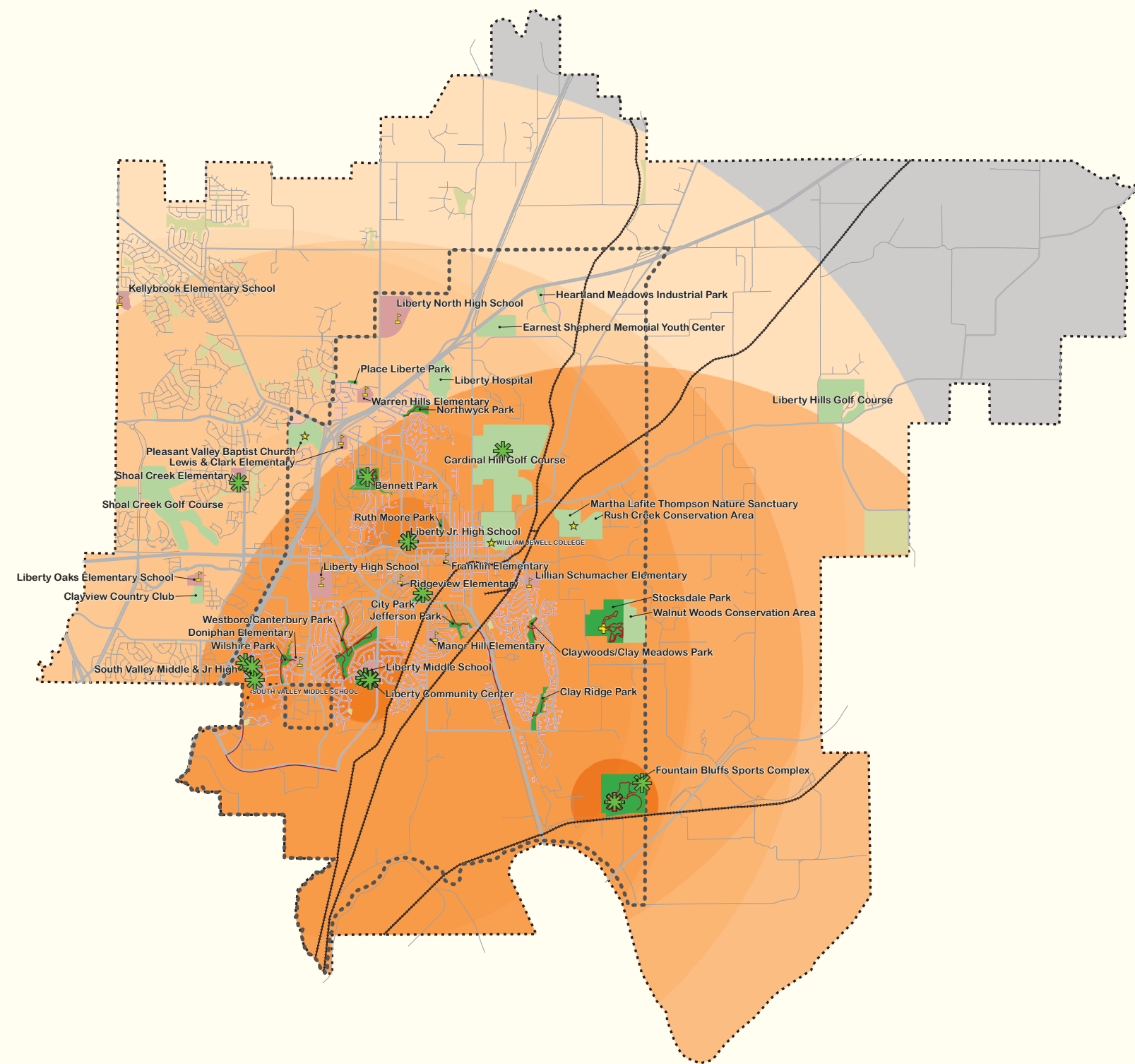
Location	Manager/Owner	Classification	Acres	Aqua Feat, Pool	Aqua Feat, Spray	Ballfield	Basketball	Batting Cage	Complex, Ballfield	Complex, MP Field	Complex, Tennis	Complex, Horseshoe	Concessions	Disk Golf	Dog Park	Educational Experience	Event Space	Fitness Course	Garden, Community	Garden, Display	Horseshoes	Loop Walk	MP Field, Large	MP Field, Small	Multiuse Court	Natural Area	Open Turf	Open Water	Other -Active	Passive Node	Picnic Grounds	Playground, Destination	Playground, Local	Public Art	Restroom	Shelter	Shelter, Group	Shelter, Shade
City Park		Community Park	12		1	2															2		2									1			1		2	
Bennett Park		Community Park	45			1					1	1											2									2			1		2	
Stocksdale Park		Community Park	112			2						1			1						12		2									1			1		2	
Westboro-Canterbury Greenway		Greenway	42			1															1					2							2		1		1	
Northwyck Park		Neighborhood Park	?																							1							1				1	
Place Liberte' Park		Neighborhood Park	?				1														1												1					
Ruth Moore Park		Neighborhood Park	?		1		1														2												1		1		1	
Clay Ridge Park		Linear Park	18																														1				1	
Clay Woods/Clay Meadows Park		Linear Park	5																														1				1	
Jefferson Park/Cates Creek Greenway		Greenway	?																																			
Fountain Bluff Sports Complex		Sports Complex	146			9			1	1			1										6					8				2					2	
Liberty Community Center		Community Park	?																																			
Martha Lafite Thompson Nature Sanctuary		Nature Sanctuary	99													1				1						1		1										
Schools:			?																																			
Franklin School Tennis Court			?																																			
Manor Hill School Tennis Court			?																																			
Other Alternative Providers:			?																																			
			?																																			
			?																																			
			?																																			
			?																																			
Totals			479	0	2	15	2	0	1	1	1	2	1	0	1	1	0	0	0	1	16	0	12	0	0	4	0	9	0	0	0	6	7	0	5	0	13	0

Page 1

Skate Park	Tennis	Track, Competition	Trail, Multi-use	Trail, Primitive	Trailhead	Volleyball	Water Access, Developed	Water Feature	Comments
1	6								
						1			
						1			
					1				
1	6	0	0	0	1	2	0	0	

Component	COMPONENT AND DEFINITION
Amusement Ride	Amusement Ride - Train, go carts, etc.
Aqua Feat, Pool	Aquatic feature, Pool (Outdoor Pool) – Consists of a single lap pool. has restricted access and lifeguards.
Aqua Feat, Spray	Aquatic feature, Spray (Destination Sprayground) – Consists of many and varied spray features. Does not have standing water, but is large and varied enough to attract users from outside the immediate neighborhood.
Aqua Feat, Complex	Aquatic feature, Complex (Aquatic Park) – A facility that has at least one lap pool and one separate spray ground or feature.
Archery Range	Archery Range – A designated area for practice and/or competitive archery activities. Meets safety requirements and has appropriate targets and shelters.
Backstop, Practice	Backstop, Practice – Describes any size of grassy area with a practice backstop, used for practice or pee-wee games.
Ballfield	Ballfield – Describes softball and baseball fields of all kinds. Not specific to size or age-appropriateness.
Ballfield, Complex	Ballfield, Complex - 4 or more ballfields of similar size in used for tournaments.
Basketball	Basketball – Describes a stand-alone full sized outdoor court with two goals. Half courts scored as (.5). Not counted if included in Multiuse Court.
Batting Cage	Batting Cage – A stand-alone facility that has pitching machines and restricted entry.
Blueway	Blueway – River, Stream or canal, that is used for aquatic recreation.
BMX Course	BMX Course – A designated area for non-motorized Bicycle Motocross. Can be constructed of concrete or compacted earth.
Bocce Ball	Bocce Ball - Outdoor courts designed for bocce ball. Counted per court.
Concessions	Concessions - A separate structure used for the selling of concessions at ballfields, pools, etc.
Concessions with Restroom	Concessions with Restroom - A separate structure used for the selling of concessions at ballfields, pools, etc. with restroom faciilty included.
Disk Golf	Disk Golf – Describes a designated area that is used for disk golf. Includes permanent basket goals and tees. Scored per 18 holes.
Dog Park	Dog Park – Also known as "a park for people with dogs" or "canine off-leash area". An area designed specifically as an off-leash area for dogs and their guardians.
Driving Range	Driving Range - An area designated for golf practice or lessons.
Educational Experience	Educational Experience - Signs, structures or historic features that provide an educational, cultural or historic experience.
Equestrian Facilities	Equestrian Facilities - designed area for equestrian use.
Event Space	Event Space - A designated area or facility for outdoor performances, classrooms or special events, including amphitheaters, band shell, stages, etc.
Fitness Course	Fitness course – Consists of an outdoor path that contains stations that provide instructions and basic equipment for strength training.
Garden, Community	Garden, Community (vegetable) – Describes any garden area that provides community members a place to have personal vegetable/flower gardens.

Garden, Display	Garden, Display – Describes any garden area that is designed and maintained to provide a focal point in a park. Examples include: rose garden, fern garden, native plant garden, wildlife garden, arboretum, etc.
Golf	Golf – Counted per 18 holes. (18 hole course = 1 and 9 hole course = .5)
Handball	Handball – Outdoor courts designed for handball.
Hockey, Inline	Hockey, In-line - Regulation size outdoor rink built specifically for league in-line hockey games and practice.
Hockey, Ice	Hockey, Ice – Regulation size outdoor rink built specifically for league ice hockey games and practice.
Horseshoes	Horseshoes – A designated area for the game of horseshoes. Including permanent pits of regulation length. Counted per court.
Horseshoes, Complex	Horseshoes, Complex - Several regulation courts in single location used for tournaments.
Loop Walk	Loop Walk – Any sidewalk or path that is configured to make a complete loop around a park or feature and that is sizeable enough to use as a exercise route (min. ¼ mile - 1320 ft.- in length)
Miniature Golf	Miniature Golf - Outdoor miniature golf course.
MP Field, Small	Multi-purpose field, Small – Describes a specific field large enough to host at least one youth field sport game. Minimum field size is 45' x 90' (15 x 30 yards). Possible sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field 1 hockey. Field may have goals and lining specific to a certain sport that may change with permitted use. Neighborhood or community component
MP Field, Medium	Multi-purpose field, Medium - Describes a specific field large enough to host at least one youth/adult field sport game. Minimum field size is 90' x 180' (30 x 60 yards). Possible sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field 1 hockey. Field may have goals and lining specific to a certain sport that may change with permitted use. Used with MP Field Complex component only.
MP Field, Large	Multi-purpose field, Large – Describes a specific field large enough to host at least one adult field sport game. Minimum field size is 180' x 300' (60 x100 yards). Possible sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field hockey. Field may have goals and lining specific to a certain sport that may change with permitted use. Neighborhood or community component
MP Field, Multiple	Multi-purpose field, Multiple – Describes an area large enough to host a minimum of one adult game and one youth game simultaneously. This category describes a large open grassy area that can be arranged in any manner of configurations for any number of field sports. Minimum field sizeis 224' x 468' (75 x 156 yards). Possible sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field hockey. Field may have goals and lining specific to a certain sport that may change with permitted use. Neighborhood or community component
MP Field, Complex	MP Field, Complex - Several fields in single location used for tournaments

Multiuse Court	Multiuse Court - A paved area that is painted with games such as hopscotch, 4 square, basketball, etc. Often found in school yards. Note the quantity of basketball hoops in comment section.
Natural Area	Natural area – Describes an area in a park that contains plants and landforms that are remnants of or replicate undisturbed native areas of the local ecology. Can include grasslands, woodlands and wetlands.
Nordic/Ski Area	Designated area specifically for skiiing, cross-country, or other winter sports.
Open Turf	Open Turf – A grassy area that is not suitable for programmed field sports due to size, slope, location or physical obstructions. Primary uses include walking, picnicking, Frisbee, and other informal play and uses that require an open grassy area.
Open Water	Open Water – A body of water such as a pond, stream, river, wetland with open water, lake, or reservoir.
Other-Active	Active component that does not fall under any other component definition. If passive, consider passive node.
Passive Node	Passive Node - A place that is designed to create a pause or special focus within a park, includes seating areas, passive areas, plazas, overlooks, etc.
Picnic Grounds	Picnic Grounds - A designated area with several, separate picnic tables.
Playground, Destination	Playground - Destination – Playground that serves as a destination for families from the entire community, has restrooms and parking on-site. May include special features like a climbing wall, spray feature, or adventure play.
Playground, Local	Playground - local–Playground that is intended to serve the needs of the surrounding neighborhood. Generally doesn't have restrooms or on-site parking.
Public Art	Public Art – Any art installation on public property.
Racquetball	Racquetball – Outdoor courts designed for racquetball.
Restroom	Restroom - A separate structure that may or may not have plumbing. Does not receive a neighborhood or community score. This is scored in the Comfort and Convenience section.
Ropes Course	Ropes Course - An area designed for rope climbing, swinging, etc.
Shelter, Group	Shelter – Large/Group– A shade shelter with picnic tables, large enough to accommodate a group picnic or other event for at least 25 persons with seating for a minimum of 12.
Shelter, Group with Restroom	Shelter – Large/Group– A shade shelter with picnic tables, large enough to accommodate a group picnic or other event for at least 25 persons with seating for a minimum of 12 - includes restroom facility.
Shelter	Shelter – Small/Individual– A shade shelter with picnic tables, large enough to accommodate a family picnic or other event for approximately 4-12 persons with seating for a minimum of 4 .
Shelter with Restroom	Shelter – Small/Individual– A shade shelter with picnic tables, large enough to accommodate a family picnic or other event for approximately 4-12 persons with seating for a minimum of 4 - includes restroom facility.
Shooting Range	Shooting Range– A designated area for practice and competitive firearms shooting activities. Meets safety requirements and has appropriate targetsand shelters.

Shuffleboard	Shuffleboard - Outdoor courts designed for shuffleboard.
Skate Feature	Skate Feature – A stand-alone feature in a park. May be associated with a playground but is not considered a part of it.
Skate Park	Skate park – An area set aside specifically for skateboarding, in-line skating, or free-style biking. May be specific to one user group or allow for several user types. Can accommodate multiple users of varying abilities. Usually has a variety of concrete features and has a community draw.
Sledding Hill	Sledding Hill - An area designated for sledding use that is free from obstacles or street encroachment.
Structure	Structure - A separate structure used for maintenance, storage, etc. Does not receive a Neighborhood or Community score.
Tennis	Tennis courts –One regulation court that is fenced and has nets.
Tennis Complex	Tennis Complex –Regulation courts that are fenced and have nets. Placed in a group of 8 or more courts.
Track, Competition	Track, competition – A multi-lane, regulation sized track appropriate for competitive track and field events and available for public use. Community component.
Trails, Primitive	Trails - primitive– Trails, unpaved, that is located within a park or natural area. That provides recreational opportunities or connections to users. Measured per each if quantity available.
Trails, Multi-use	Trails-multi-use– Trails, paved or unpaved, that are separated from the road and provide recreational opportunities or connections to walkers, bikers, roller bladers and equestrian users. Located within a dedicated ROW. May run though a park or parks but is not wholly contained within a single park. Can be a component of a park if it goes beyond the park boundaries, or can be its own park type. Measured in miles.
Trailhead	Marker, post, sign or map indicating location, intersection, beginning or end of trail.
Volleyball	Volleyball court - One full-sized court. Surface may be grass, sand, or asphalt. May have permanent or portable posts and nets.
Water Feature	Water feature – A passive water-based amenity that provides a visual focal point. Includes fountains, and waterfalls
Water Access, Developed	Water Access - Developed - Includes docks, piers, boat ramps, fishing facilities, etc. Receives quantity for each pier, dock, etc.
Water Access, General	Water Access - General - Measures a pedestrian's general ability to have contact or an experience with the water. Usually receives quantity of one for each park.

Name	Address	Classification	Arts and Crafts	Auditorium/Theater	Childcare/Preschool	Climbing Wall	Fitness/Dance	Food-Café/Concessions	Food - Full Service	Food - Vending	Gallery	Gymnasium	Indoor Ice	Tennis, Indoor	Track - Indoor	Kitchen - Kitchenette	Kitchen - Commercial	Lobby/Entryway	Multi-purpose	Patio/outdoor seating	Pool, Lap	Pool, Leisure	Pool, Therapy	Retail/Pro-shop	Racquetball	Sauna/steam	Specialty Services	Specialty Training	Weight/Cardio Equipment	Woodshop
Liberty Community Center				1			1					0.8			1			1	1		4		1			1			1	
Martha Lafite Thompson Nature Sanctuary																		1	1											
Total:			0	1	0	0	1	0	0	0	0	0.8	0	0	1	0	0	2	2	0	4	0	1	0	0	1	0	0	1	0

Component	COMPONENT, DEFINITION, AND TYPICAL ARCHITECTURAL ELEMENTS
Arts and Crafts	Arts and Crafts - non-carpeted floor with built-in storage and a sink, often adjacent to a kiln room
Auditorium/Theater	Auditorium/Theater - designed specifically for a performance/ lecture space; built-in stage, seating, and can accommodate stage lighting and sound
Childcare/Preschool	built in secure entry and cabinets, room with small toilet, designated outdoor play area, etc.
Climbing Wall	Climbing Wall - special design for climbing, includes harness and safety flooring system
Fitness/Dance	Fitness/Dance - resilient flooring, mirrors
Food-Café/Concessions	Staffed food service with commercial kitchen - informal (no dining room or waiter services)
Food - Full Service	Staffed food service with commercial kitchen and dining room/waiter services
Food - Vending	Non-staffed area with vending machines and/or self-service
Gallery	Gallery - adequate lighting, open wall space with room for circulation
Gymnasium	Gymnasium - large space that can accommodate basketball, volleyball, or other indoor court sports
Indoor Ice	Ice arena used for hockey or other ice sports
Tennis, Indoor	Indoor Tennis Courts
Track - Indoor	Indoor Track - course with painted lanes, banked corners, resilient surface, and marked distances
Kitchen - Kitchenette	Area for preparing food, warming, or serving
Kitchen - Commercial	Kitchen that meets local codes for commercial preparation and service of food
Lobby/Entryway	Waiting and sitting area at the entry
Multi-purpose	Multi-purpose - any room that can host a variety of activities including: classroom, meeting room, banquet room etc. maybe be dividable - see list below for common uses
Patio/outdoor seating	Outdoor space or seating area that is designed to be used exclusively in conjunction with an indoor space and has primary access through an indoor space.
Pool, Lap	Pool, Lap - pool appropriate for swimming laps
Pool, Leisure	Pool, Leisure - designed for leisure water activities, may include zero-depth entry, slides and spray features
Pool, Therapy	Pool, Therapy - warm water pool used for rehabilitation and therapy
Retail/Pro-shop	Area for retail sales of sporting equipment, gifts, etc. Usually had with direct access to outside and can be locked separately from the rest of the facility
Racquetball	Racquetball - regulation courts
Sauna/steam	Sauna/steam - built-in seating and heat source, may be steam or dry heat
Specialty Services	Specialty Services - for example - visiting nurse
Specialty Training	Specialty Training - for example - circuit training, gymnastics
Weight/Cardio Equipment	Weight/Cardio Equipment - resilient or anti-bacterial flooring, adequate ventilation and ceiling heights appropriate forweight and cardio equipment

Woodshop

Woodshop - contains adequate power supply and ventilation for wood-working equipment

Typical Multi-purpose room USES
Classes, events, etc.
First aid room
Game Room
Library
Lounge
Lounge, Senior
Lounge, Youth
Massage room