

Desert Discovery Center Feasibility Study: Phase II

Prepared for the City of Scottsdale, Arizona



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Section I

Executive Summary

Executive Summary

In January, 2010, Swaback Partners, and a multi-disciplinary team were commissioned by the City of Scottsdale to perform a Phase 2 - Feasibility Study for the proposed Desert Discovery Center. The study built upon, and expanded the work of the Phase 1 – Feasibility Study performed in 2008 by ConsultEcon. The Swaback Partners Team included architects, land planners, management and economic development specialists, interpretive planners and designers, landscape architects, construction cost estimators, and market research specialists.

This report evaluates the feasibility of the proposed Desert Discovery Center (DDC) located at the Gateway within the McDowell Sonoran Preserve. Within this report is summarized the study methodology, research, analysis, and findings of the study. The work includes a high degree of citizen involvement in the form of citizen committees, work with the Tourism Development Commission, the McDowell Sonoran Preserve Commission, survey work, focus groups, public open houses, significant numbers of meetings with citizen leaders within Scottsdale, consultation with leaders of other similar facilities and work with city staff.

The results of this study indicate that there is a high level of interest and support for the DDC within the City of Scottsdale as well as the greater metropolitan area. The design concepts and interpretive exhibit plan presented in this report were deemed highly creative and desirable by most who reviewed them during the study process. Clearly, there are members of the community who are concerned about the impact the DDC will have on the Preserve, as well as the ability of the community to develop the capital costs necessary to build and operate the DDC, and the business plan within the study addresses alternatives for both of those concerns. Strong, creative leadership was continually cited as what is needed to see the DDC come to life and be successful. The DDC concept is unique and will give Scottsdale a world-class environmental education facility that is entertaining and inspiring. It is a facility that will educate the visitor on the wonders of the Sonoran Desert and McDowell Sonoran Preserve. It is more than a building. It is about experiences woven into the desert that can only be had at the DDC, and to get that experience again you have to return. It has no true competition. It is unique and thus will give Scottsdale its' next strong tool in tourism development, while being extremely respectful of the majestic site it occupies within the Preserve.

The experience within the DDC will take the visitor through a variety of linked desert pavilions; each with an interpretive subject matter being presented, and desert environments that will aim to tell an environmental story of Adaptation. Each visitor will experience great vistas to the Preserve, and the DDC will act as a base camp for understanding and exploring the Preserve. Visitors will experience interpretive exhibits presented in numerous ways including highly interactive exhibits, multi-media presentations, outdoor amphitheater events, as well as presentations by docent scholars. The facilities will include unique event spaces that can be used as a revenue stream for the DDC as well as highly flexible spaces for constantly changing presentations. The exhibits and experiences at the DDC will be dynamic with a goal of being able to have a different experience 360 days a year. The concept of "Adaptation" is the main theme of the interpretive plan, and the DDC environment itself. The interpretive plan focuses on telling the story of adaptation of animals, plant life, and human within the Sonoran Desert, which is the richest, most amazing desert on earth. The linked desert pavilions are conceptually designed to be highly adaptive to the climate throughout the year so that they can be open and act as indoor/outdoor facilities during the pleasant temperature months and tempered in the cooler and warmer months. The goal is to create a LEED Platinum facility that demonstrates a high commitment on the part of the citizens of Scottsdale to build within the desert a place that respects its site and shows the best of the best building techniques for sustainable buildings.

Executive Summary

The study concluded that the DDC as conceptually designed should be a series of facilities with a total of 72,000 gross square feet of enclosed space. The construction cost estimate for the facility, inclusive of all known costs to develop it turnkey, including all pre-opening expenses, and create a full year operating cost reserve is approximately \$74 million dollars. It is projected that in a stabilized year that approximately 333,000 visitors would come to the DDC. The yearly operating costs in a stabilized year of the facility would be approximately \$ 7.4 million dollars. The revenue from a variety of earned and non-earned revenue streams including ticket sales, special events, and fund raising could reasonably be assumed to match the operating expenses. The personnel plan shows approximately 79.25 full time equivalent employees. The full business plan is presented in Section VI with an Executive Summary.

The project square footage and capital costs shown in this report are larger than previous studies. The study team is confident of its recommendations and notes that any previous study had nowhere near the amount of research and analysis that this study has.

Several methods of capital funding for the facilities were discussed during the study such as bonding and public/private partnerships. While it is not the scope of this study to identify exact sources of funding, it was generally agreed by those involved during the process that some method of public/private partnership funding was the best method to raise capital funds.

As a separate document, the DDC Subcommittee has produced a Suggested Work Program for “next steps” to be considered.

In summary, the DDC is a concept that has been talked about for many years within the City of Scottsdale. As presented in this report, the DDC is a world-class facility that will draw residents and visitors alike to understand the beauty and majesty of the Sonoran Desert, and inspire them to return.

The following are a variety of simple facts contained within the feasibility study.

Site Size

- DDC: 8-9 Acres
- New Parking: 4-5 Acres
- Existing Parking: 4-5 Acres

Facility Size

- Net:61,610 Sf
- Gross:73,932 Sf

Parking

- Existing Parking and Circulation: 216 Spaces
- Current Parking Expansion: 125 Spaces
- New DDC Parking: 428 Spaces
- Total: 769 Spaces

Capital Cost\$74.0 M

- Buildings and Site: \$35.1 M
- Exhibits: \$13.1 M
- Permits, Design, Engineering:\$4.0 M
- City Project Management / Public Art:\$3.9 M
- Furniture, Fixtures, Equipment:\$1.0 M
- Contingency (10%):\$4.8 M
- Startup Budget:\$5.8 M
- Operating Reserves/Endowment:\$6.3 M

Annual Mid-Range Attendance Potential 333,000 visitors

Ticket Price:

- Adult \$15.00
- Child\$9.00

Annual Earned and Contributed Revenue\$7.1 M

Annual Operating Budget\$7.1 M

Personnel

- Full Time46
- Part Time60
- Volunteers 250+

Section II

Introduction & Process

Introduction & Process

INTRODUCTION

The Scope of Work of the Phase 2 - Feasibility Study of the DDC included major tasks and subtasks that would provide enough definition of the overall architectural and exhibit concept that it could be tested in market research, as well as have a preliminary cost of construction and on-going operations cost developed for it. A full business plan, architectural concept, and interpretive plan are included in this document. These were developed and constantly refined during the time of the study.

The following is the outline of the Scope of Work of the study;

Study Process

Task 1 – Define and Finalize the DDC Concept, Visitor Experience and Community Uses

- 1.1 Project Initiation
- 1.2 Develop and Refine Concept

Task 2 – Market Survey, Concept Testing, and Refinement

- 2.1 Primary Research
 - 2.1.1 Qualitative Research
 - 2.1.2 Quantitative Research
- 2.2 Public Open House
- 2.3 Revised Market Analysis
 - 2.3.1 Site Review
 - 2.3.2 Define Market Segments
 - 2.3.3 Resident Market Evaluation
 - 2.3.4 Tourist Market Profile
 - 2.3.5 Experience of Visitor attractions in the area
 - 2.3.6 Comparable Facility Experience
 - 2.3.7 Attendance Potential
 - 2.3.8 Attendance Mix
 - 2.3.9 Sizing Parameters

Task 3 – Preliminary Architectural Design

- 3.1 Concept Design
- 3.2 Concept Refinement
- 3.3 Architectural Renderings

Task 4 – Preliminary Project Cost Estimates

- 4.1 Cost Estimating Parameters
- 4.2 Preliminary Cost Estimate
- 4.3 Refinements to Cost Estimate and Architectural Design
- 4.4 Final Cost Estimate

Task 5 – Preliminary Business/Marketing Plan & Pro Forma Budget

- 5.1 Ticketing
- 5.2 Earned and Contributed Revenue Sources
- 5.3 Personnel Plan
- 5.4 Preliminary Marketing Strategy
- 5.5 DDC Operating Expenses
- 5.6 Ongoing Operations Pro Forma Analyses
- 5.7 Organization Ramp-Up Plan
- 5.8 Draft Operating Plan

Task 6 Project Updates

PUBLIC INVOLVEMENT PROCESS

The study team met on a regular basis, often bi-weekly, throughout the approximately 9 months of the study with the 4 person Joint Sub-Committee made up of 2 members of the Tourism Development Commission and 2 members of the McDowell Sonoran Preserve Commission, that was authorized by the City Council, in open public meetings. The committee received updates by the study team in each meeting and gave direction when requested.

The public involvement process was designed to include the following opportunities:

- Open weekly or bi-weekly meetings of the Joint Sub-Committee where public input was a regular agenda item.
- Public open house held at the DC Ranch Desert Camp community room.
- Presentation before the City Council and viewing on the Cities Cable Channel
- 2 focus groups
- On-line surveys
- On-going work sessions with members of the public and the study team
- Presentations before the Tourism Development Commission (TDC)
- Presentations before the McDowell Sonoran Preserve Commission (MSPC)
- Presentation before the McDowell Sonoran Conservancy
- Presentations before Joint Sessions of the TDC and the MSPS

Site Location

The site location for the Phase 2 – Feasibility Study was selected prior to the study teams involvement and is located immediately north of the existing Gateway at the McDowell Sonoran Preserve.



The area was defined generally on drawings produced during the design of the Gateway and further on master plans for the Preserve. Parking and vehicular circulation was initially defined in the plans for the Gateway and in the time span of the study the parking was being expanded to allow for the current demands of the Gateway. The study team did not study alternative site locations within Scottsdale as part of its Scope of Work.

Initial Architectural Space Program

The Phase I – Feasibility study defined an architectural space program, which was referred to within that study as *Exhibition Sonora* as defined by the Scope of Work. That architectural space program became the initial starting point of the study team for Phase II. The study team studied that program and refined it by eliminating and adding spaces, as necessary, as the concept evolved. That initial program is listed below:

Exhibition Sonora: A destination attraction

- In-depth exhibits 1½ - 3 hour length of stay
- Exhibits are also a stand-alone experience
- 120-seat 3D theater; 100-seat planetarium w/ observatory
- Destination-themed retail shop and café
- 40-70,000 square foot building
- 200-seat outdoor amphitheater
- Many public programs and substantial sponsored research
- Serves regional residents, schools and tourists
- Adult admission: \$10-20. Substantial discount for Scottsdale residents
- High attendance potential; Iconic attraction with high national profile
- Capital development costs: +/- \$50 million
- Significant new job creation and economic impacts

INITIAL EXHIBIT SUMMARY

The Phase 1 – Feasibility study defined a set of central interpretive exhibit themes, which the study team reviewed, and as part of its work extensively refined and expanded upon these themes and further defined the interpretive plan as presented in Section IV of this report.

The major interpretive themes that were identified in the Phase 1 work included an overall central theme of “Adaptation”. Under that central theme the sub-themes identified included:

Central Interpretive Theme

The diverse adaptations that allow native plants and animals to survive in the harsh environment of the Sonoran Desert are a continual source of wonder to the careful observer, and a wellspring of ideas and inspiration so that future generations will have adequate resources to meet their needs as well as the opportunity to experience the magic and mystery of the natural world.

Biodiversity

Despite the biological diversity of the Sonoran Desert (home to 2000 native plants, 60 mammals, 30 fish, 20 amphibians, 100 reptiles and more than 350 birds), many people still perceive the desert as a wasteland; overcoming this perception may be the last best hope for conserving large enough landscapes to allow ecosystem processes to continue on a genetically-meaningful scale.

Edge Ecology

The location of the McDowell Sonoran Preserve on an ecotone between the basin and upland plant communities of the Sonoran Desert creates a biological treasure chest of uncommon value, and the intricate network of interactions among its many species is so complex that the human intellect may never achieve the capability to fully comprehend it.

Urban/Wildland Interface

City dwellers place a high value on natural landscapes adjoining urban areas, and increasing recreational pressure on such lands can hamper resource conservation efforts, necessitating a reliance on interpretation and environmental education to create an informed public that actively supports management objectives.

Water

In the arid environment of the Sonoran Desert, the presence or absence of water has a profound effect on topography and the composition of natural communities, which reflects the fact that society’s critical need for adequate supplies of clean water will define, in large part, the politics of 21st Century human interaction with the remaining natural landscapes of the American Southwest.

Archaeology

The evidence of ancient irrigation canals in the McDowell Mountains, and the presence of numerous toolmaking sites, testifies to the fact that humans have always manipulated their environment and exploited desert resources, but the eventual passing of early cultures that were far more in tune with the natural rhythms of the desert than modern society reminds us that change is the only constant, and that even our highly-advanced technologies do not free us from the need to adapt or perish.

Geology/Cultural Geography

Exploitation of the mineral resources of the McDowell Mountains by both prehistoric and more recent human cultures emphasizes the intimacy and depth of the connection between people and planet: geologic forces that occurred millions, or even billions, of years ago shaped a landscape that still shapes patterns of human migration and settlement today.

Sustainability

The vision of the people of Scottsdale to preserve open space in the McDowell Mountains requires striking a delicate balance between economic development, recreational access and resource protection that confers, on those who manage and interpret the resource, a responsibility to set impeccable standards for sustainable development and environmental education.