Quarry Park and Nature Preserve

Stearns County, Minnesota

Prepared For:
Stearns County Park Department
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Acknowledgements

Overview

In mid-1994, the Stearns County Board of Commissioners commissioned Brauer & Associates Ltd. to prepare a master plan for Quarry Park and Nature Preserve. An Ad Hoc Advisory Committee was formed to represent the county and public and oversee the project. A Technical Advisory Committee and User-Group Advisory Committee were also formed to participate in the planning process. Public meetings were held to gain public participation to ensure outcomes were in line with public sentiment.

The planning team lead by Brauer & Associates, Ltd. would like to thank the County Board of Commissioners and committee members for providing their insight and understanding of the concerns and needs of county residents. We would also like to thank the individuals that attended the public meetings. The participation of committee members and public allowed us to prepare a master plan that reflects the unique character and intrinsic qualities of the county and park.

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Marty Tabor
Our appreciation is also extended to Charles Wocken, Park Director for Stearns County Park Department, who took the time to attend many meetings and provide his insight and understanding of the site and local conditions and provide guidance on difficult planning issues.

Sincerely,
BRAUER & ASSOCIATES, LTD.

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Primary References and Resources

The following identifies the primary resources used in the preparation of this document.

A series of geological reports submitted to the Stearns County Park Department -- George Shurr and Garry Anderson authors.


Photography Credits

The following individuals provided photographs used in this publication:
Don Bruno
Charles Wocken
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Summary Statement

Overview/Project Scope

This document represents the cumulative effort of the planning team, advisory committees, and Stearns County staff. The project began in mid-1994 and reached completion of the master plan in June of 1995. The project focused on the preparation of a master plan for Quarry Park and Nature Preserve. The planning process took into consideration the history of the site, setting, needs of the surrounding communities, natural and cultural resources of the site, and reclamation issues. The result is this master plan for the park that provides outdoor recreation opportunities for the public that are appropriate for the setting.

Public Involvement

The public was the primary driving force behind the master plan for the park. Their involvement in the process was through public meetings (which began prior to this planning process) and citizen advisory committees, including:

- Ad Hoc Advisory Committee -- responsible for overseeing the entire planning process and representing the interests of the public.
- Technical Advisory Committee -- provided valuable background information on technical issues ranging from site resources to site safety.
- User Group Advisory Committee -- provided user-based perspective on park development and use issues.

Public Agency Involvement

To ensure consistency with broader, county-wide planning objectives, policies, and implementation procedures, the consultant team and advisory committees worked closely with Stearns County Park Department staff. They served in a technical advisory and consultant role on pertinent planning issues.

The Setting and History

Quarry Park and Nature Preserve is a very unique park setting with a rich cultural history and diverse natural resource base. The site is situated on a 220 acre tract of land off County Road 137 southwest of Waite Park in Stearns County's St. Cloud Township. (Figure 2.1 shows the location of the park within Stearns County.)

The park is located close to the core of the St. Cloud Metropolitan Statistical Area (MSA), one of the fastest growing metropolitan areas in the state. The park is well situated to service the expanding outdoor recreation needs of this region, as well as preserve a major portion of its historic natural and cultural landscape. The inherent qualities of the park lends itself to enriching the quality of life in the surrounding communities that goes beyond outdoor recreation to include:

- Education -- from grade school through graduate school
- Cultural and natural interpretation
- Earth science and ecological research
- Tourism
Site and Resource Analysis

Appropriately named, Quarry Park and Nature Preserve clearly reflects the history of the granite industry. Starting in 1913, the Empire Quarrying Company opened up mining operations on the site. Many different companies held ownership of the property over the years. Although the extent to which each company actually worked quarries on the site remains unclear, the cumulative effect of their activities left 20 quarries of varying size, shape, depth, and complexity.

The site and resource analysis provides an overview of the park's physical characteristics. The diversity of geology, plant life, wildlife, and hydrology coupled with the cultural impacts of past quarrying activities offer a park setting unlike any other.

Although the open quarries and grout piles are dominant and interesting site features, the natural resources of the park are arguably the most important. It is these resources that give the park its enduring qualities and sense of place. It is these same resources that opened up the opportunity for past cultural activities that are so readily recognizable.

Within the confines of the park there is an opportunity to witness first hand the interconnection of all aspects of our natural environment -- bedrock, overburden (layers of earthen material lying above the bedrock), water, plants, and wildlife.

Cultural activities have also had a profound impact on the character of the site. Cultural impact refers to the impact that man has had on the landscape. This includes:

- Granite quarry mining
- Farming and other land uses

Of the two, quarry mining is certainly the most unique and significant impact on the overall character of the site. A total of 20 quarries are found within the park property. Although perhaps less obvious to the casual observer, farming and other land uses have also greatly impacted the park as it exists today.

Quarry Park and Nature Preserve is endowed with an impressive and unique natural resource base that is rarely found anywhere. Adding the cultural events that took place over the years only adds to its appeal. Within this context, the challenge becomes one of developmental restraint. As its name implies, the park is first and foremost a preserve of nature and culture. The "sense of place" one comes to understand upon entering the site is self evident. The master plan presented here seeks to enhance that image, rather than detract from it.

Master Plan

The Master Plan is a direct outgrowth of the site and resource analysis and public participation process. It is important to view the master plan as dynamic, meaning it will continue to evolve and be fine-tuned as it moves through implementation steps and benefits from management experiences in the years to come.

The master plan responds to a couple of land use zones, which describe the park by functional use areas. By looking at the park from this broader perspective, one can determine the most appropriate way to use the land within the context of its natural features and development program.
Based upon the site and resource analysis and field observation, a couple of distinct land use zones emerge:

- Cultural interpretive/primary development zone -- ideally suited for the development of the major park facilities and cultural interpretive elements.
- Natural interpretive/preservation zone -- ideally suited for natural interpretation/education and passive outdoor recreation.

The master plan (as shown in figure 4.2) locates development program items in response to the land use zones. It also seeks to achieve a balance between providing facilities and amenities that allow the public to enjoy the park without compromising its natural and cultural character. The development program for the park includes:

- Fence enclosure
- Site access points
- Main entrance and contact station
- Entrance drive and parking facilities
- Interpretive center/trailhead building
- Controlled outdoor interpretive area
- Outdoor amphitheater and lecture/gathering area
- General outdoor interpretive area
- Hiking trails (of varying levels of accessibility)
- Overlooks and observation points
- Mountain bike trail and technical zone
- Swimming facilities
- SCUBA facilities
- Rock climbing facilities
- Cross-country skiing -- traditional and skate-style
- Ice skating
- Fishing
- Outdoor classroom
- Group camp area
- Restrooms
- Operations and maintenance facilities
- Picnicking
- Horse-drawn sled
- Miscellaneous site amenities, including extensive interpretive signage program.

**Future Expansion**

Several opportunities for future expansion were considered during the design process. (Figure 4.21 identifies these areas). The expansion area on the northwest corner of the site is of particular importance in that it is adjacent to the front door of the park. Acquiring this property would protect the views as one enters the park and provide a desirable location for the maintenance and operations facilities.

South of the current park property lies considerable acreage that remains largely undeveloped. Characteristically, it resembles the natural areas of the existing park property, making it very suitable and desirable for expansion. Acquiring additional property to the south has a number of potential benefits:

- A larger ecosystem would improve the diversity and extent of the plant communities found within the park.
- Reduces over-use problems.
- Helps maintain the integrity of the park. By expanding the park, the "essence of the place" can be preserved without like limiting capacity.
Accessibility / Universal Design

Universal design is an approach to design that provides access to a broad range of people with and without disabilities. By focusing attention on a broad spectrum of needs, facility design can accommodate people with varying degrees of abilities and disabilities. This is distinctly different than simply accommodating a set of accessibility requirements that ensure compliance to the law but may not ensure accessibility for all people.

Under this paradigm, universal design attempts to consider all degrees of sensory awareness, all types of locomotion, and all levels of physical and intellectual function. By doing so, the needs of individuals with varying desires, abilities, and expectations can be reasonably accommodated in an appropriate setting. The end result is that individuals with and without disabilities are accommodated in a manner that meets their expectations for a specific space or setting.

The principles of universal design and access have been applied to the master plan and are largely reflected in the type and character of the trails planned for the park and access to primary and secondary facilities.

Ecological Restoration and Site Reclamation Plan

Restoring the native plant communities and reclamation of the quarries is integral to the overall master plan for the park.

The restoration plan puts emphasis on restoring the native plant communities within the park to a "sustainable" level. In this context, sustainable refers to a level of restoration that can be indefinitely propagated and maintained by staff and volunteers. Ideally, this level will approach a historic landscape that features native plant communities. That is a distinct possibility in this case given the likelihood of extensive involvement of volunteer groups, schools, and colleges in the restoration program. To the credit of the county staff, much of this volunteer network is already taking shape and ready to become active in restoration programs. Because of the existing diversity of plant life present, and remnants of native plant communities in particular, the site is expected to respond very quickly to restoration treatments. It should be expected that all natural communities will need to be managed to achieve a consist, sustainable landscape into the future.

Site reclamation focuses on the rehabilitation of quarries and adjacent grout piles to ensure public safety. It also considers water management and quality issues. In this context, site reclamation is concerned with protecting the public from unexpected and unpredictable happenings caused by past mining activities. An example of this would be granite debris falling off of a grout pile and landing on a designated trail. For each of the site reclamation issues identified, there are solutions that can remedy immediate concerns and minimize the potential for longer-term threats. The key to managing these issues includes: 1) understanding their inherent dynamics; 2) monitor changes in those dynamics; and 3) remedy threatening situations before they become serious concerns.

It is important to note that site reclamation focuses on stabilizing the existing grout piles and quarries rather than eliminating them by reestablishing the original contours (which is a more typical restoration approach in the mining industry). This approach was selected because these landforms are considered key aspects of the park and part of its unique character. Public sediment strongly favored preserving the quarries and grout piles as a reflection of past cultural activities.
Management and Use Issues

Although the focus of the master plan is on physical planning, management and use issues are relevant and worthy of some discussion. Once the park is developed, how it is managed and used will ultimately determine whether or not it reaches its fullest potential as a public park and nature preserve. The following lists the management and use issues identified as part of the master planning process:

- Management policies
- Site capacity
- Park uses
- Staffing and scheduling
- Advisory committees
- Maintenance and resource management
- Park safety, liability, and enforcement
- Interpretation, research, and education
- Volunteering
- Tourism

Each of these issues requires additional discussion and debate by Stearns County Park Department, Park Commission, and County Board of Commissioners as the master plan moves toward implementation.

Implementation Plan

A framework and action steps for implementing the master plan was prepared to aid the county in understanding implementation issues and costs. The framework includes:

- Partnership approach to implementation
- Cost analysis
- Funding sources
- Phasing and implementation action steps

The overall potential cost for the project is $6,450,120. The cost is based on having the work completed by contractors and specialists. It does not take into consideration work that would be performed by volunteer groups or through other means. Since the availability of detail design, technical engineering information, and related information is limited at this time, a degree of professional judgement has been used in determining potential costs. The cost figures are intended to be used for budgeting purposes, project phasing, and comparing the relative cost of one item to that of another.

A number of sources have been identified for funding, ranging from local initiatives to state and federal grant programs. It is expected that development will rely on a combination of available funding options. It is also expected that project phasing may also be required given the overall development costs. The phasing program identified in this document provides some general phasing recommendations that place emphasis on:

- Addressing immediate concerns (i.e., reclamation/ restoration issues).
- Strategies that allow for use of the facility by the public in the shortest possible timeframe.

Once funding has been secured, implementation planning can be undertaken between the consultant team and county. This phase essentially takes off where the master planning phase ended. To ensure consistency in planning and design outcomes, it is recommended that the same staff and advisory committee members work with the design team throughout the implementation process. This will ensure that the vision brought forth during the master plan process is realized at the point of implementation.
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