DOCUMENT RESUME

ED 090 138 SP 006 031

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TITLE Master Plans for Park Sites.
INSTITUTION Department of Agriculture, Washington, D.C.; Illinois Univ., Urbana. Cooperative Extension Service.
REPORT NO ORPR-12
PUB DATE May 70
NOTE 18p.

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS *Facility Planning; *Facility Requirements; Master Plans; *Park Design; *Physical Design Needs; *Planning (Facilities); Recreational Activities; *Recreational Facilities

ABSTRACT

This booklet is a general guide to park site planning. The four basic steps involved in developing a park site are a) determination of the uses of the site, b) analysis of the site potential for these uses, c) identification of the functional relationship among the uses, and d) coordination of the uses to the park sites. Uses of park sites are divided into active and passive recreation: a nature preserve is classified as passive recreation; a golf course, as active recreation. The factors involved in the analysis of the site are general ecology; topography, which includes classification of slopes, geological formations, and potential pond sites; soils and other environmental factors; existing manmade features; and esthetic considerations. Various uses of the parks are analyzed for functional relationships which would enhance the planning of the site. Coordination of land uses with the actual park site is the final design of the master plan. Land criteria are given for campgrounds, picnic areas, interpretive centers, hiking trails, and roads. Working drawings and specifications are intended to be prepared for the site development plan. A five-item bibliography is included in the booklet. (BRB)

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This publication was written as a general guide which will enable interested citizens to gain a better understanding of the demanding task called park site planning. It is hoped that those who read this publication will be able to assume a more active role in working with the professional planners who prepare park plans for their respective communities.

GENERAL CONSIDERATIONS

It is important to recognize there are different kinds of park plans. Comprehensive plans deal with the planning of entire park systems. Site plans deal with the planning of an individual park. A comprehensive plan indicates the outdoor recreation needs of people and identifies the potential park sites which are capable of meeting these needs.

After the park sites have been identified, it is then necessary to prepare individual park site plans. The first site plan to be prepared is called the "master site plan." It has two basic steps. First is the determination of the uses to which the park will be put. This is called establishing the "program" for the site. Camping, swimming, hiking, picnicking, and parking are examples. The second step is the determination of the best place on each site for the respective uses or program units.

When the master site plan is completed, final design considerations, working drawings and specifications, and other elements of the overall job must be developed for each program unit of the site. This process results in what is often called the "Site Development Plan."

The purpose of this publication is to explain the procedures used in Master Site Planning, which is a critical link in the total park and recreation planning process.

STEPS IN MASTER PLANNING

There are four basic steps involved in developing a park site master plan. They are:

1. Determining the program or uses of the site.
2. Inventorying and analyzing the site potential for the stated uses.
3. Identifying the functional relationship between uses.
4. Fitting the program to the site.

DETERMINING THE PROGRAM

As stated previously, guidelines for determining use programs for specific sites should be provided in the comprehensive park and recreation plan. In the absence of such guidelines, opinion surveys and advisory committee recommendations will have to suffice. In either case, differences in age, sex, ethnic groups, and income need to be considered, as well as whether the program orientation will be toward or away from participation as a family unit.

It is well to remember that not all parks can or should be designed as general-purpose parks. It might be well to choose a primary use for a park, permitting additional uses only when they enhance the primary one. Recognizing there are different kinds of parks, the range might be as follows:

Passive Recreation (nature preserve) --General Purpose-- Active Recreation (golf course)

Depending on the nature of the site, the two extremes--nature preserve and golf course--may have to occupy separate park sites. If the site is large enough to avoid conflicts, the two may be designed on one site as a general-purpose park.

For illustrative purposes, a hypothetical case study involving the design of a park has been chosen. The program listed in Figure 1 was decided on arbitrarily, but will serve to demonstrate the principles involved in completing the remaining steps in the master planning process. Furthermore, the process documented here is greatly simplified, compared with the actual process which a professional planner carries out.

ANALYSIS OF SITE POTENTIAL

While there are certain basic considerations, such as general ecology, topography, soils, etc. that must always be considered, the predetermined uses of the site will provide the context or guidelines for the analysis. For example, the program chosen in this case is nature-oriented, therefore characteristics that would enhance or detract from this purpose should be examined. Aerial photographs, topographic maps, and soil maps of the park site are of great assistance in this process of analysis. All natural or man-made factors that might have an influence on the final park plan must be identified and recorded, graphically or in written form. These factors, along with the program, will determine the final character of the park.

Primary Uses

- Nature Preserve
- Nature Interpretive Center
- HiKing Trails
- Outdoor Classroom

Secondary Uses

- Camping
- PicnicKing
- Fishing
- Boat Launching
- General Play Area

Supporting Uses

- ParKing
- Roads
- Sanitary Facilities
- Maintenance Buildings
- Entrance Control

Figure 1. Program for Park Site.

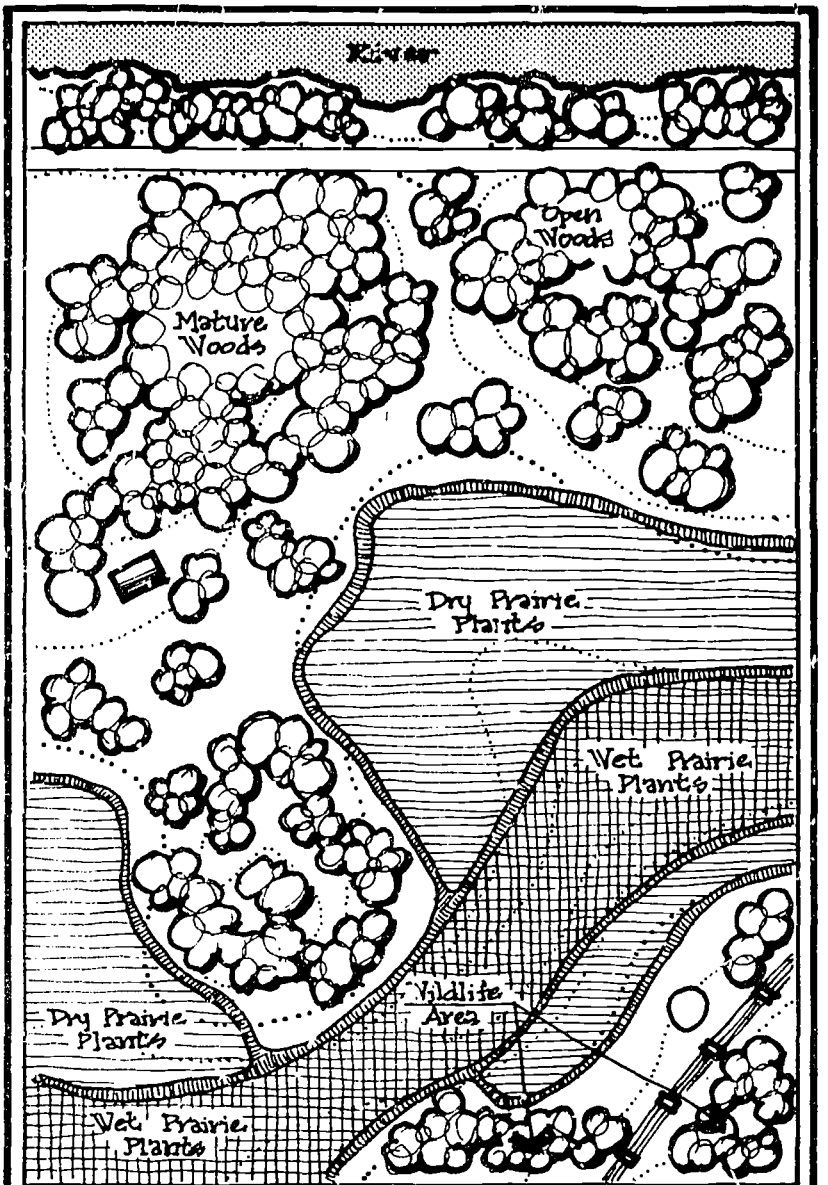

Figure 2. General Ecology.

An important consideration involved in this process is that a park site should not be acquired unless the uses that will be made of the park, and the landscape features necessary to support the stated uses are clearly known. Where a site has been acquired in advance of the determined uses, one should be prepared to compromise the use program based on the limitations of the site. This may mean having to leave out or seriously limit a recreation use that was highly desired by community residents.

Examples of the types of factors that must be considered are these:

General ecology

1. Unique wildlife areas.
2. Unique areas of vegetation.
3. Location of all vegetation.
4. Vegetation--types of trees, shrubs, etc.
5. Expected wildlife species on the site.
6. Other ecological considerations.

Topography

1. Classification of slopes--
   a. Less than one percent--drainage often a problem.
   b. One to four percent--generally suitable for game areas, campsites, parking lots, and building sites. Requires little site modification.
   c. Four to nine percent--easy grades, suitable for most movement and activity, building sites, and roads. Requires moderate site modification.
   d. Ten percent and over--steep, difficult to develop roads. Usually requires major site modification.
2. Geological formations
   a. Type of bedrock.
   b. Location of rock outcroppings.
   c. Location of water table.
3. Potential pond sites.

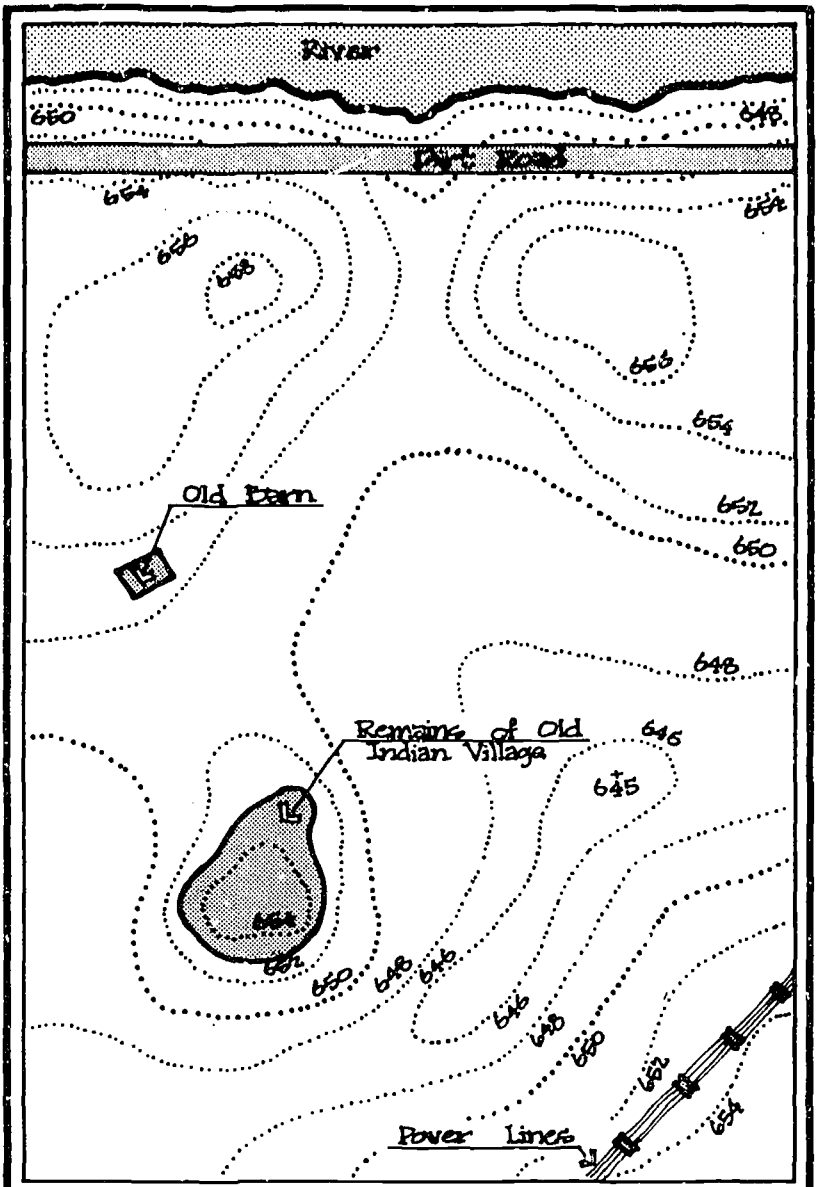

Figure 3. Topography and Man-Made Features.

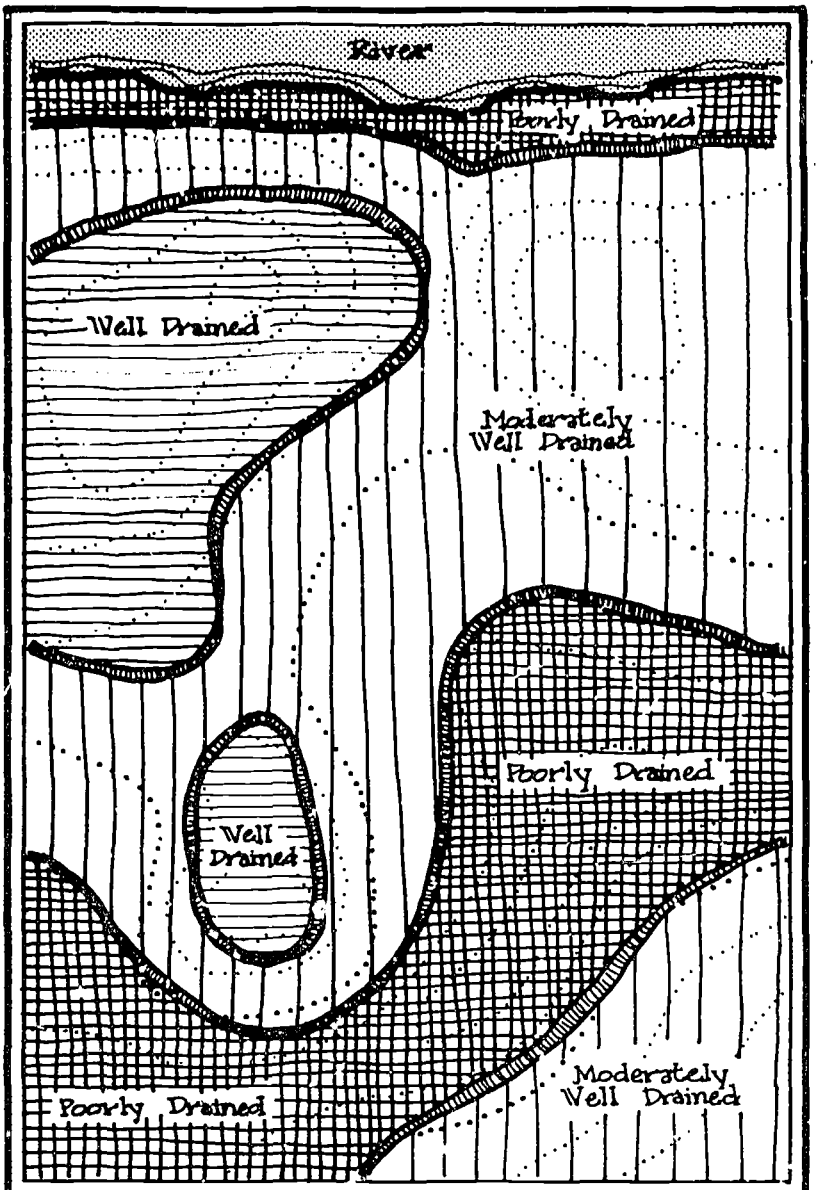

Figure 4. Soil--Drainage.

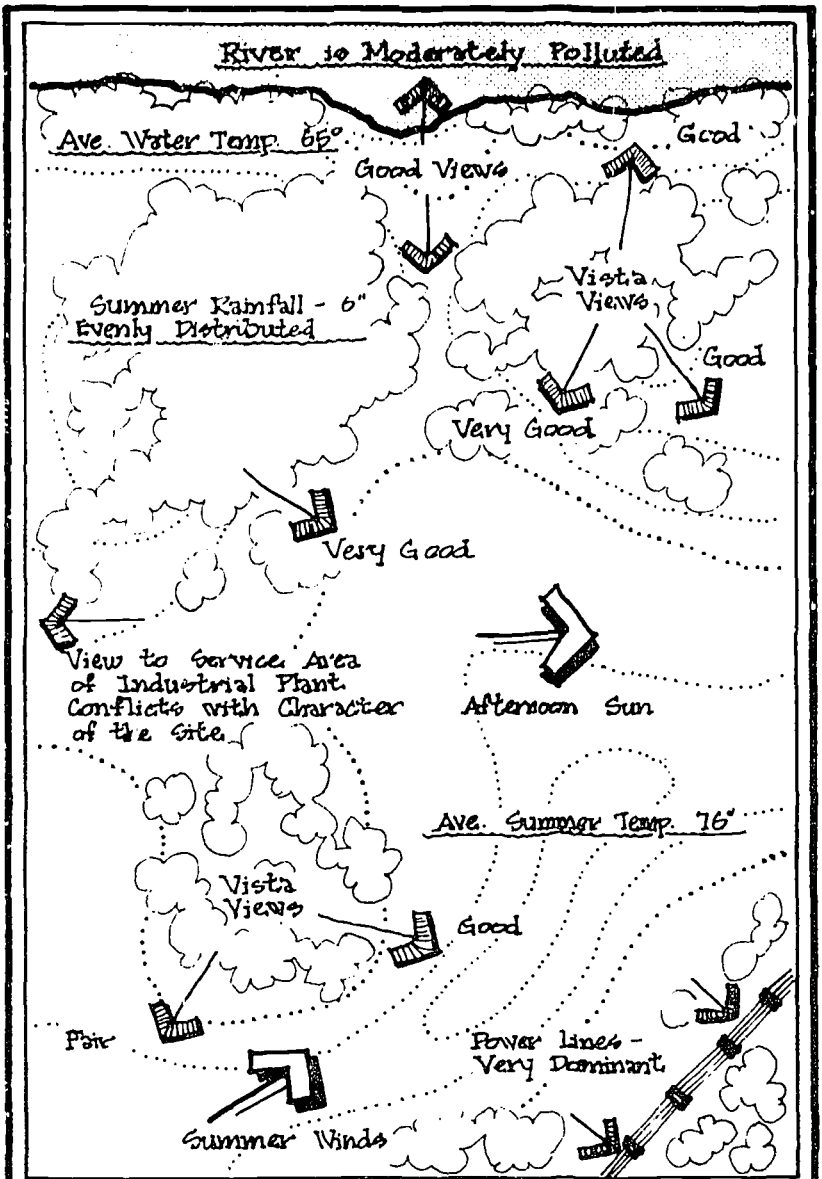

Figure 5. Environmental Factors.

Soils

1. Inventory of soil types.
2. Soil descriptions.
3. Soil interpretations by use--ability of the soil to support a specific activity, such as roads, buildings, parking lots, campsites, sewage disposal, etc.

Other environmental factors

1. Prevailing wind direction and intensities.
2. Angle of sunlight.
3. Precipitation rates and patterns of intensity.
4. Water characteristics--pH, temperature, etc.

Existing manmade features

1. Location of utility lines.
2. Location of roads and buildings.

Esthetic considerations

1. Location of scenic views.
2. Location of distracting factors, noise, odor, manmade objects, etc.

FUNCTIONAL RELATIONSHIPS BETWEEN USES

Each program unit or park site use will necessarily have some relationship to others, which serve to support or enhance the use under consideration. Because of this, the various uses will tend to group themselves into logical associations. These relationships need to be analyzed in order to help the park function efficiently. Circulation between major uses must also be considered. Quite obviously, the site potential will influence the functional relationships. Figure 6 illustrates the logical grouping of activities.

In Figure 6, a single entrance road provides a measure of control of the people going in and out of the park. Because the campground has its own parking spaces, it has its own turn-off road--so the camping traffic will not have to be routed to or through the main parking lot, which is intended for day-use visitors. Circulation patterns between uses are provided

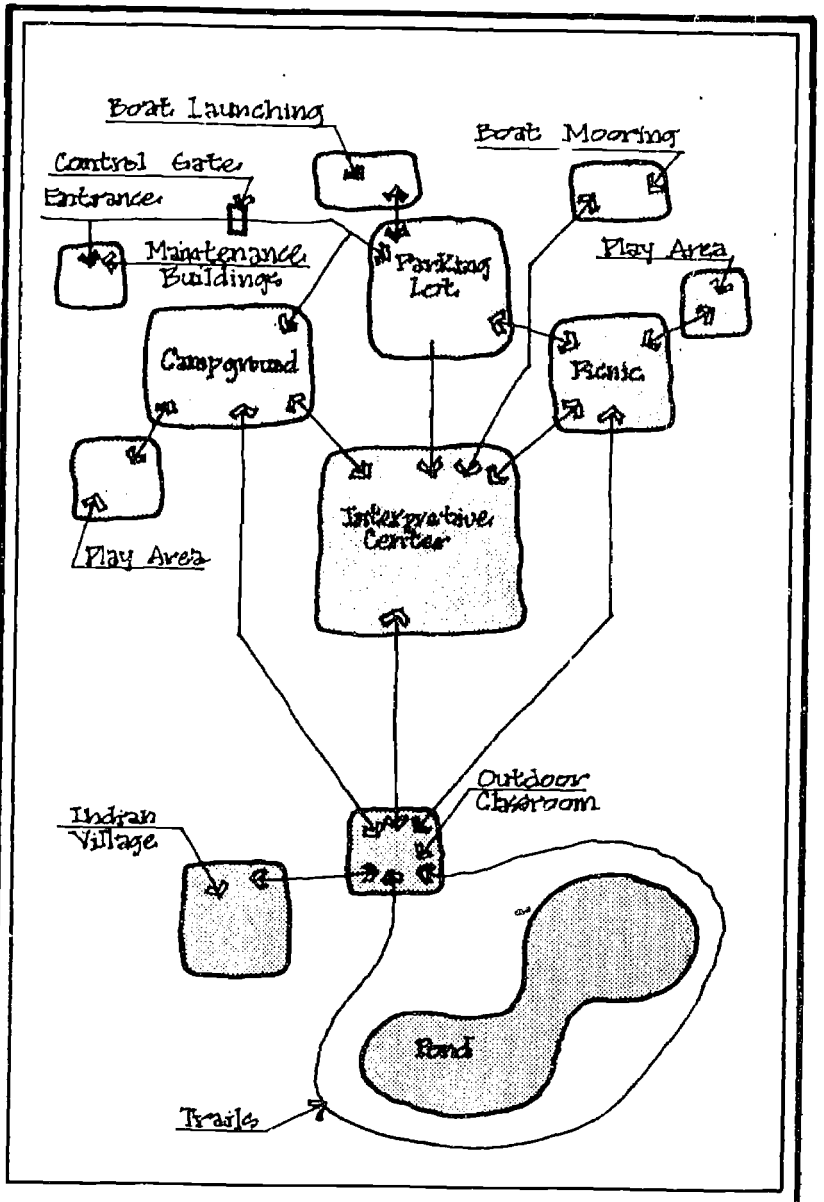

Figure 6. Functional Relationships.

so campers could walk to the interpretive center, hiking trails, or boat mooring on their own walkways.

The same systems were developed for day-use visitors who could either go directly to the boat mooring area, interpretive center, picnic area, or hiking trails. In this case, the circulation system was designed so an overnight-use/day-use conflict would not develop, which is one reason for separate general play areas. The common use facilities, then, are the boat-launching pad, interpretive center, and hiking trails.

FITTING THE PROGRAM TO THE SITE

This step in the site-planning process involves fitting to the site the functional diagram of uses based on the opportunities and limitations of the site. It is an attempt to fit the land uses in an optimum manner, and results in the final design of the master plan. In this case, the criteria were as follows:

Campground:

1. Elevated to catch summer breezes and provide scenic views.
2. Reasonably well-drained soils.
3. Soils of sufficient bearing capacity for roads, etc.
4. In close proximity to launching pad, picnic areas, and interpretive center.
5. Does not infringe on unique ecological area.
6. Location minimizes removal of existing vegetation.

Picnic area:

1. Elevated to catch summer breezes.
2. Open shade.
3. Reasonably well-drained soils.
4. Close to parking lot and interpretive center.
5. Does not infringe on ecological areas.
6. Does not distract from camping area.
7. Gently rolling topography.

Interpretive center:

1. Centrally located.

2. Soils of appropriate drainage and bearing capacity.

3. Location minimizes removal of existing vegetation.

Hiking trails:

1. Located to maximize the educational opportunities of the landscape.

2. Visit interesting ecological areas.

Roads:

1. Soils of appropriate drainage and bearing capacity.

2. Flat to rolling topography, to avoid excessive cuts and fills.

3. Located to serve major use areas.

4. Located to minimize removal of significant vegetation.

The amount of land devoted to use is determined by space standards--for example, the number of picnic tables, camp sites, or parking spaces per acre. A publication on space standards is listed in the bibliography.

SITE DEVELOPMENT PLANS

After the final design of the master site plan is completed, a detailed site development plan must be prepared. For example, the campsite units and roadways within the campground must be designed and engineered, an architectural style must be chosen for the interpretive center, and working drawings and specifications must be prepared. These are the types of things incorporated in the site development plan, the last step before construction.

CONCLUSIONS

It is not the objective here to make the reader into a park planner, rather to create an awareness of the process involved. Quite obviously, the planning process is a much more difficult and detailed one than presented in outline here, and will almost always require the services of professional planners. Such experts are able to make optimum use of a park site, insuring greater satisfaction and economy as people pursue recreational activities in the finished facility.

However, professional planners can function better if interested citizens are able to provide them with information and cooperation. Park planning will be greatly facilitated if lay leaders who work with planners understand the planning techniques involved.

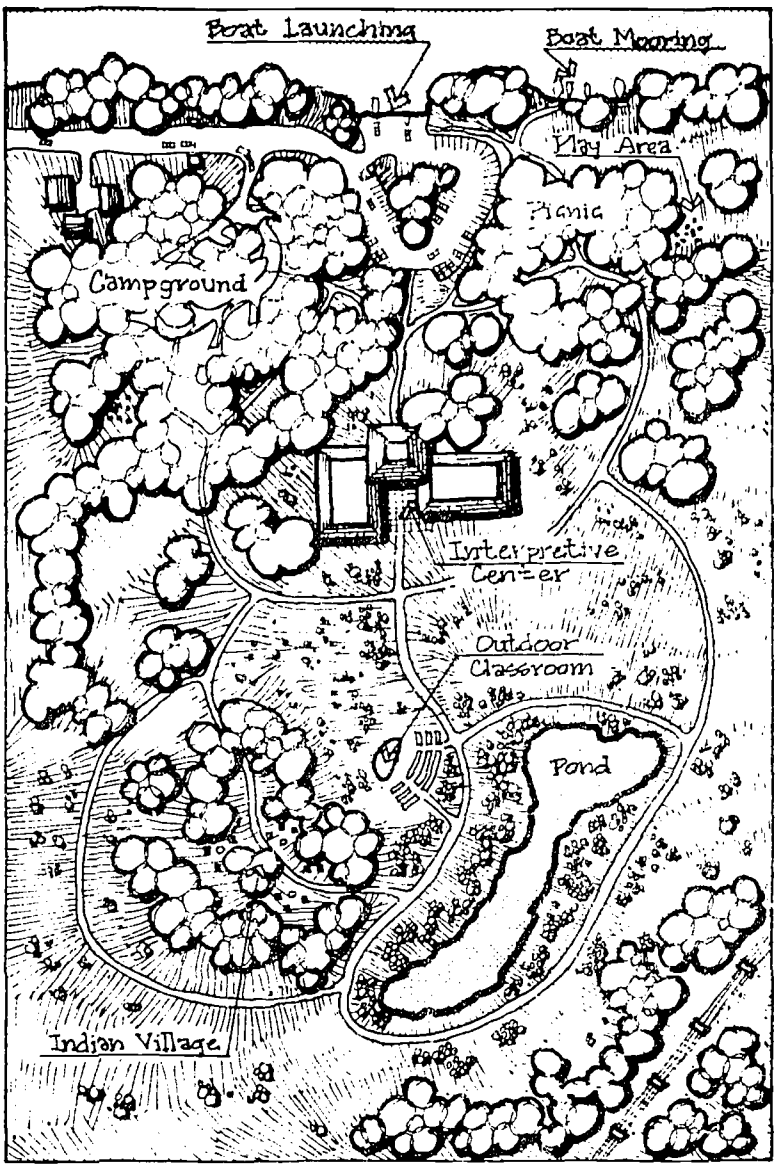

Figure 7. Master Site Plan.

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Urbana, Illinois Nov. 1970
Issued in furtherance of Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. John B. Claar, Director, Cooperative Extension Service, University of Illinois at Urbana-Champaign.