

APPENDIX D - GRASP® SCORING METHODOLOGY AND PROCESS

INVENTORY DATA COLLECTION PROCESS

The inventory was completed in a series of steps.

1. The planning team first prepared a preliminary list of existing components using information provided from the City.
2. Next, field visits were conducted to confirm the preliminary data and collect the following information:
 - Component (room or space) type and approximate square footage
 - Evaluation of component condition
 - Evaluation of building setting and entry
 - Evaluation of office and storage spaces
 - Building and Site photos
 - General comments

The inventory team used the following three-tier rating system to evaluate each component:

- B = Below Expectations (1),*
- M = Meets Expectations (2,) and*
- E = Exceeds Expectations (3)*

Component Scoring

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

The range of scores for each component is as follows:

- Below Expectations (BE) – Substandard amenity related to function. Issues downgrading a space may include size, furnishings, age, and accessibility.
- Meeting Expectations (ME) – Standard amenity related to function. May include appropriate size, furnishings, and accessibility.
- Exceeding Expectations (EE) – Above standard/premium amenity. May include: size larger than normal, furnishings being modern and new or fairly new, and no issues with accessibility.

Because the GRASP® analysis is based on numeric values, the above scores were assigned numeric values to serve as a GRASP® value for each amenity.

BE=1, ME=2, EE=3

Above and beyond the functional score that was assigned to each component, some elements serve as modifiers that increase the comfort, capacity, or convenience of the amenity. For the Oklahoma City Recreation and Senior Centers, the project team

determined that these elements include kitchens, and the aesthetics, quality and functionality of the building and its setting.

How Components are Scored:

For each occurrence of the components listed below, a score for that feature is placed in the appropriate column on the Facilities Score Sheet according to the following directions. If a feature is used for multiple functions, 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 feature is designed.

For each component, a score of two (2) points is assigned if it meets expectations for its intended purpose and meets the Basic Characteristics (refer to the Component Description list, Appendix X) described for that feature. The Basic Characteristics should all be present and in good repair to warrant the score of two.

If the component clearly exceeds the Basic Characteristics or is of exceptional quality, a score of three (3) is assigned.

If all of the Basic Characteristics are not present, or if they are present but are under-sized, in disrepair, or otherwise sub-standard, a score of one (1) is assigned for the feature.

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).

The GRASP® analysis recognizes that value results from a combination of attributes. These include capacity or quantity, but can also include quality and accessibility. Quality itself is a combination of things, but essentially is based on the suitability of something for its intended purpose. For example, consider the value of an older-model luxury car to a brand-new economy model. Both cars may be suitable for the intended purpose of getting passengers to a destination, and they may have equal value, but the value is derived from different combinations of condition and features. The service value of components in the parks and recreation system works on similar principles.

An older model playground with lots of features, but in less-than-perfect condition may be equal in the value of service it provides to a new playground with fewer features that are in perfect condition and are ones that are currently most desired by the public. The metric in determining value is whether or not something meets expectations for its intended use. In the case of the cars, both cars meet the expectation to carry passengers safely, comfortably, and reliably to their destination, but each one does so with a different combination of attributes. A brand-new luxury car with lots of features, on the other hand, may clearly exceed this basic expectation.

Neighborhood and Community Scoring

Components were 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 was 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, 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 city. For these reasons indoor facilities are given only one score.

How Modifiers (comfort and convenience features) are scored:

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 are things that enhance the users' experience by making it a nicer place to be. The presence of features such as drinking water, shade, seating, and restrooms in proximity to a component has the effect of increasing the value of the component. Modifiers encourage people to stay longer and enjoy the components more fully. 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. For example, having one bench in a 60-acre park may not be enough and therefore benches would receive a "1." Likewise, having 20 benches in a ¼ acre park maybe too many and would also score a "1." Conversely, a park with an appropriate number of benches that are located to take advantage of shade, views, and park activity, may score a "3."

Indoor Modifiers

For indoor facilities the comfort and convenience features change slightly to reflect the characteristics of the building. Building modifier categories include: setting, entry function, overall building condition, and quality of restrooms.

Activity and Sports Lighting

During the site visit, evaluators recorded the presence of activity or sports lighting for each component. This modifier counts for lighting that allows for component use in the evening/night hours. Although it applies to all outdoor components, it is most often associated with ballfields, sports courts, and shelters. This modifier does not apply to security lighting.

How Design & Ambience is scored:

The quality of the users' experience is also enhanced by a pleasant setting and good design. Components within a park that is well-designed and maintained in good condition offer a higher level of service than ones in a park that nobody wants to visit. 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. In the GRASP® formula, a site with a level of design and ambience that is consistent with local norms will have its component scores raised by a factor of two. Sites where design and ambience is below expectations receive a multiplier of one, and therefore do not see an increase in the value of the components, and sites with exceptional design and ambience receive a multiplier of three.

Information collected during the site visit was then compiled and corrections and comparisons made to GIS. Following the comparisons and compilation, the inventory was sent to the City staff for corrections and comments.

INVENTORY COMPILATION AND SCORING PROCESS

Once the inventory has been reviewed and approved by the client the information is compiled to create a GRASP® base score. The GRASP® base score is created by applying the modifiers and design and ambience scores to the component score. Also at this time other modifiers are applied as appropriate to the project. The most typical type of modifier is the ownership modifier.

Ownership Modifier

This modifier is generally 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 schools are given a 50% ownership modifier which halves the GRASP® score to account for the limited access that the neighborhood has to school facilities.

Adjusted modifier score

In the inventory process, modifiers were scored by a process similar to that used for components. These scores were used to calculate a modifier value for each site. If a site has a high modifier value, the values of the components located there are increased by a factor of 1.3. A modifier value in the middle range is considered "normal," and increases the values of the components by a factor of 1.2. A site with a modifier value in the low range will increase the value of components located there by a factor of 1.1, and at a site with no modifiers the value of the components is not increased. To determine the range that defines high, medium, and low, the total of all modifier scores is calculated. The range of totals in the community is then divided into three groups and given an adjusted score based on

where it falls in the range of scores, thus scores of 1 to 7 = 1.1, 8 to 14 = 1.2, and 15 to 21 = 1.3.

COMPOSITE GRASP® SCORE

Finally, the final Composite GRASP® score for each component is determined by using the following formula:

$$(\text{total component score}) (\text{adjusted modifier score}) (\text{design and ambiance score}) (\text{ownership modifier}) = \text{Composite GRASP® score}$$

GRASP® TARGET SCORES

GRASP® perspectives show the cumulative level of service available to a resident at any given location in the City. It is a blended value based on the number and quality of opportunities to enjoy a recreation experience that exist in a reasonable proximity to the given location. If a philosophy is adopted wherein the goal is to provide some minimum combination of opportunities to every residence, a GRASP® score can be calculated that represents this minimum.

A reasonable goal would be to offer a selection of active and passive recreation opportunities to every residence, along with access to a recreational trail. The formula for calculating the GRASP® value of such a combination of components is:

$$\text{Number of Components} \times \text{Score for each Component} \times \text{Modifier Value (will be 1.2 if adequate set of modifiers is present)} \times \text{Design and Ambiance Score (will be 2.0 if met to normal* expectations)} = \text{Base Score}$$

Components:

If we assume that a combination of three components and the park itself (acting as a component) should be made available to each home, then the number of components for a minimum level of service is four. Within these four components it is assumed that there is a mix of both active and passive components. Active components include things like courts, athletic fields, etc., and passive components include things such as picnic shelters, natural areas, landscaped gardens, art, etc. Although this example uses a park and outdoor components, service is provided in the same way from indoor components and is considered interchangeable with outdoor components assuming that a good mix of both are present in the parks and recreation system. “Making available,” as used in GRASP®, means that they exist within a reasonable distance of the home.

Components that meet normal expectations for size, quality, capacity, and condition receive a score of two in the GRASP® system, so that score will be used to calculate the target minimum score.

Modifiers:

In addition to components, parks, buildings, and other public spaces have things in them to make them more comfortable and convenient to use. In the GRASP® system these are called

modifiers. A modifier value in the middle range is considered “normal,” and increases the values of the components by a factor of 1.2. For the purpose of calculating a minimum target score, therefore, a modifier value of 1.2 will be used.

Design & Ambience:

The quality of the users’ experience is also enhanced by a pleasant setting and good design. Components within a park or building that is well-designed and maintained in good condition offer a higher level of service than ones in a location that nobody wants to visit. 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. In the GRASP® formula, a site with a level of design and ambience that is consistent with local norms will have its component scores raised by a factor of two. A design and ambience factor of two will be used to calculate the minimum target score.

Computed Minimum Base Score:

In determining the target score it is also assumed that the ownership value is 100% - meaning that there is no change in score based on ownership. Plugging in the assumptions described above, a minimum base score for park and indoor components is calculated:

Number of Components (4) x Score for each Component (2.0) x Modifier Value (1.2) x Design and Ambience Score (2.0) = Base Score (19.2)

Because the ability to walk to components makes them more available, GRASP® places a premium on their scores for the area within walking distance. On the Perspective the Base Score is doubled within 1/3 mile of the component. (The 1/3 mile distance represents an approximate 10-minute walk. Barriers that restrict walking have also been taken into account, by cutting off the double-score value around the component at the barrier.) When the score is doubled, the desired GRASP® score is therefore **67.2** for any given residential location, assuming that the basic set of components and other conditions described above have been met.

In built-out areas, in addition to the service received from the basic set of components described above, homes will also have access to components located further away from them than 1/3 mile. GRASP® assumes that components up to a mile away are “available” to a home. A mile is easily traveled by automobile, bicycle, or other means within a reasonable amount of time, unless unusual circumstances exist. The service value of these components is equal to their base score for the components, calculated according to the formula above. If the standard of having the basic set of components within 1/3 mile of each home is met uniformly across the entirety of an area within a one-mile radius of a given home, there could be as many as seven or more parks serving the home with the basic (non-doubled) score of 19.2 points. The total value of these would add another 134.4 points, raising the score at the subject residence to a total value of **201.6**. This explains why values much higher than the basic minimum of 33.6 are typically found on the composite Perspective.

Component Diversity

However, the mix of components needs to be considered further. For example, a home that is within 1/3 mile of four tennis courts and no other amenities would meet the basic

numeric standard, but not the intent of the standard. Other duplications are even more likely within the one-mile radius. Based on this, it is recommended that the goal be to provide the minimum score to as many homes as possible, but also to exceed the minimum by some factor whenever possible.

GRASP® LEVEL OF SERVICE AND DETERMINING COMMUNITY EXPECTATIONS

The GRASP® methodology uses targets to establish a baseline for comparison and to determine what a reasonable amount of service is for a particular area. Targets can apply to different land use types such as suburban (residential and commercial), and urban (residential and commercial). The GRASP methodology can cater to a particular community by using the prevalent land use patterns in a community. For example, in Salida, Colorado the GRASP® perspectives and summary tables which analyze level of service are grouped according to whether an area is below residential targets, meeting residential targets or exceeding residential targets. This terminology is best for Salida because of the City's desire to focus on the service it is providing to residential areas. We used this terminology (*residential targets*) to emphasize that the GRASP® level of service applied to a particular area in Salida is only significant if the area in question is residential in nature. For example, a rural or industrial area that achieves a low GRASP® level of service may still be meeting expectations for that land use because the population is dispersed or nonexistent and therefore does not warrant a high GRASP score. In Salida, GRASP® score breaks have been adjusted based on what types of components are represented in each perspective to show how residential areas meet expectations for that group of components.

Composite & Walkability

It is assumed that there is a point at which the number or quality of recreation components falls below residential targets. Likewise, when a resident receives service from a certain number or quality of components, that level of service exceeds the residential targets of the community.

The point at which service falls below residential targets is determined as when a resident doesn't have access to a score which represents access to the equivalent of a park and a trail receiving the base score within one mile of their home. The score that equates to this condition is **33.6**.

Composite and walkability perspectives and summary tables use the following breaks:

- >0 - 33.5 = below residential targets
- 33.6 - 201.6 = meets residential targets
- 201.7+ = exceeds residential targets

The high end of the scores that represent conditions that are meeting residential targets is the score of **201.6** which, as explained above is equivalent to a person living within 1/3 mile from a park and a trail with a base score and access to seven park receiving the base score within one mile of their home.

Trails

When trails are the focus of the GRASP® perspective the point as which service falls below expectations is determined as when a resident has access to less than one multi-use trail within 1/3 mile from their home. The score that equates to this condition is **28.7**.

The high end of the scores that represent conditions that are meeting expectations is the score of **57.6** which, as explained above is equivalent to access to more than one multi-use trail within 1/3 mile, one park trail within 1 mile, and one connector trail @1/3 mile.

Trails maps and summary tables use the following breaks:

>0 - 28.7 = below expectations

28.8 - 57.6 = meets expectations

57.7+ = exceeds expectations



APPENDIX D - GRASP® HISTORY AND METHODOLOGY

GRASP® (Geo-Referenced Amenities Standards Program) *Composite-Values Level of Service Analysis Methodology*

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 been typically 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. In 1906 the fledgling “Playground Association of America” called for playground space equal to 30 square feet per child. In the 1970’s and early 1980’s, the first detailed published works on these topics began emerging (Gold, 1973, Lancaster, 1983). In time “rule of thumb” ratios emerged with 10 acres of parklands per thousand population becoming the most widely accepted norm. 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,” **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 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. **In essence, the popularly referred to “NRPA standards” for LOS, as such, do not exist.** The following table gives some of the more commonly used capacity “standards” today.

Commonly 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	2,400 – 3,036 vs.	¼ to ½ mile Usually in school, recreation center or church facility; safe walking or bike access; outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings	1 per 5,000
High school	5,040 – 7,280 s.f.		
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 & 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 bike 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: National Recreation and Park Association, 1996), pp. 94-103.

In conducting planning work, it is key 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 it’s an urban land-locked community? What if it’s a small town surrounded by open Federal lands?
- What about quality and condition? What if there’s a bunch of ballfields, but they haven’t been maintained in the last ten years?
- And many other questions....

GRASP®

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** and has been applied in communities across the nation in recent years 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. The trademarked name for the composite-values methodology process that these three firms use is called **GRASP® (Geo-Referenced Amenities Standards Program)**. For this methodology, capacity is only part of the LOS equation. Other factors are brought into consideration, including *quality, condition, location, comfort, convenience, and ambience*.

To do this, parks, trails, recreation, and open space 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 ways in which the characteristics listed above affect the amount of service provided by the components of the system are explained in the following text.

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.

Location To be served by something, you need to be able to get to it. The typical park playground is of more service to people who live within easy reach of it than it is to someone living all the way across town. Therefore, service is dependent upon proximity and access.

Comfort The service provided by a component, such as a playground, is increased by having amenities 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 increased 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. A well-designed park is preferable to poorly-designed one, and this enhances the degree of service provided by the components within it.

In this methodology, the geographic location of the component is also recorded. Capacity is still part of the LOS analysis (described below) and the quantity of each component is recorded as well.

The methodology uses comfort, convenience, and ambience as 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.

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 **GRASP**[®] analysis of the study area.

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 the GRASP[®] methodology provides not only 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 of issues. Combined with a needs assessment, public and staff involvement, program and financial assessment, GRASP[™] allows an agency to defensibly make recommendations on priorities for ongoing resource allocations along with capital and operational funding.

Appendix E – GRASP® Perspectives and Maps

Remove this page and replace with the PDF files of the GRASP® Perspectives and Maps.