

The Canoa Ranch Master Plan



Final Report
February 2007



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The Canoa Ranch Master Plan was prepared with the assistance of a dedicated team of consultants, local agencies, and spirited individuals who broadened our understanding of this complex project. The Project Team wishes to thank them for their insightful contributions and commitment to this important project.

Except where indicated, all drawings and images were produced by Poster Frost Associates.

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Executive Summary

For more than a year, a team of consultants, led by Poster Frost Associates, has worked with the Pima County Board of Supervisors, Pima County staff, the Canoa Ranch Community Trust and Oversight Committee, and local stakeholders to develop a Master Plan for the Historic Canoa Ranch. Since purchasing the 4,800 acre Canoa Ranch, south of Green Valley, in 2001, Pima County has embarked on a number of projects at the ranch to preserve and protect the valuable natural and cultural resources. The preservation and restoration of historic buildings, as well as efforts to protect important habitat and restore natural systems are well underway. The Master Plan represents an important milestone towards the goal of making the Canoa Ranch a public site where its rich history can be understood and appreciated by visitors.

Over this one year period, the vast cultural, natural, and educational resources of the Canoa Ranch were identified and priorities were established for their future protection, interpretation and enjoyment by means of a comprehensive master plan. With the expertise of the consultant team, the participation of an active Oversight Committee and community, and the trusted vision and leadership of the Pima County Board and its natural and cultural resource professionals, the Canoa Ranch Master Plan seeks to preserve the Canoa Ranch as a treasure for future generations, retaining a sense of place from earlier times.

Throughout the master planning process the consultant team returned to the community for direction. Three rounds of public meetings were scheduled. The first round of public meetings was held in February of 2006 to give the community a basic level of understanding of the Canoa Ranch and to stimulate the communities' participation in envisioning a future for the property. Three alternative concept plans for the Canoa Ranch

property were presented at public meetings held in June of 2006. Approximately thirty-five people attended the Tucson meeting and nearly eighty people were present in Green Valley. Surveys and written comments from forty-three individuals were collected and tabulated. The public's three most important evaluation criteria for a successful Master Plan, consistent with the preferences of the Canoa Ranch Community Trust / Oversight Committee, were: 1. the experience is authentic, 2. the sense of place and silence is preserved, and 3. it teaches about conservation and sustainability, especially water. The alternative concepts were presented to the Pima County Board of Supervisors at their meeting held on August 1, 2006.

A preferred concept, based on a synthesis of the three alternative concepts, was developed and presented to the public during the third round of public meetings held in November 2006. The preferred alternative includes preservation and restoration of the Manning Era ranch headquarters for use as a Heritage Area with exhibits and programs interpreting all layers of site history. Living history and working ranch demonstrations will provide the visitor with a sense of life on the ranch. Special event programming will provide additional interpretive and educational opportunities. A small number of remote interpretive sites are planned to interpret prominent events and historical themes that have occurred in the region.

Visitor parking, a new orientation center and a new conference and dining center are proposed for the area west of the restored historic pond. To help preserve the site's sense of place and silence, these modern intrusions will be kept some distance from the ranch headquarters. A small fee will be collected for entering the site, with additional fees for entering the Heritage Zone and for additional experiences, including horseback riding and camping. The historic pond will be restored and is expected to generate considerable visitation as a stand alone experience for recreational purposes, including

bird watching and picnicking.

Comprehensive land restoration and resource management programs are key components of the master plan. Preserving and enhancing the natural resource values of the site through land rehabilitation, research, and stewardship programs offers many opportunities for community participation and partnerships. Several projects are either already underway or proposed, including a plan to produce clean effluent, on-site, for use in restoring the pond, flood plain revegetation projects, and aquifer recharge.

The concept addresses the capital costs associated with implementing the master plan by aligning specific improvements with the County's bond election cycle. As proposed, all major site infrastructure, including new buildings for visitors and staff will be paid for through the County's Bond Elections. Public-private partnerships and private investment will also be encouraged. Initially expected to attract a local audience, facilities and educational programs will need time to mature as a broader visitor market is tapped. Staff and volunteer coordination of educational and stewardship programs will need to be orchestrated as visitation increases.

A business and management plan entitled, Market and Operating Potential of the Canoa Ranch Master Plan was prepared by ConsultEcon, Inc., a Cambridge, Massachusetts based consulting firm who specialize in economic and management analysis of heritage attractions. A conceptual interpretive approach to the site is included in a report prepared by Ralph Appelbaum Associates, widely regarded for their experience in developing interpretive content for important historical sites. Both reports are included as separate chapters in this document.

Public Access Area

Access: Public access to the ranch is by one main entry, arrived at by the I-19 frontage road. The main entry is through the historic Manning Era drive, with vistas of the ranch, pond, valley, and mountains beyond. All visitors to the park will be directed to the main visitor parking lot and Orientation Center north of the drive, nestled in native landscape west of the pond. The main lot has (60) all weather parking spots and (3) bus bays; an additional area to the west would be designated for special event spill-over parking.

Fee structure: A Gift Shop within the Orientation Center will double as a ticketing and information counter. Visitors will be asked to pay a nominal fee for park entry (per car perhaps) and additional fees based on destinations and activities. One goal is to allow public access to recreation areas around the pond but to limit the intensity of public use on this sensitive area by imposing a small fee; perhaps locals and bird watchers could be allowed an annual pass. Admission to the heritage area could be controlled using hand stamps, maps, headsets, or similar. While it is not practical to fence the heritage area completely it may be feasible to create strategic partial enclosure to discourage cheating. Docent led tours, trail rides, Cowboy College, camping, and special events would all impose additional fees.

Circulation / parking: The drive will run south from the main parking area connecting all activities within the public access area, including the pond / Orientation Center / Heritage Area, Caretaker's Cottage, ranch skills school, Hack Stables, maintenance facilities, Equestrian Center / Arena, and special event camp grounds. Parking for docent volunteers (20 spots) is provided behind the Caretaker's Cottage, and accessible parking (5 spots) is provided along a turn-around just west of the Story Center. Special event parking is also planned for in an open field in this general area, for as many as (100) cars. Hack stable, trail ride, and ranch skills school parking will be provide south of the Burnt Adobe House (117). A service drive

connects the frontage road to the access drive south of the heritage area, providing gated access to maintenance, service, and trash collection facilities. This second drive could be used for overflow exiting during special events, or possibly for limited access to the equestrian area and campground. Special event parking for the arena will be provided in an adjacent open field.

Primary Attractions

Orientation Center: This is the primary arrival point for visitors and will include a lobby, public toilets, and vending machine area. North of the lobby a gift shop will double as a ticketing and information counter. South of the lobby is an orientation museum, organized into galleries related to historic and prehistoric time periods. Beginning with a Native Peoples gallery the museum moves forward in time through Spanish, Mexican, American Territorial, Manning, Corporate, and Conservation galleries. Buildings would be scaled to match the short span vernacular buildings of the historic ranch, and would be compatible the historic architecture but differentiated. Buildings are angled to create a vista of the heritage area to the southeast, and to buffer the visitors experience form the parking and freeway noise. The building would be configured to allow its use for public and special events, and may include a space dedicated for this.

Conference / Event / Dining / Education Center: This building would also be located north of the Orientation Center and would include an event plaza and lawn facing the pond front (buffered from parking and freeway). This would include a commercial kitchen and service area and a Heritage Foods restaurant serving regional cuisine prepared with locally grown food. A grouping of rooms would ring the plaza and be used for a variety of events including conferences, weddings, heritage events, art fairs and similar.

Pond (6.5 acres): Water front recreation is rare in the Tucson region and will be in high demand. The pond, though, will be sensitive riparian habitat and an important component of the historic setting. A balance between the public interest and preservation goals will be struck by limiting parking and assessing a fee for pond access and parking will be held away from the pond itself (150 LF). A multi-use path will ring the pond and connect to the Anza trail north of the flood berm. Modest picnicking areas will be carefully placed along this path.

Heritage Area / Headquarters Complex (10 acres): The setting and the exteriors of buildings within the Headquarters Complex will be restored to their 1951 appearance. This will include seventeen structures (adobe houses and vernacular ranch buildings), corrals, landscape, pond, canal, and (water rights willing) pasture and agricultural fields. Interiors of the historic structures will be restored but used to interpret other eras and for contemporary programming. The emphasis will be on the long traditions of ranching in Southern Arizona and Northern Sonora, with Canoa Ranch as a unique opportunity to bring these stories to the public. Two buildings will be used as “day-in-the-life” house museums from the Manning era (one for Manning’s themselves and one for the Mexican ranch hand / cowboys who kept the ranch working), but other buildings will interpret Mexican and Territorial eras as well.

Living Ranch (23 acres): The south section of the HQ will function as a living ranch, with tack room, blacksmiths shop, hay barn, stables, corrals, pasture and offices for the trail ride operation, ranch skills school, and heritage breeds program. The historic mesquite corrals may be lined with pipe rail panels for protection. The burnt adobe house (117) would act as an arrival point and office for hack stables and Ranch Skills School, and the south house (120) could be used as a residence for on-site program manager. Four bunkhouses, screened with landscape, on the southern fringe of the historic area can accommodate a total of 64 visitors in

rustic accommodations. The (10) acre pasture west of the historic flood/irrigation berm will be used (irrigation rights permitting) as pasture to help feed and, more importantly, display heritage cattle breeds; this pasture will also act as a foreground landscape feature as seen from the approach along the frontage road. Special events in this area might include living history, holiday hay rides, and festivals. By their nature the weekend cowboys, “dudes”, or general public associated with the Living Ranch area should be kept at arms length from the professional cowboys and horse owners using the equestrian facilities to the south.

Equestrian Center: The existing (30) acre equestrian facilities would remain in its current location and could support both a specialty equestrian training center and a special event area and arena. The specialty training is seen as having little public benefit, but is an historic land use, a modern outgrowth of the ranching traditions of the region, and a good fit for the site. Special events might consist of rodeos, “mutton busting”, roping events, and “rawhide” pulls.

Special event campground: At the south end of the public access area, situated in the niche between the canal, historic reservoir, and mesquite Bosque is a multi-use camp site. It would be designed to accommodate equestrian trailers and intended as a camp site for Anza trail riders, both as a base camp and as an overnight stop for riders based up or down river. It would also be used as a site for overnight hack stable riders, star gazing events, scout troops or similar, but would not be available on a drop-in basis.



Photo by Howell Manning, Jr.

Introduction

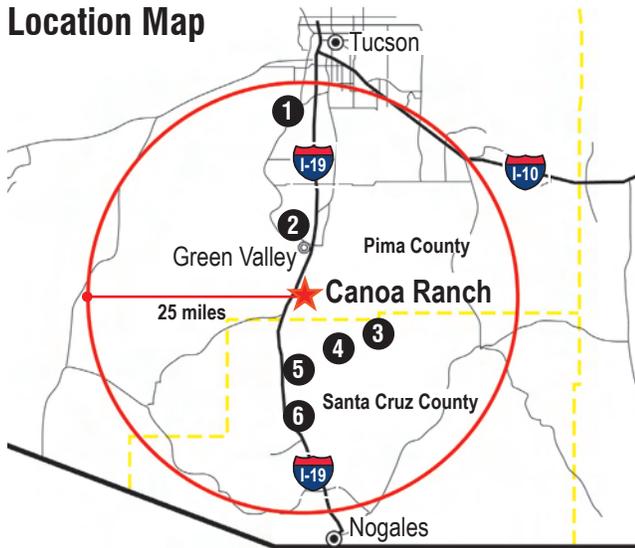
Canoa Ranch is a treasure of natural and cultural resources. The objective of this Master Plan is to integrate the historic site resources with the larger context of the Santa Cruz River Valley to preserve, restore and rehabilitate the site for public benefit. To facilitate this objective, the overall 4,800 acre project site is broken down into distinct zones in both the natural resource and cultural resource arenas.

The Master Plan identifies three land stewardship zones that differ in vegetative composition and ecological health, as well as former and proposed uses. The landscape treatments in each of these zones is tied together with common themes designed to create a comprehensive user experience. The ultimate goal of the Master Plan is to integrate the project stakeholders and the general public into the ongoing use, management and stewardship of the property.

The cultural resources of the site span more than 4,000 years and range from 5th Millennia B.C. archaeology to 20th Century ranch buildings. Resources are distributed throughout the site and will be preserved and interpreted for the public. The plan takes into account the sensitive nature of the site's physical resources and protects both their condition and setting for the future. Important heritage resources will be sheltered from over-visitation and access to other sensitive resources will be restricted. Our goal is to both provide access, when appropriate, and, at the same time, insure that cultural resources are protected for future generations.

By nature, a master plan generates overall concepts and recommendations for a site based on desired goals and outcomes.

Location Map



- 1 Mission San Xavier del Bac
- 2 Titan Missile Museum
- 3 Whipple Observatory
- 4 Madera Canyon
- 5 Tubac Presidio State Park
- 6 Tumacácori National Historical Park

The Canoa Ranch is located in the Santa Cruz River Valley of Southern Arizona. A number of other natural and cultural attractions are located within a short drive of the Canoa Ranch.

Master Plan Criteria

The following criteria, suggested by the Canoa Ranch Community Trust and Oversight Committee, were used to develop the Master Plan and should be used to evaluate the success of the plan as it is implemented

Educational, especially for kids

Represents diverse peoples and cultures

Tells/gathers untold stories

Aimed first at local audience

Encourages repeat visits

Teaches conservation and sustainability, esp. water

The experience is authentic

The sense of place and silence is preserved

Can be staffed and stewarded

Incorporates partners and friends

Represents past, present and future

Economically viable – capital cost

Economically viable – operating cost

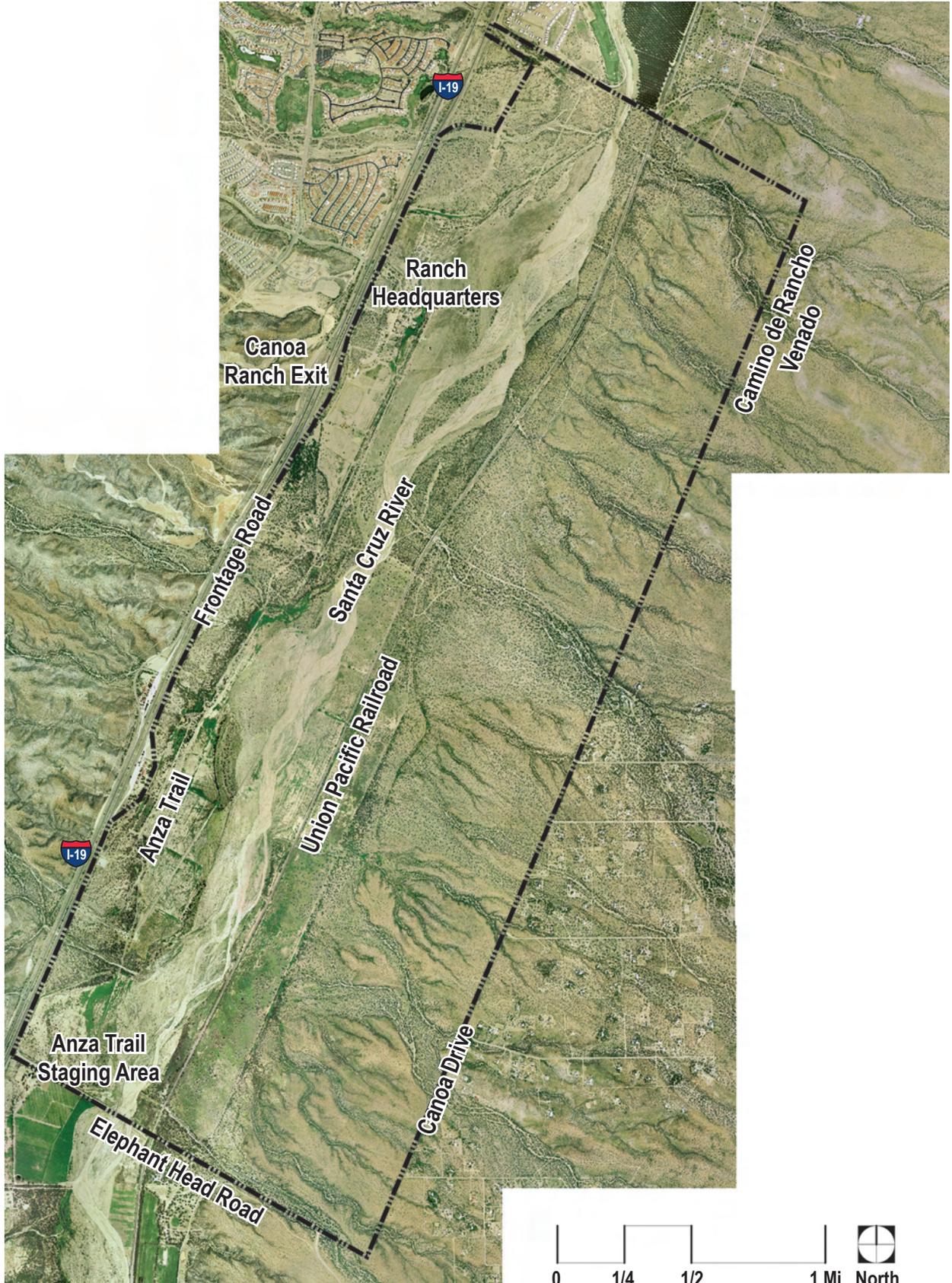
Consistent with Sonoran Desert Conservation Plan

In the process of preparing the Master Plan, the consultant team collected extensive amounts of information on Canoa's history, current conditions, and its value to the community. A companion document entitled The Canoa Ranch Master Plan Background Report, provides extensive site and resource information. Economic and marketing analysis of comparable sites was also collected and informed the planning process. Criteria (see this page) for the Master Plan were developed in conjunction with the Canoa Ranch Community Trust and Oversight Committee.

Master Plan concepts were presented to the general public at meetings held in June 2006. From the initial concepts, a final concept was developed and is presented within this document. On the following pages, natural and heritage resource concept plans introduce the principle concepts of the Master Plan. Specific details and recommendations are included in individual sections on natural and cultural resources.

General landscape, mitigation, environmental permitting and regulatory requirements will need to be addressed in the next phase of site design. These include threatened and endangered species surveys and documentation, Corps of Engineers Clean Water Act 404 and Section 402 permitting, cultural resource documentation and mitigation, storm water pollution prevention plans, Pima County native plant preservation ordinance inventory and documentation, Pima County landscape buffer yard ordinance compliance, Pima County Xeriscape ordinance compliance, and depending on the source of funding other Federally regulated required permitting.

Aerial Photo



Aerial photo courtesy of Pima County, 2002

Natural Resource Concept Plan

Three overall land stewardship zones are included in the Master Plan. The three zones are defined by existing or proposed elements, for convenience only. The actual boundaries of these areas will be considered as gradients of change from one area to another.

Zone 1 Historic West Bank

Current Conditions:

- Former agricultural fields and structures
- River terrace
- Mesquite bosque
- Xeroriparian washes and habitat
- Anza Trail

Objectives:

- Interpret
- Reclaim
- Preserve

Zone 2 Santa Cruz River Floodplain

Current Conditions:

- Santa Cruz River channel and terraces
- Mesquite bosque
- Xeroriparian habitat
- Former cottonwood/willow association
- Former grazing land

Objectives:

- Protect
- Enhance

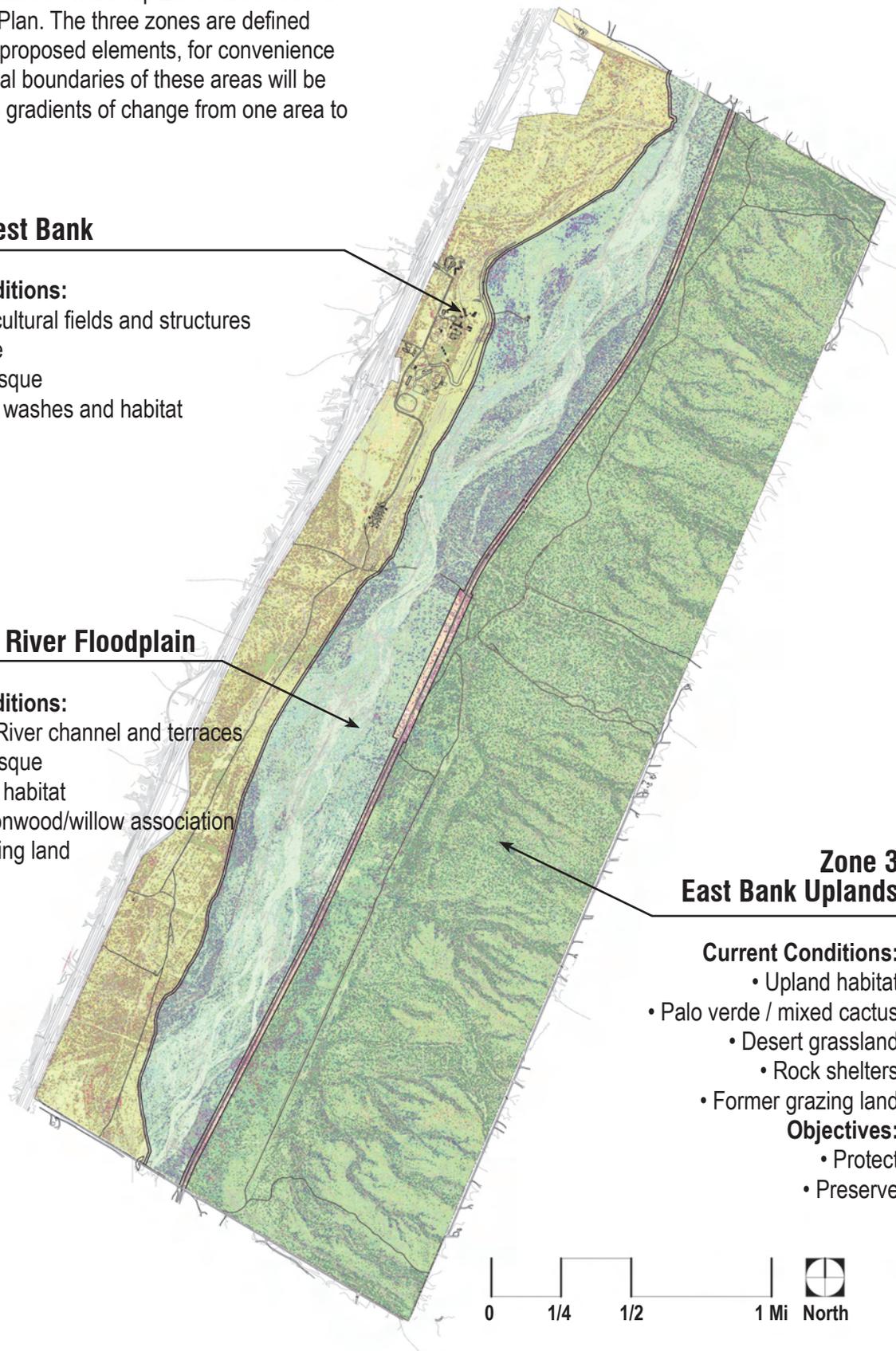
Zone 3 East Bank Uplands

Current Conditions:

- Upland habitat
- Palo verde / mixed cactus
- Desert grassland
- Rock shelters
- Former grazing land

Objectives:

- Protect
- Preserve



Heritage Resource Concept Plan

These primary visitor zones create a framework for promoting the site's heritage resources without jeopardizing their future preservation. The framework allows for partnerships and community involvement to evolve on the site as the Master Plan is implemented.

Entry and Orientation

Features:

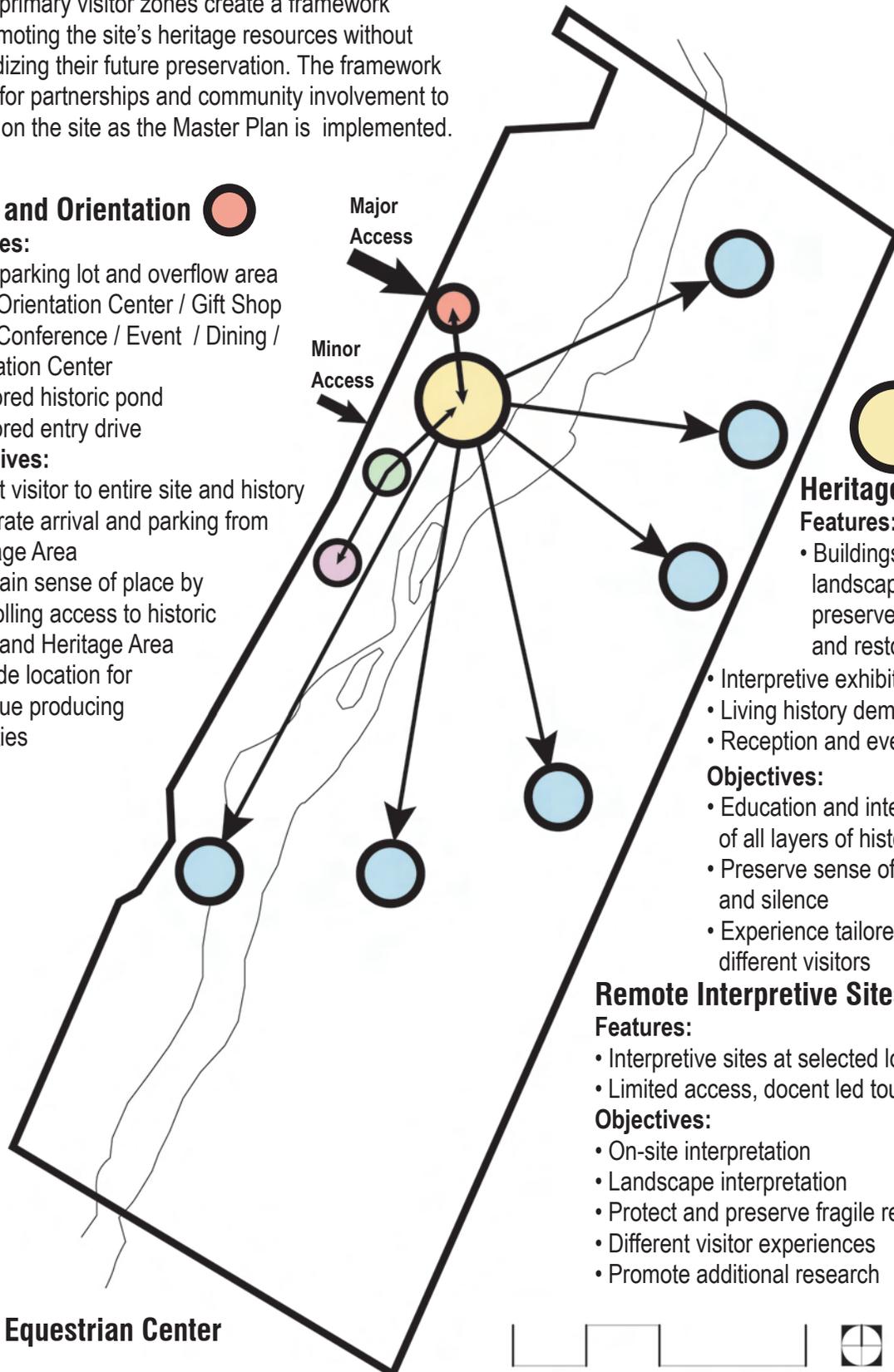
- Main parking lot and overflow area
- New Orientation Center / Gift Shop
- New Conference / Event / Dining / Education Center
- Restored historic pond
- Restored entry drive

Objectives:

- Orient visitor to entire site and history
- Separate arrival and parking from Heritage Area
- Maintain sense of place by controlling access to historic pond and Heritage Area
- Provide location for revenue producing activities

 **Equestrian Center**

 **Special Event Campground**



Heritage Area

Features:

- Buildings / landscape preserved and restored

- Interpretive exhibits
- Living history demonstrations
- Reception and event spaces

Objectives:

- Education and interpretation of all layers of history
- Preserve sense of place and silence
- Experience tailored for different visitors

Remote Interpretive Sites

Features:

- Interpretive sites at selected locations
- Limited access, docent led tours

Objectives:

- On-site interpretation
- Landscape interpretation
- Protect and preserve fragile resources
- Different visitor experiences
- Promote additional research



Historical Overview

Canoa Ranch is a microcosm of the history of our land and our people and the telling of the Canoa Ranch story encapsulates many of the narratives of Southern Arizona. When we understand the rich and diverse past and present of the river, the land, the peoples, and the economy of this place, then maybe we can plan a future for Canoa Ranch that respects and honors its vital place in our community. In brevity, the stories of the people of this place are as follows:

Native People (2,000 BC): There was intermittent occupation of the Canoa area throughout the prehistoric period, including Hohokam (600-1450) and O’odham (1600s-1800s). Prehistoric sites cover a large portion of the 4800 acres but are especially concentrated in the access restricted east bank uplands.

Spanish (1690): The Camino Real gradually developed from traditional Native American river bank trails. Father Kino traveled these trails in 1770, followed by Anza (on his way to San Francisco) in 1775. La Canoa, the Spanish “paraje”, was a regular stop on the Camino Real and believed to be the spot of the Anza camp site.

Mexican (Land Grant) (1821): The Canoa Ranch can be seen as an example of the larger land grant system and its impact on Southern Arizona (Santa Cruz, San Pedro, and San Bernardino Valleys) and the establishment of Hispanic American families (Ortiz, Elias, Herreras).

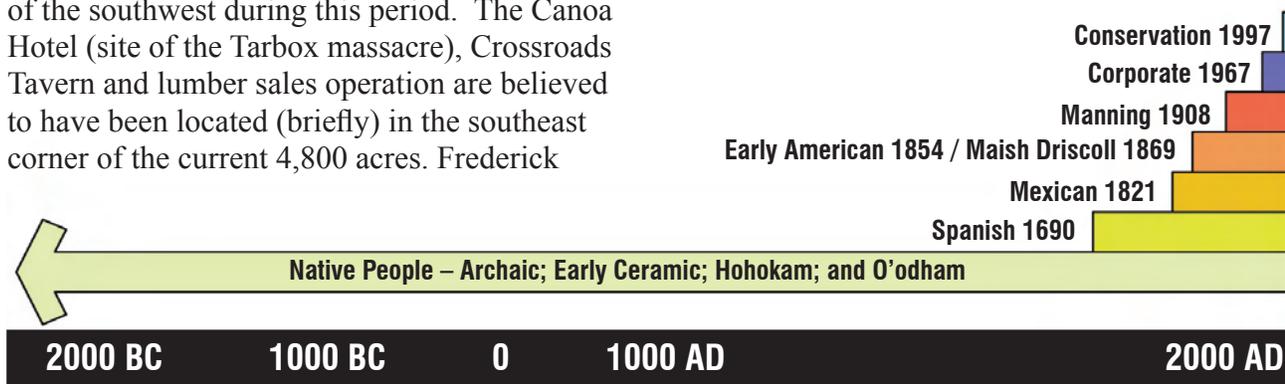
American Territorial / Maish Driscoll (1869): Indian warfare hindered American occupation of the southwest during this period. The Canoa Hotel (site of the Tarbox massacre), Crossroads Tavern and lumber sales operation are believed to have been located (briefly) in the southeast corner of the current 4,800 acres. Frederick

Maish and Thomas Driscoll began running cattle on the Canoa Grant in 1775. In 1887 they initiated the Canoa Canal Company and began a long term reshaping of the land for irrigation and agriculture. In 1880 the Southern Pacific railroad crossed Southern Arizona, and in 1910 Canoa Ranch was linked to it by the Tucson-Nogales railroad.

Manning (1908): Most of the abundant historic era resources remaining on the ranch date from this time. These resources retain near complete historic integrity and remain much as they were during the mid 20th century. The west bank of the river is rich with irrigation, water collection, flood control, and ranching and agricultural infrastructure that tell an important part of the story of the land.

Corporate (1967): Importantly the water rights were separated from the land rights by Pennzoil and water rights then sold to Phelps Dodge, limiting how the land could be used and redirecting large amounts of water to the mines.

Conservation (1997): Pima County voters approve \$2 million to purchase the Canoa Ranch and another \$200,000 to rehabilitate structures in 1997. Sites will undergo ecological restoration or preservation and these should offer a variety of interpretative opportunities. Finally, as the land around the ranch continues to be developed the ranch will stand in contrast as a natural refuge and reminder of the openness of an earlier time.





Natural Resources

Canoa Ranch is identified as “an important natural landmark that is significant for its important riparian areas and its scenic and historic values,” by the Pima County Open Space Committee in 1988, and again in 1997. Both the surrounding context and the project site have been studied and documented at a planning level, which is used as the foundation to analyze the landscape’s history, continuity, change, ecological condition, habitat, recreational resources and visual resources.

Zone 1: Historic West Bank

West property line to the Anza trail, 800 acres

This area has the majority of historic era sites and features still in existence from the ranching era and will therefore have the most public access. From an ecological perspective the extensive land use along with the more recent I-19 corridor altered this strip of land, changing it from a xeroriparian flood terrace broken up by many tributary washes to a commercial agricultural landscape and finally to its current condition as a biologically degraded landscape dominated by former agricultural fields / pastures and a reduced number of channelized drainage ways. The goals in this zone are to develop interpretive features and landscapes for the public related to history and ecology and to enhance existing native habitat and drainages to retain storm water.

Limited areas of historic cultural landscape will be restored in keeping with the architectural restoration of the Manning ranch headquarters (HQ). Two landscape elements that can serve both historic and habitat restoration goals are the pond and the canal. These provide the opportunity for restoring cottonwood/willow habitat at their margins. In addition, the restoration of working farm fields in the HQ area will return some fields to their former use. The farm will be planned in conjunction with other land stewardship tools (cattle/livestock, rain water harvesting, habitat and water management, volunteers) and balanced with the historic landscape restoration goals. The goal is the integration of the natural ecosystem and dry land farming techniques to restore and operate an efficient, sustainable and productive farm. This integrated system will protect water and soil resources, provide a place of learning for visitors and an abundance of wholesome and historic crops.

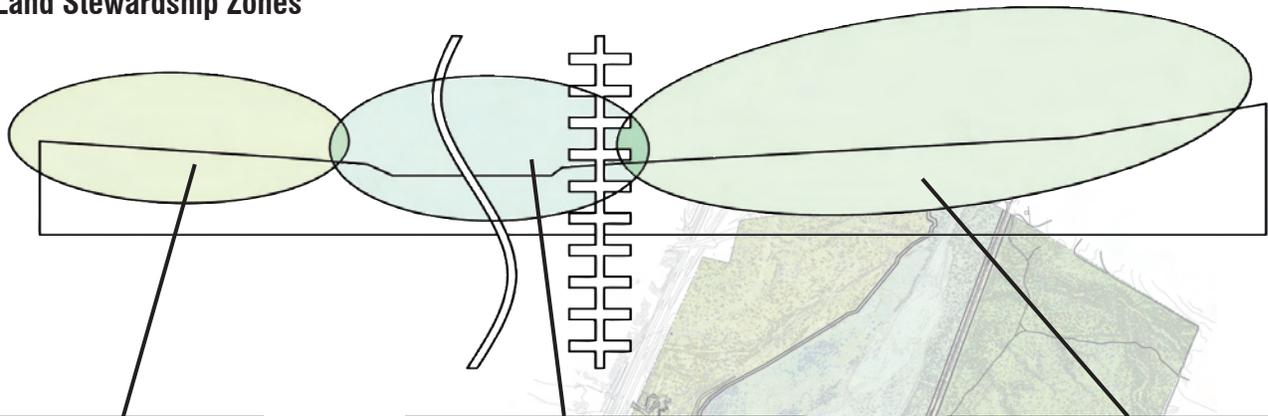
This area will have the most public access. Limited and controlled public access will extend south from the historic HQ entry drive to the canal head / seep area. Areas north, south and

east of this public access will be restricted to signed trails, docent lead tours, and special events. The only exception is the Anza trail head parking lot and trail system which will remain open to the public at all times. North of the HQ will be the restored Manning ranch pond and a new ten to twelve acre effluent infiltration field. East and south of the HQ, the northern third of the canal will be restored. The lands south of the HQ are rich with historic era irrigation and flood control infrastructure, and agricultural fields. Existing roads and trails will be used to allow guided access to these areas to interpret the history of cultural and ecological changes to the land.

The goal for the former agricultural field and pastures reclamation work is to re-establish some working agricultural fields and restore sustainable native mixed scrub/mesquite habitat. The rehabilitation of the fields on the west side is a priority. The methods will be low-tech and focus on enhancing the natural forces of native plant succession including the removal of exotics and invasive species. In this area there is opportunity to test alternative land restoration techniques including cattle as a restoration tool. Fencing required for this grazing will be designed for minimal disruption to wildlife movement and will maintain a buffer between the cattle and the river habitat to protect native birds from cowbird brood parasitism. As long as impacts to the Anza Trail are minimal restoration of the distributive flows of a few channelized washes would contribute to enhanced native habitat and slow storm water run off. Wildlife corridors to the west will be maintained especially those connecting with conservation easements west of I-19 and in the major drainage ways running west. Additional means of increasing permeability for wildlife to the west is encouraged, starting with the exploration of results from the 2006 ADOT studies and availability of resources dedicated for wildlife overpasses in the RTA.

Pima County Waste Water Management in association with the County's Flood Control

Land Stewardship Zones



Historic West Bank

- Restore limited amount of historic cultural landscapes
- Interpretation of landscape change
- Reclaim disturbed land and agricultural fields
- Mitigate damage to disturbed lands
- Regulate public access
- Cattle as a possible land stewardship tool

Santa Cruz River Floodplain

- Enhance native xeroriparian floodplain and tributary wash habitat
- Proposed Floodplain Native Vegetation Enhancement Area east of Ranch Headquarters by Pima County Regional Flood Control District
- Manage floodplain as part of the larger flood control system
- Remove exotic invasive species
- Reclaim former agricultural fields. Enhance fields with native vegetation
- No livestock grazing
- Limited public access via the Anza Trail and special docent led tours

East Bank Uplands

- Preserve and protect native species diversity
- Maintain the large open tract of undeveloped land and wildlife corridors
- Invasive plant removal
- Erosion control management of uplands
- Public access restricted to docent lead tours along existing trails and roads
- Test alternative land restoration techniques
- No livestock grazing

District will site a new self-contained wastewater package plant north of the HQ. This facility would produce Class A water, safe for use in public areas, and available for irrigation and restoration of the pond.

Zone 2: Santa Cruz River Floodplain

Anza Trail to railroad tracks, 1,000 acres

This area of river channel, natural floodplain and xeroriparian habitat is perhaps the most ecologically important section of the remaining ranch land. It is known as a wildlife corridor for species which range short or long distances and is identified as a raptor corridor. In 2006, several burrowing owls were relocated to the floodplain to the north of the HQ. Starting early in the American Historical period the river floodplain and its banks have been subject to extensive biological impacts from large scale land alterations for food production, water control and transportation routes. Two major documented changes to the floodplain's natural drainage pattern from this period are the construction of the canal and the railroad. The river itself was channelized and straightened in the 20th century, but has regained much of its original width and sinuosity through major flood events over the last twenty years. While most of this reach of the Santa Cruz is understood to have flowed only during floods or periods of snow melt run-off from the Sierrita and Santa Rita Mountains, in times past a consistent high ground water level supported a denser riparian habitat which included the cottonwood/willow association community. Between 2000 and 2002, Pima County Flood Control District documented flows in the absence of storm flows from effluent discharge in the lower one and one half miles. Today's lowered ground water is a lasting legacy from the historic and current water use. In 2005, groundwater was determined to be generally 50 feet below the land surface according to Pima County Flood Control District. This condition can not be corrected by any known restoration methods. Recognizing the current status of

available water, the goals for this area are to enhance and to protect the density and structural diversity of existing native xeroriparian habitat to provide ecological connectivity and biological corridors for species movement and to slow and retain storm water. The course of action will include enhancing native xeroriparian flood plain and tributary wash habitat, removing exotic invasive species, promoting the natural succession of native plants in former agricultural fields, and managing the floodplain as part of the larger flood control system of Pima County. Pima County Flood Control District has plans to install a thirty five acre Floodplain Native Vegetation Enhancement Area to the east of the HQ. The main objective will be to enhance native vegetation to slow flood waters. In addition, this agency has been monitoring the riparian vegetation change since 2002. Public access will be limited to guided equestrian trails, docent lead tours, and special events on existing trails. Anza trail riders or other horse riders may be allowed to ride the river to points north and south. The former agricultural fields would have removal of invasive species and enhancement of native vegetation as priorities. Livestock grazing will be prohibited due to the ecological sensitivity of this zone and the cost of vegetation enhancement efforts.

Zone 3: East Bank Uplands

Railroad tracks to the east property line, 3,000 ac.

This area has seen the least amount of major mechanical manipulation and provides a foreground to the views of the Santa Rita Mountains from the west bank. Relatively few acres have had significant alteration for human use and for the most part, the natural drainage channels remain intact. Likely to have been native grassland at the beginning of the American Territorial Period, the subsequent 150 years of overgrazing, lack of fire, the railroad and the introduction of exotic grasses has degraded this habitat. Currently the land features a range of native plant communities including some areas

Land Stewardship Overview

Land and Habitat Restoration Projects

- 1 Proposed Effluent Recharge Project**
 - 1a Package Plant
 - 1b Restored Pond for Wildlife and Recharge Storage
 - 1c Infiltration and Riparian Area
 - 1d Enhanced Native Vegetation / Floodplain Buffer
- 2 Burrowing Owl Habitat**
- 3 Restore Distributary Flows**
- 4 River Restoration**
1.5 mile stretch of the Santa Cruz River with documented intermittent flows appropriate for cottonwood / willow restoration



Land Restoration Zones

-  Remove Invasive Species
Re-establish Upland Habitat
Test Alternative Land
Restoration Strategies
-  Remove Invasive Species
Re-establish Native
Xeroriparian Habitat
No Cattle
-  Reclaim Former Uses
Re-establish Native Habitat
Test Alternative Land
Restoration Strategies



of mixed native grasses, palo verde/mixed cacti, and agave/columnar cactus. In addition, other valuable resources in this zone are washes, wildlife links, connections to undeveloped state land, natural rock shelters for bats and extensive archeological resources. The key goals are to preserve and to protect native species diversity and to maintain the large open tract of undeveloped land. To do this, invasive plant removal and erosion control management of uplands are crucial. Low tech water distribution and contentment structures will slow run off and allow deposition and absorption by the plant roots protecting vulnerable ridges and slopes against erosion. The use of low tech structures and systems such as trincheras, gabions, or one-rock dams as well as the reuse of ranch area tanks will be explored. For the most part, this area is enclosed and secured by barbed-wire fencing around the site perimeter and along the railroad tracks. Human activity will be most restricted in this area and limited to existing roads and trails. Invasive species removal is the priority for the former agricultural fields on the south. The fields present another opportunity to test alternative land restoration techniques.

Water Management Guidelines

The story of the Canoa Ranch is in many ways the story of water in the desert. Water is the life-blood of this region and it is because of the reliable source of water at La Canoa (the feeding or drinking trough) that this site was so attractive to Native American farmers, Spanish Explorers, and American Ranchers. Over time, and especially during the ranching era, the wise and inventive use of water was a hallmark of the ranch and a cornerstone of its success.

The Master Plan calls for the reintroduction of water to the site on a meaningful scale to authenticate the historic sense of place, invite recreational users, and support critical habitat. Importantly, though, the plan emphasizes conservation, sustainability, and environmental

sensitivity in the supply, handling, and use of water. This is in keeping with the spirit of the ranch and will help to support Pima County's overall stewardship of the Sonoran Desert.

Canoa Ranch currently holds Type-I, non-irrigation water rights for domestic purposes only. Canoa's Type I water rights, amounting to approximately 1,200 acre feet per year, can be used for domestic purposes, including landscape, only. There are currently no irrigation rights at Canoa for agricultural production of food, fiber or pasture. According to the Arizona Department of Water Resources (ADWR), the only way to use groundwater for agriculture is with an exempt well, limited to two acres.

An effluent reuse project is proposed for Canoa Ranch. Under the proposal, between 50,000 and 100,000 gallons per day of class A+ treated effluent would be produced at an on-site package plant. The impetus for this project is the desire to reestablish flood plain vegetation and habitat near the Headquarters Complex. The reestablished of flood plain vegetation would be augmented by effluent from the package plants. The historic pond will be restored with riparian vegetation and used to store effluent for use on-site and to recharge the aquifer. The entire allotment of effluent would be used in one capacity or another so that the package plant could run continuously. An infiltration area could be needed to help redirect effluent during certain times of year. Unfortunately, effluent cannot be used for irrigation of row crops. Likewise, ADWR prohibits the use of reclaimed storage credits for irrigation of pasture or row crops.

A preliminary water budget (Table 1) has been developed for the irrigated areas of the Master Plan.

Fire Management Guidelines

Pima County's standard approach to fire is suppression and it is assumed this approach

Table 1: Preliminary Water Budget



Area	Plant List	Estimated Total Area Acreage	Estimated Total Area SF	Estimated designed landscape SF (% of total SF)	Evapotranspiration rate (Tucson)	Irrigation Efficiency	Species Factor	Density Factor	Microclimate Factor	Landscape coefficient	ETI (project specific ETo)	Total Water Demand Gallons (July)	Total Annual Water Demand Gallons	Total Annual Water Demand Acre Feet
Area	Plant List	Ac	SF	Design SF	Et _o	(IE)	(K _s)	(K _d)	(K _{mc})	(K _i)	ET _i	Gallons (July)	Gallons Annual	Acre feet Annual
Pond edge	Trees: Velvet Ash (<i>Fraxinus velutia</i>), Fremont Cottonwood (<i>Populus fremontii</i>) Shrubs: Native mesoriparian species	3	120,000	54,000	9.06	0.9	0.5	1	0.5	0.3	2.265	84,706	1,016,478	3.05
Entry drive	Trees: Velvet Ash (<i>Fraxinus velutia</i>), Mesquite (<i>Prosopis spp.</i>) Shrubs: native desert species (creosote)	0.69	30,000	15,000	9.06	0.9	0.5	1	1	0.5	4.53	47,059	564,710	1.69
Visitor orientation & parking	Mesquite (<i>Prosopis spp.</i>) Shrubs: native shrubs (creosote)	6	280,000	42,000	9.06	0.9	0.7	1.3	1.4	1.3	11.542	335,739	4,028,866	12.09
Heritage area (75% of design area drip irrigated)	Trees: Velvet Ash (<i>Fraxinus velutia</i>), Mesquite (<i>Prosopis spp.</i>) Farm crops: 2.5 ac Turf: 2 acres Roses (500sf) Kitchen Garden (500sf)	18	765,000	252,450	9.06	0.9	0.9	1.3	1.4	1.6	14.84	2,594,610	31,135,320	93.41
Canal edge & buffer	Trees: Velvet Ash (<i>Fraxinus velutia</i>), Fremont Cottonwood (<i>Populus fremontii</i>) Shrubs: Native riparian species	4	170,000	85,000	9.06	0.9	0.2	1.1	0.5	0.1	0.9966	58,667	704,005	2.11
Trail ride offices/Bunkhouse/Residence	Mesquite (<i>Prosopis spp.</i>) Shrubs: native desert species (creosote)	7	288,750	115,500	9.06	0.9	0.5	0.5	1	0.3	2.265	181,178	2,174,133	6.52
Heritage Breed Pasture (Flood irrigation assumed)	Forage grass (Ryegrass, Sudan, Fescue, Orchard Grass)	20											10,857,370	33.32
Milk Cow Pasture (Flood irrigation assumed)	Forage grass (Ryegrass, Sudan, Fescue, Orchard Grass)	4											2,171,474	6.66
Proposed Flood Control Buffer Area (Spray irrigation assumed per PCFCD)	Native shrub xeroriparian species (see PC Flood Control District Plans)	35	1,524,600	381,150	9.06	0.63	0.2	0.5	0.5	0.1	0.453	172,191	2,066,296	6.20
Equestrian Area	Mesquite (<i>Prosopis spp.</i>) Shrubs: native	28	1,200,000	216,000	9.06	0.9	0.2	0.5	1	0.1	0.906	135,530	1,626,364	4.88
Campground	Trees: Mesquite (<i>Prosopis spp.</i>) Shrubs: native desert species	14	600,000	120,000	9.06	0.9	0.2	1	1	0.2	1.812	150,589	1,807,071	5.42
Main road (north end of heritage area to drop off)	Trees: Mesquite (<i>Prosopis spp.</i>) Shrubs: native desert species	1	51,000	10,200	9.06	0.9	0.2	0.5	1	0.1	0.906	6,400	76,801	0.23
												58,228,886	175.58	

NOTES

- 1) Figures used are for mid-summer baseline case (July). Calculation method adapted from LEED-NC 2.2 water efficiency reference guide. Pasture equations per Bob Sharp and assumes flood irrigation.
- 2) Drip irrigation in design areas unless otherwise noted.
- 3) Soil analysis not available or included in calculations.
- 4) Calculations for Proposed Flood Control Buffer Area for reference only, verify with Pima County Flood Control District calculations.
- 5) Rainfall for Canoa not included. Annual Rainfall for Canoa = 15.36 inches. (1931-1994)
- 6) Reductions possible through use of captured rainwater; recycled on-site greywater; treated, reclaimed municipal wastewater and the use of unirrigated seeded areas.
LEED-NC Equation 1 $KL = k_s * k_d * k_{mc}$
LEED-NC Equation 2 $ETL (in) = ETO - KL$
LEED-NC Equation 5 $Total\ Water\ Demand\ Gal = Area\ (SF) \times (ETL(in)/IE) \times .6233\ gall/sf/in$

Project Total Annual Water Demand Gallons	Project Total Annual Water Demand Acre feet
--	--

would be the same for Canoa Ranch. Currently there is no fire management plan for any Pima County park that includes prescribed burns.

burns and the perceived nuisance of smoke to the neighbor

Wildland fire response at a park is handled through a reciprocity agreement with Arizona State Land Wildland Fire Center. The process begins with park staff calling the local fire station to report a wildland fire. The station contacts the state fire center which then coordinates the response.

There are two groups of valued resources at Canoa that would be threatened by fires: cultural resources, such as the historic structures and other structures of value, and biological resources of high value and high fire sensitivity. The biological resources include non-fire adapted desert plant communities that are important wildlife corridors or resources such as xeroriparian habitat in the river and washes as well as the agave and columnar cactus habitat in the southwest corner of the property.

An initial step in wildland fire control could be cutting fire breaks in areas with invasive plant species as a means to contain or limit the spread of wildland fire damage. It is possible the roads and railroad track, as well as the planned Anza Trail, could function as fire breaks

It is conjectured that prescribed burns may have use as a tool in rehabilitation in conjunction with other restoration/rehabilitation methods. However, this is dependent on the completion of an analysis of existing biological conditions and specific rehabilitation objectives to determine the feasibility of prescribed burns as a rehabilitation tool.

Specific concerns regarding prescribed fire at Canoa Ranch are related to the close proximity of residential neighbors and the fragmentation of the land surrounding the park. These would tend to increase the risk associated with prescribed

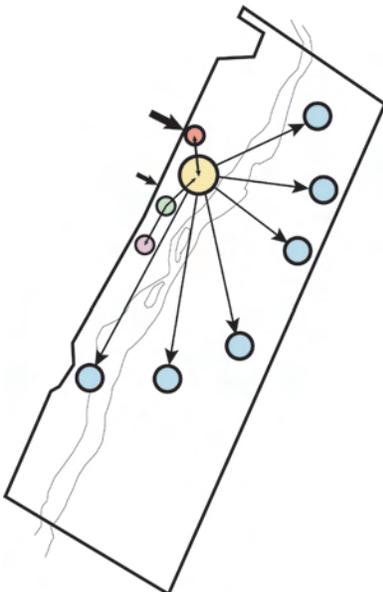


Built Resources

Canoa's historic built resources include historical and prehistorical archaeological resources, historic buildings and structures, and historic landscapes. Historic buildings and structures are located at the Canoa Ranch Headquarters Complex, a collection of buildings and structures eligible for listing on the National Register of Historic Places. Many of the buildings display a high degree of integrity and possess many original features. Other buildings have suffered serious damage and loss of historic fabric from decades of neglect. Stabilization, and in some cases, complete restoration of the historic buildings is already underway.

The historic cultural landscape documents the imprints of the cultural groups who have modified the natural environment over time. Features and traces important to understanding historic ranching and agricultural activity at Canoa are present throughout the entire property, but more research is needed to understand their significance.

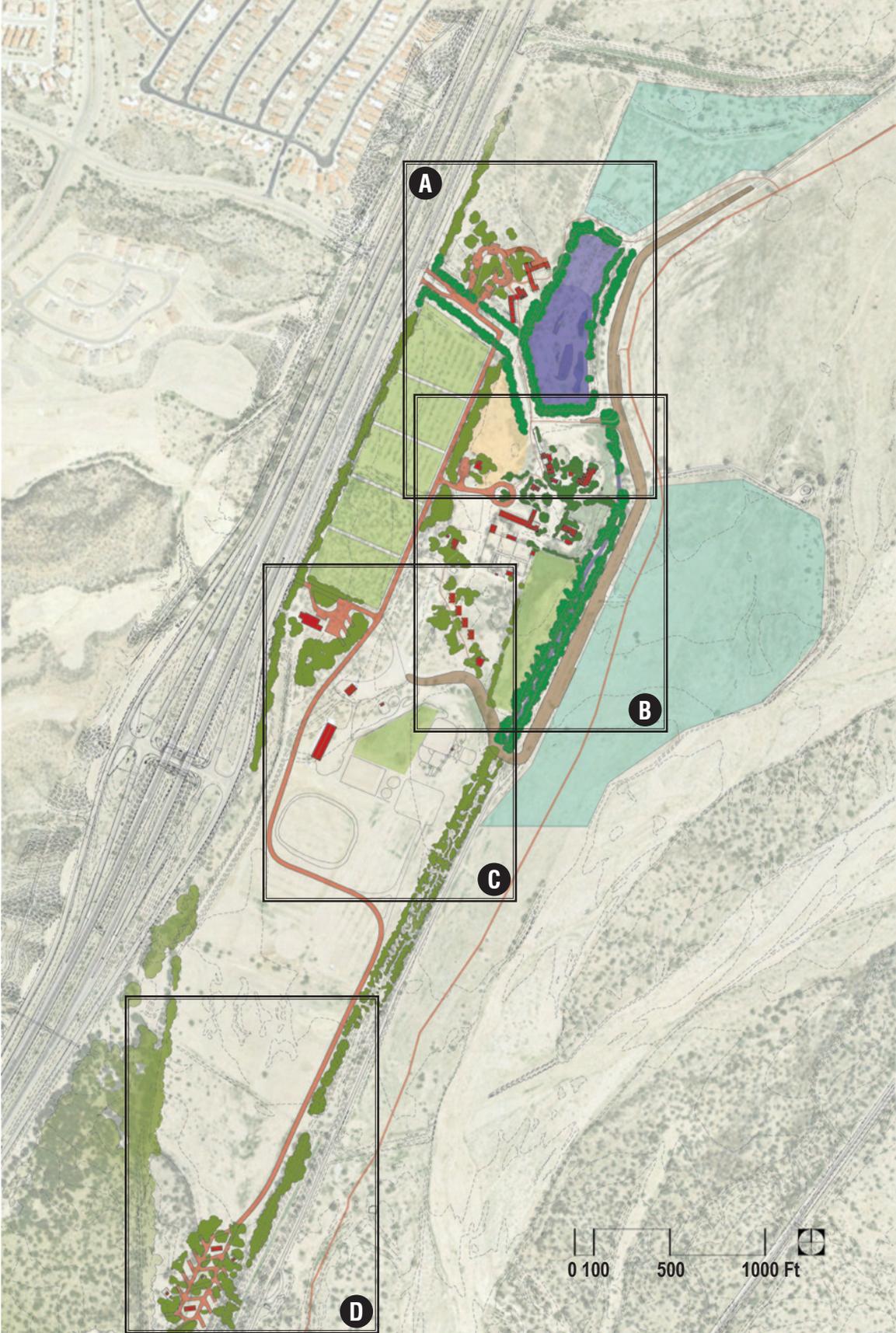
Canoa's preserved and restored historic buildings and landscapes are the foundation on which the visitor experience and interpretive plan is developed. The proposed plan reconciles the park's visitor and interpretive needs with the desired objective of preserving historic resources within a historic setting. The Heritage Area, the most sensitive historic setting, remains separate from parking and orientation activities to help preserve a sense of place.



The Heritage Area buildings and landscape will be restored to their appearance in the early 1950s. Interior spaces will be restored and rehabilitated to accommodate a range of interpretive approaches, including exhibits, house museums and living history. When necessary, buildings and structures will be rehabilitated, (adaptively used) in accordance with the Secretary of the Interior's Standards, to accommodate new uses.

The site specific goals of the historic and cultural landscape preservation, restoration and rehabilitation are multi-fold. Some site historic features exist, such as the entry road, corrals and

Primary Visitor Zones



Primary Visitor Zones



A Entry and Orientation

Photo by Howell Manning, Jr.



B Heritage Area / Headquarters Complex



C Equestrian Center



D Special Events Campground

© Joe Orman

Courtesy of Joe Orman / www.eastvalleyastronomy.org

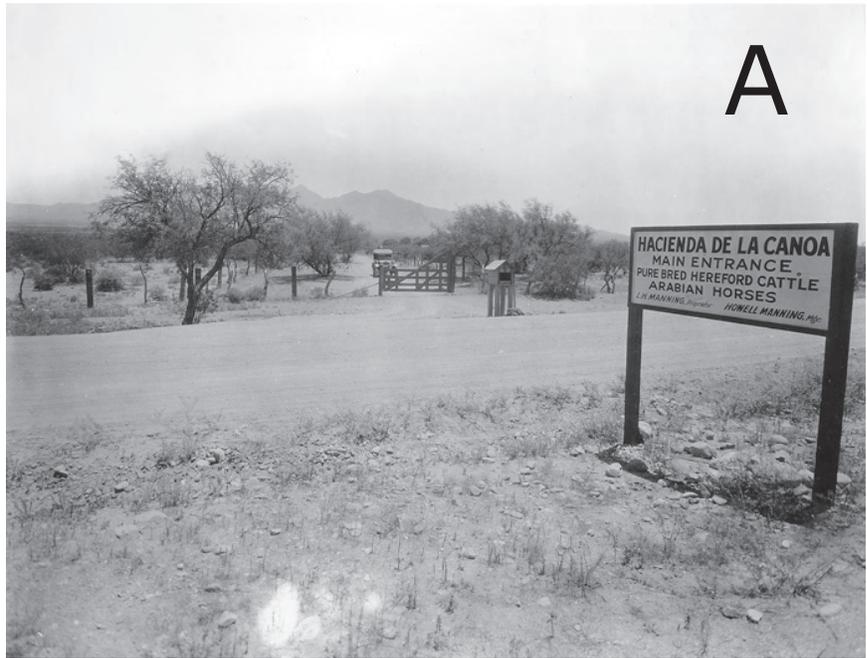
E Remote Interpretive Sites
(Not shown on this plan)

some buildings. These will be preserved to the extent possible, and the associated historic landscape context preserved and restored, based on photographic and written record, to the period of significance. Rehabilitation will be employed to integrate compatible uses for the landscape such as parking, service access, and accessible access throughout the site. Repairs, alterations and additions to site features will be designed to accommodate these design objectives.

Site lighting and other safety features shall be provided for overall public safety and comfort and to accommodate events. Lighting needs to meet local dark sky codes and be compatible with Mt. Hopkins in the Santa Rita Mountains. The style of new elements such as these shall be coordinated with the historic materials, or obscured from view. Site furnishings will consist of picnic tables by the pond with associated drinking fountains, clustered in discrete groupings. Fencing, gates, ramadas and hardscape treatments shall all be restored from what historically existed on the ranch. Design, repair, maintenance, alterations and addition of new fencing, gates, ramadas and hardscape will convey the sites historical or cultural values through the use of the forms, features and character of this historic setting. The limited and sensitive upgrading of lighting, drinking fountains, accessible ramps and other code-required work to make the property functional is appropriate within this zone.

The Equestrian Center and Campground zones are not considered cultural landscapes. A functional landscape which supports the use and needs of the stables, recreational vehicles, camping, parking, arenas, service areas and bunkhouses will be designed. Native desert plantings will be used for shade, buffering, visual screening, definition of space and enhanced wildlife habitat. A native plant seed mix can be used in peripheral areas where length of time to establishment is not critical.

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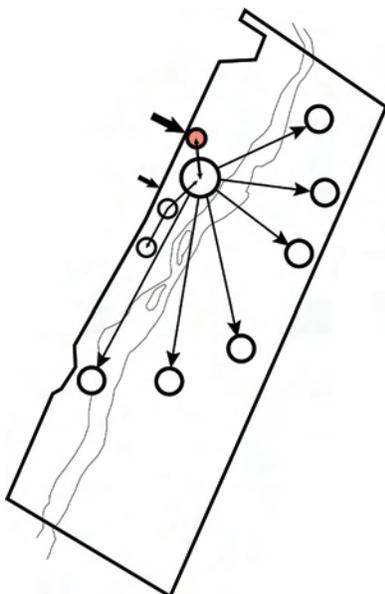


Courtesy of Diana Hadley

Entry and Orientation

The main access point to the site will be from the I-19 Frontage Road, approximately one-half mile north of the Canoa Ranch exit. Visitors will enter the site along the Manning Era entrance drive, restored to its tree-lined appearance, with vistas of the ranch, pond, valley, and mountains beyond.

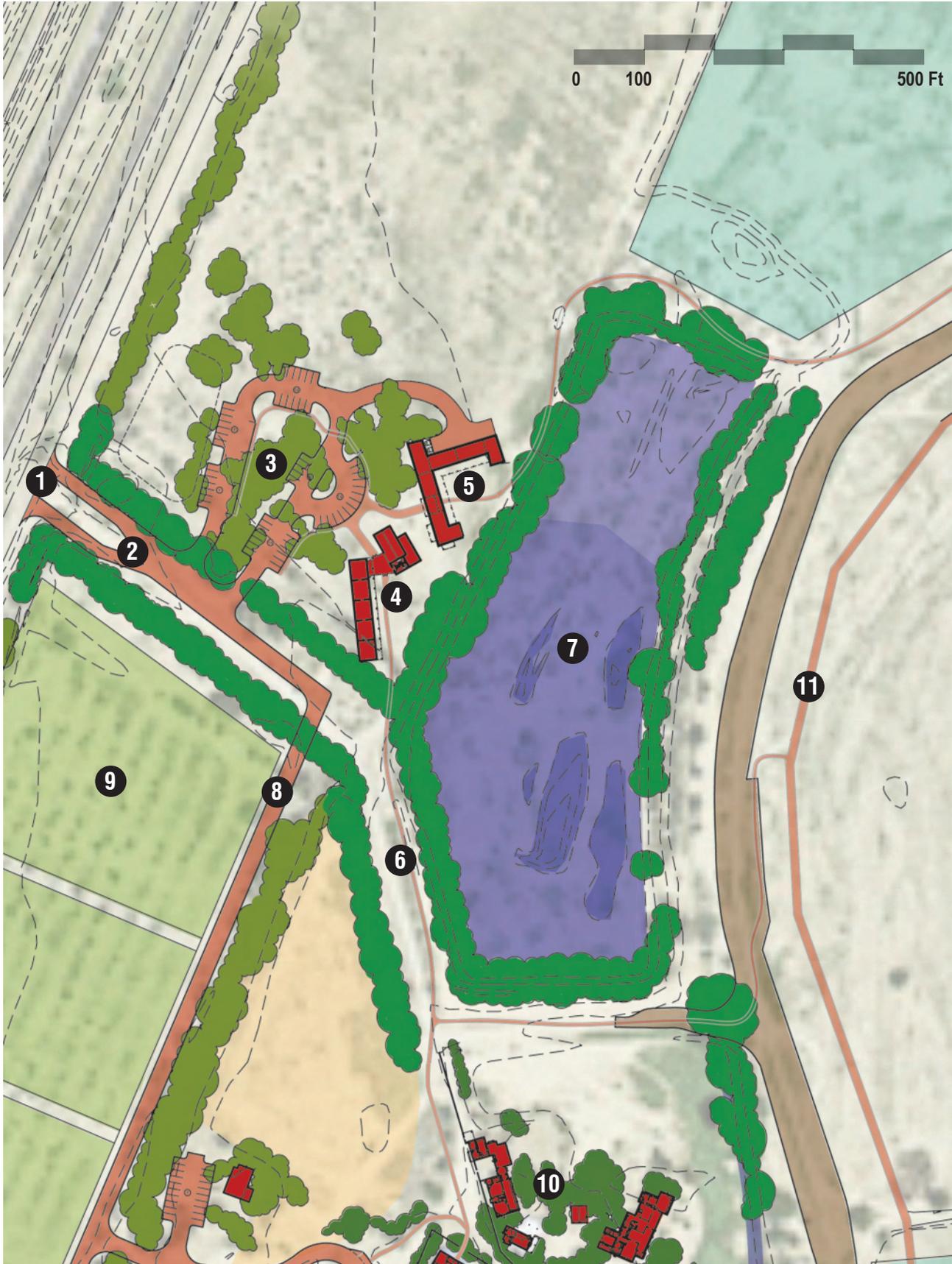
All visitors to the park will be directed to the main visitor parking lot, nestled in native landscape, north of the entrance drive and west of the pond. The main lot has sixty all weather parking spots and three bus bays. Spill-over parking for special events is located to the west of the main parking lot. Visitors will be asked to pay a nominal fee for park entry (per car perhaps) and additional fees based on destinations and activities.



The historic pond will be restored and provide multiple benefits to the site. Recreational uses, including bird watching, will benefit from this additional wetland habitat. The intensity of public use on the pond will be controlled by imposing a small daily fee, with the possibility of making an annual pass available to local residents and special use groups.

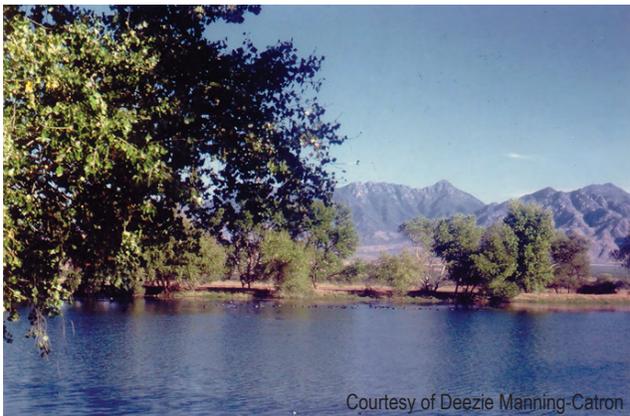
Two new buildings are proposed for the area between the parking and historic pond. The buildings will be compatible in scale and style with the vernacular ranch buildings and are angled to create vistas of the Heritage Area to the southeast, and to buffer the visitor experience from parking and freeway noise. Other noise

Overview of Visitor Orientation



Programmatic Elements

- 1 Main Park Entrance
- 2 Restored Historic Entry Drive
- 3 Main Parking Lot
- 4 New Orientation Center
- 5 New Conference / Event / Dining and Education Center
- 6 Walking Path to Heritage Area
- 7 Restored Historic Pond
- 8 Main Park Road
- 9 Heritage Breed Pastures
- 10 Heritage Area
- 11 Anza Trail



Restoration of the historic pond will have multiple benefits to the park. It could become a destination for bird watchers and an amenity used for special events at the ranch.



The visitor will approach the Heritage Area by walking from the Orientation Center along the restored entry drive.

mitigation strategies should be considered to help achieve a more authentic the sense of place.

The Orientation Center will be the primary arrival point for visitors and will include a lobby, public toilets, and vending machine area. A Gift Shop within the Orientation Center will double as a ticketing and information counter. Admission to the Heritage Area could be controlled using hand stamps, maps, headsets, or similar. Docent led tours, trail rides, ranch skills school, camping, and special events would all impose additional fees. South of the lobby is an orientation museum, organized into galleries related to historic and prehistoric time periods. Beginning with a Native Peoples gallery, the museum leads the visitor through galleries dedicated to the Spanish, Mexican, American Territorial, Manning, Corporate, and Conservation Eras. The building would be configured to allow its use for public and special events.

North of the Orientation Center, a second building, for conferences, events, dining and education, is proposed. A heritage foods restaurant, serving meals created from locally grown products, would be appetizing to visitors and local residents. Additional conference and event space would help promote the ranch as a premier venue for weddings, meetings, and special events. Office and classroom space is also included.

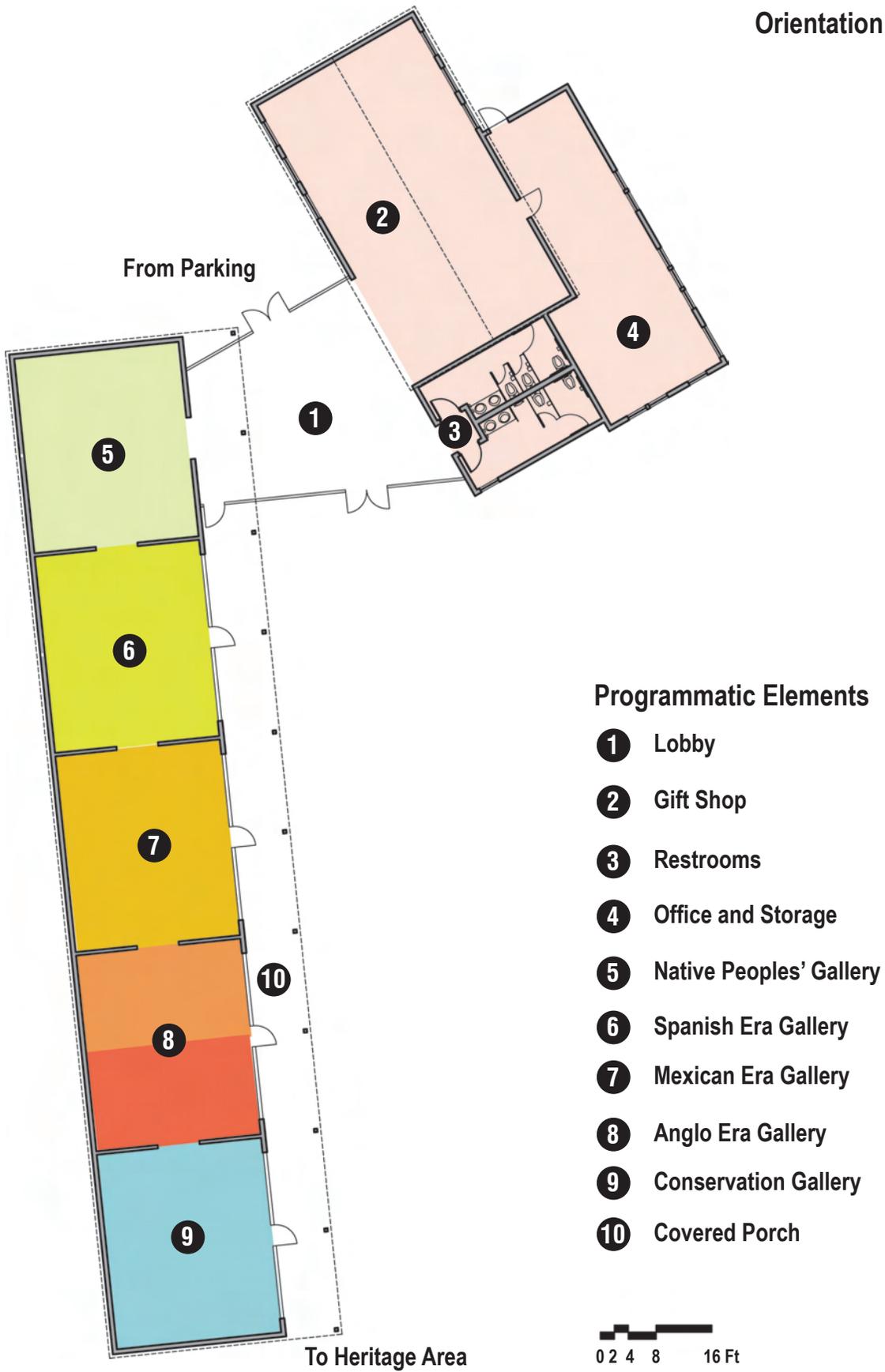
The landscape architectural objective in the orientation zone is to restore the entry sequencing so that once a visitor enters the property they begin to experience the history of the site.

This zone will be designed with elements which are similar in character and form to the materials found historically in the ranch property. The tree lined entry drive will be restored as is depicted in historic photos. In addition entry signage, parking configuration, interpretive elements and roadway features will be designed of materials which are modest in scale, and organic in

Entry and Orientation Detail Plan



Orientation Center Plan



texture, but are not intended to represent historic elements. Ash trees, or a similar species which is historically significant to Canoa, upright and deciduous, will line the entry drive. Native mesquite trees will fortify this entry experience by providing back up screening around the main parking lot. Landform grading such as berms will further assist with buffering the parking. The parking layout will integrate organically with the setting, with many native mesquites which provide shade. The experience evolves into a pedestrian experience at the parking lot along the historic drive. External to the orientation center, the history will begin to be interpreted, so that the historic interpretation is not confined to the orientation center, but seamlessly evolves from the outside inside.

The restored pond will serve multiple objectives, including Pima County Department of Flood Control water treatment, storage and reuse. In addition, the pond will support wetland habitat and foster pond-side recreational activities such as picnics, group gatherings, and passive open space. A bentonite clay lining is recommended for a portion of the pond to minimize water infiltration and soil permeability. Pond-side plant materials will focus on a dense canopy of ash and cottonwood trees. Wetland plant species will be proposed which facilitate the multiple objectives of the pond, and a maintenance plan will be developed to address short term and long term maintenance objectives.

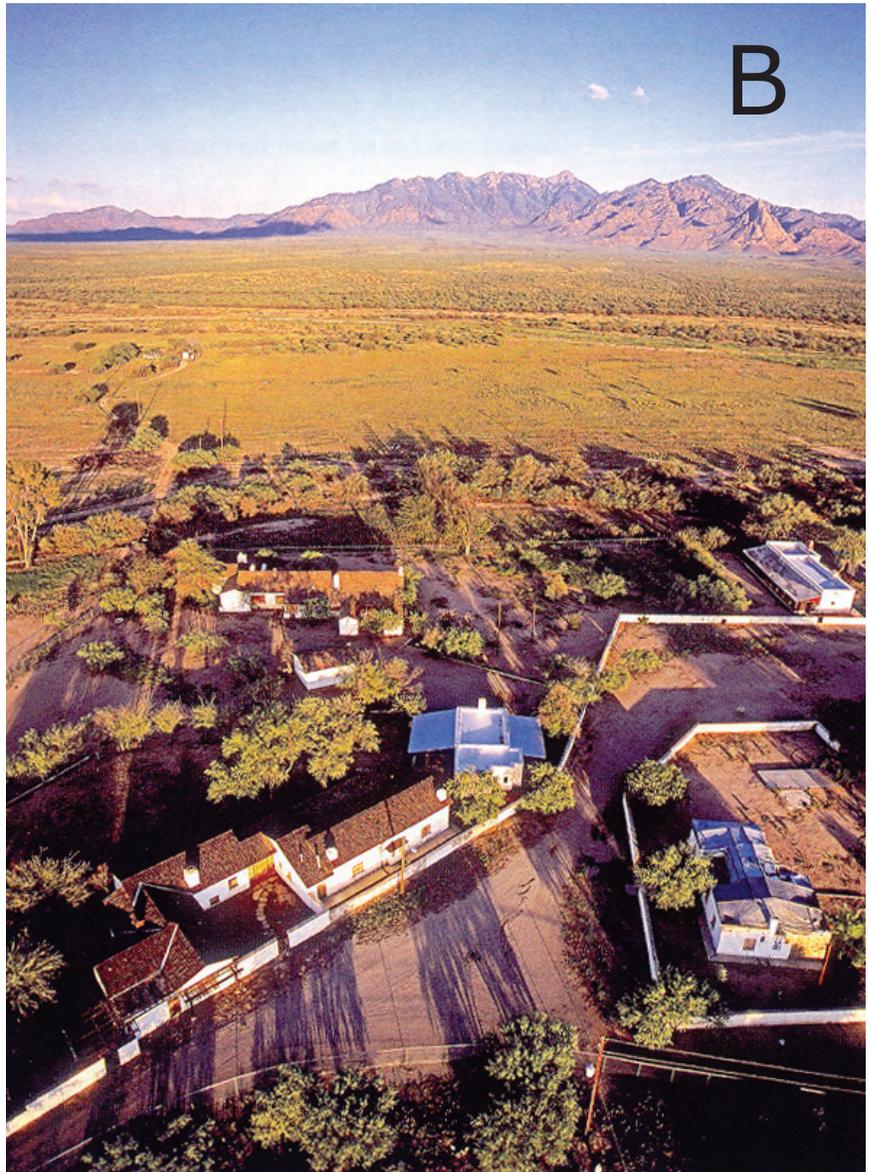
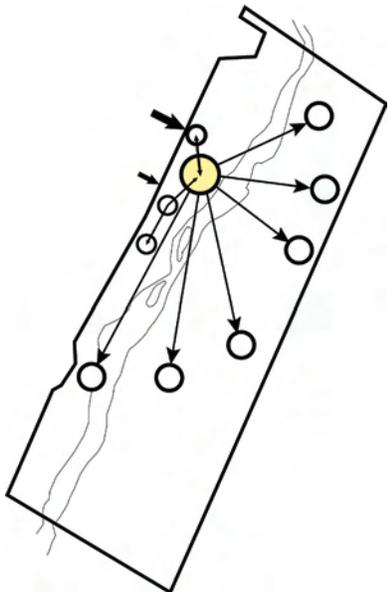


Photo by Adriel Heisey

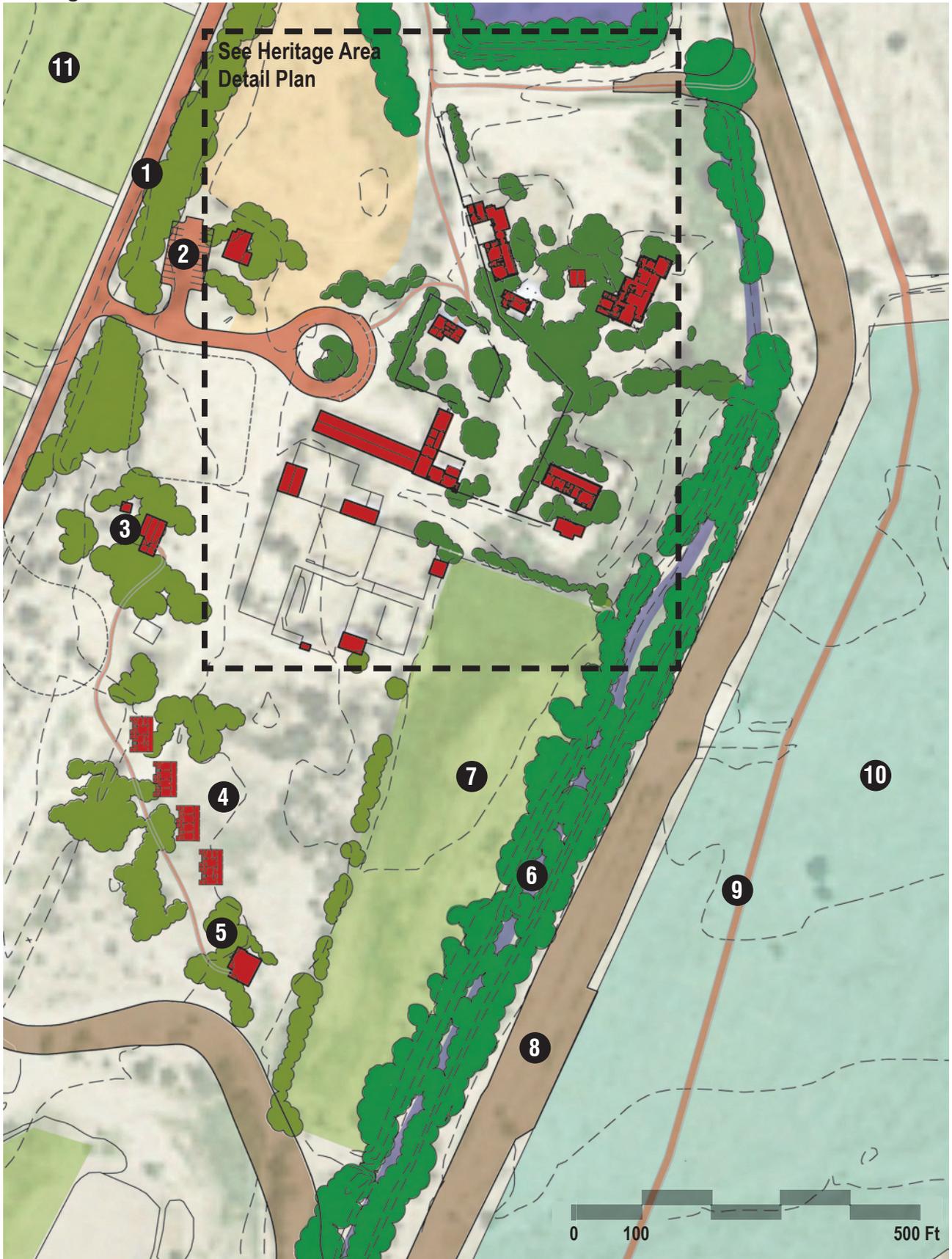
Heritage Area

The Heritage Area is accessed by walking along the restored entry drive that leaves from the new Orientation Center. This short walk will take the visitor between the restored historic pond and proposed agricultural fields. A limited access turnout, for drop-off and parking, is available for visitors requiring special accommodations directly west of the Heritage Area. The drop-off can also be used for staging special events at the Ranch Headquarters. Visitors to the Heritage Area will pass through the Story Center where admission tickets will be checked and visitors will be reoriented to activities and programs in the Heritage Area.

The setting and the exteriors of buildings within the Heritage Area will be restored to their appearance in the early 1950s. This



Heritage Area Overall Plan



Programmatic Elements

- 1 Main Park Road
- 2 Parking for Volunteers, Docents, and Staff
- 3 Offices for Trail Ride Operations
- 4 New Bunkhouses for Overnight Stay
- 5 Residence / offices for Park Staff
- 6 Canoa Canal Restoration
- 7 Historic Milk Cow Pasture
- 8 Existing Flood Control Berm
- 9 Anza Trail
- 10 Proposed Flood Control Buffer Area
- 11 Pasture for Heritage Cattle / Grass-Fed Beef



Photo by Howell Manning, Jr.

Restored pastures used for Heritage Breed cattle could provide a backdrop to the Heritage Area and an attractive foreground element along the Frontage Road.



Courtesy of Diana Hadley

If water is available, a portion of the historic Canoa Canal should be restored. The canal would provide habitat and contribute to the historic setting of the Heritage Area.

restoration period was chosen because the Canoa Ranch Headquarters Complex was substantially complete by this time with there being very few changes to the buildings since. The restoration will include seventeen structures (adobe houses and vernacular ranch buildings), retaque corrals, historic landscape, pond, and (water rights willing) canal, pasture and agricultural fields. Minor rehabilitation may be required to accommodate visitors and to meet current code and mechanical requirements.

Interiors of the historic structures will be restored but used to interpret other historical periods and for contemporary programming. The emphasis will be on the long traditions of ranching in Southern Arizona and Northern Sonora, with Canoa Ranch as a unique opportunity to bring these stories to the public. Two buildings will be used as “day-in-the-life” house museums from the Manning Era, one for Manning’s and one for the Mexican ranch hand / cowboys who kept the ranch working. Other buildings will be used to interpret Mexican and Territorial ranching history and practices. A Story Center will collect and preserve the oral histories of people with ties to the ranch and its history. Visitors will have a chance to hear these stories and to lend their own comments and thoughts on Canoa.

The south section of the Heritage Area will function as a living ranch, with tack room, blacksmiths shop, hay barn, stables, corrals, pasture and offices for the trail ride operation, ranch skills school, and heritage breeds program. The ten acre pasture west of the historic flood/irrigation canal will be used (irrigation rights permitting) as pasture to help feed and, more importantly, display heritage cattle breed. Special events in this area might include living history, holiday hay rides, and festivals. By their nature the weekend cowboys, “dudes”, or general public associated with the Living Ranch area should be kept at arms length from the professional cowboys and horse owners using the equestrian facilities to the south.

Heritage Area Detail Plan



Programmatic Elements

- 1 Restored Historic Entry Drive
- 2 Drop-off and Accessible Parking
- 3 Story Center / Entry to Heritage Area
- 4 Ranching Museum (Spanish / Mexican Era)
- 5 Ranching Museum (Southern Arizona / Northern Sonora Since 1854)
- 6 Ranch Owners House Museum
- 7 Living History and Working Ranch Center
- 8 Ranch Hand House Museum
- 9 Utility Building / Covered Activity Area
- 10 Corrals, Stables, and Associated Structures
- 11 Volunteer Building
- 12 Restrooms
- 13 Outdoor Event Areas
- 14 Caretaker's Cottage
- 15 Agricultural Fields
- 16 Restored Canoa Canal
- 17 Historic Milk Cow Pasture



Courtesy of Deezie Manning-Catron

The plan proposes approximately 2.5 acres for agricultural demonstrations and food production by volunteers and local non-profits. Water rights for food production still need to be obtained.

The landscape treatments in the heritage area and historic plan area are intended to visually and functionally support the preserved, rehabilitated and restored historic structures by providing the visual context similar to what existed at the time of the structures. This zone will contain the most intensive historic interpretation. The plant materials chosen will be based on those identified in historic photos and verbal/written descriptions. These include trees such as mesquite, ash, cottonwood, hackberry Mexican alder and smaller scaled plantings around the historic ranch houses such as roses, lawn and a kitchen garden. The historic Canoa landscape is simple in form, focused on trees, lawn and ornamental plants close to the buildings. Interpretive elements will be located in the landscape, such as historic photos of a view shed, for the purposes of comparing, and in some cases contrasting, with the current view to interpret ecological change over time and also the significance of the cultural landscape.

The pond and heritage area will be visually buffered from the nearby parking and main park road by native vegetation such as mesquite trees, hackberry, brittle bush, wolfberry and also by land form.

A grass crop will be planted to both reconstruct the pastures and the cattle ranch landscape context and to function as a food source for the Heritage Cattle. Suggested forage include: Ryegrass, Sudan, Fescue and Orchard Grass. These same grasses are suggested for the milk cow pasture.

The southern portion of the proposed pasture area is currently designated as xeroriparian type "B" (vegetation volume between .675 and .850 m³/m²) and is considered regulated habitat under Article X of the Pima County Flood Plain and Erosion Hazard Management Ordinance, Watercourse and Riparian Habitat Protection and Mitigation Requirements. Prior to implementation and once the boundaries

of the regulated habitat are confirmed, an On-Site Mitigation Plan would be developed and submitted to Pima County if over one acre or ten percent (10%) of the regulated habitat is disturbed.

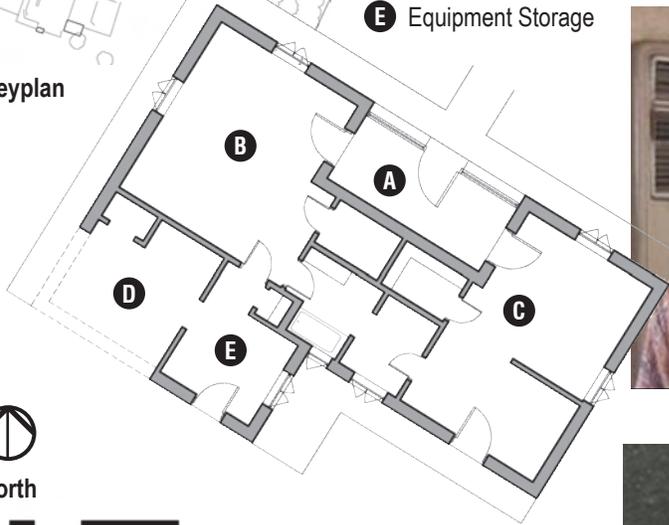
3 Story Center



Building Legend

- A** Porch
- B** Interactive Video and Audio Stories
- C** Sound and Video Recording
- D** Office
- E** Equipment Storage

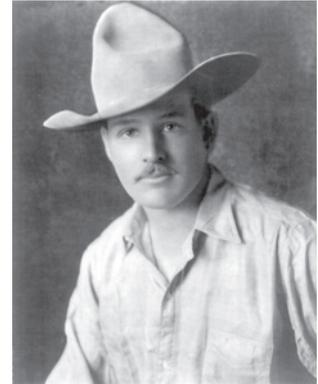
Keyplan



North



Courtesy of Tomas Javier Castillo



Courtesy of Deezie Manning-Catron

Proposed Use and Building Description

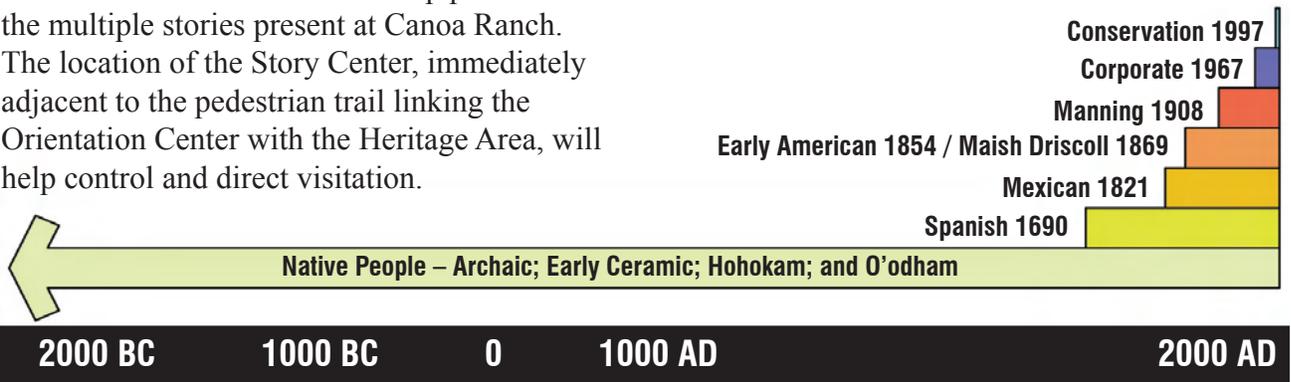
Visitors will enter the Heritage Area through the Story Center, an interactive space dedicated to documenting and sharing the stories of Canoa. Similar to National Public Radio's oral history project, StoryCorp, the Center will record the history of Canoa through audio and video documentaries that will help preserve the multiple stories present at Canoa Ranch. The location of the Story Center, immediately adjacent to the pedestrian trail linking the Orientation Center with the Heritage Area, will help control and direct visitation.



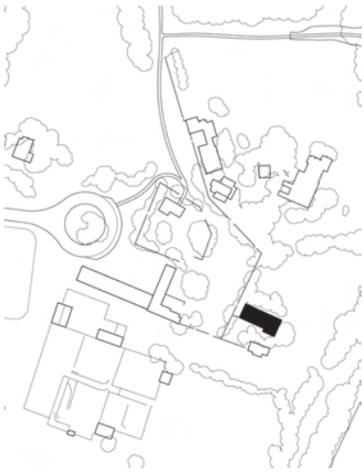
Courtesy of www.america-dreamz.com



Photo by Howell Manning, Jr.



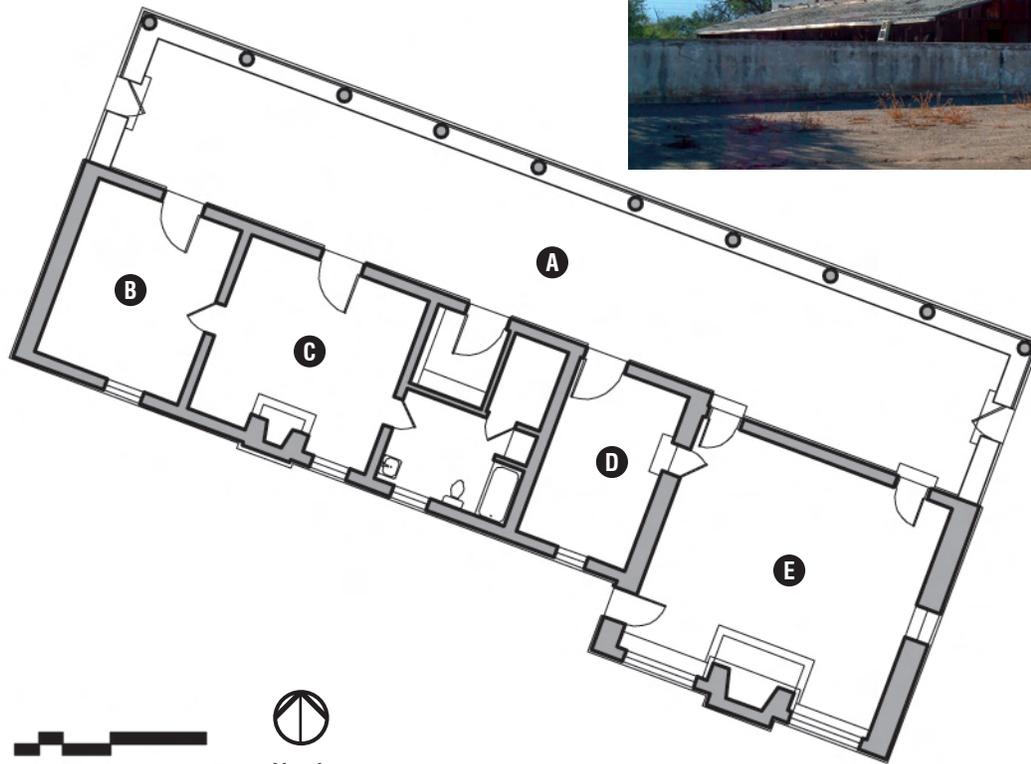
4 Ranching Museum Spanish and Mexican Era



Keyplan



Courtesy of Deezie Manning-Catron



0 2 4 8 16 Ft



North

Building Legend

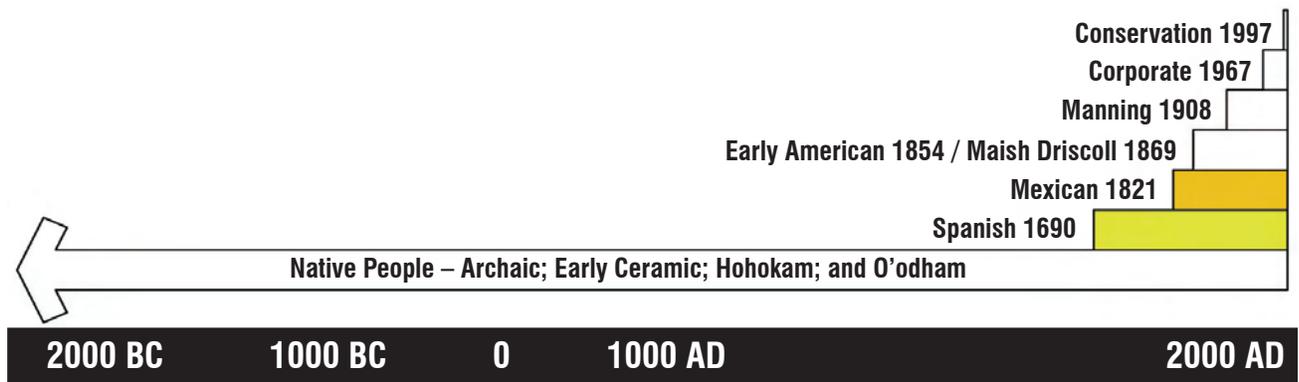
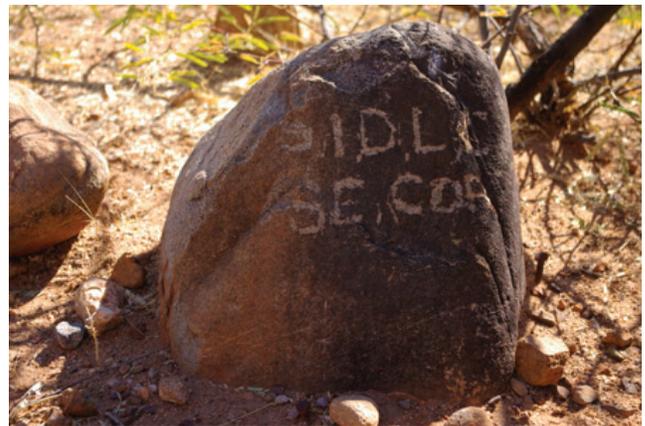
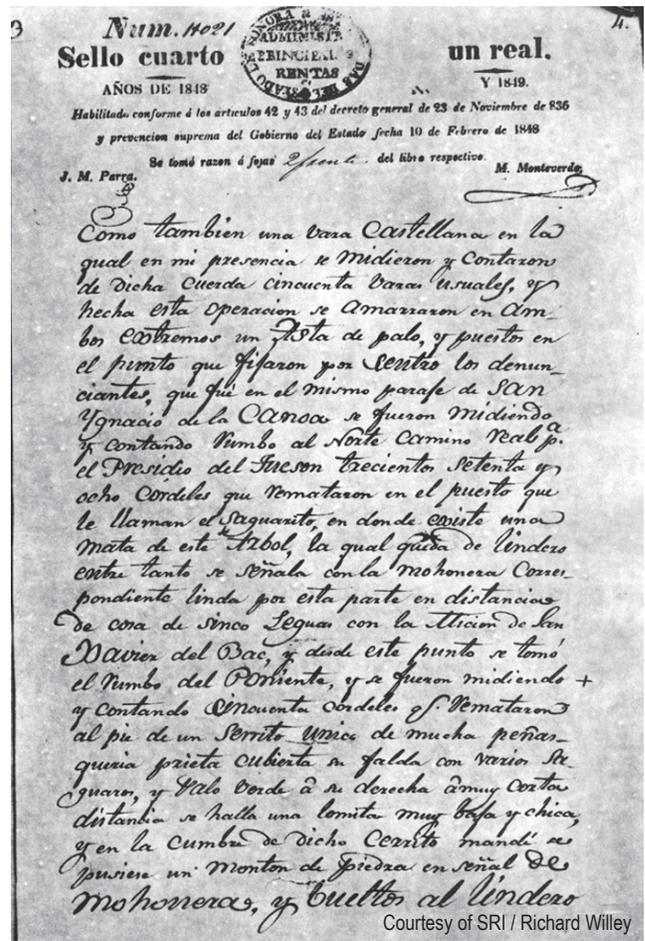
- A** Open Porch
- B** Spanish and Mexican Building Traditions
- C** Vaquero Artifacts
- D** Horse Equipment
- E** Ortiz Family and Land Grant History



Proposed Use and Building Description

This building will showcase activity and history pertaining to this region’s Spanish and Mexican Era ranching. Exhibits will trace the evolution of ranching, from the early introduction of cattle by the Spanish in the 17th and 18th Centuries, through the establishment of Spanish and Mexican Land Grants in the early to mid 19th Century. The petitioning of the Mexican government by the Ortiz brothers in 1821 to establish the San Ignacio de la Canoa Land Grant, followed by their subsequent struggles to establish clear title to the land while facing increased Apache hostility, is critical to understanding the history of ranching at Canoa. The interpretation of ranching practices can be enhanced by the collection and display of vaquero artifacts and horse equipment.

Furthermore, this well-preserved example of a traditional Sonoran building will be used for interpreting Spanish and Mexican building practices. This building displays early responses to building in this climate, including a linear arrangement of spaces, one room deep, a continuous shaded porch for circulation and gathering, thick adobe walls, high ceilings, and a flat roof with canales.



5 Ranching Museum
Southern Arizona / Northern Sonora Since 1854

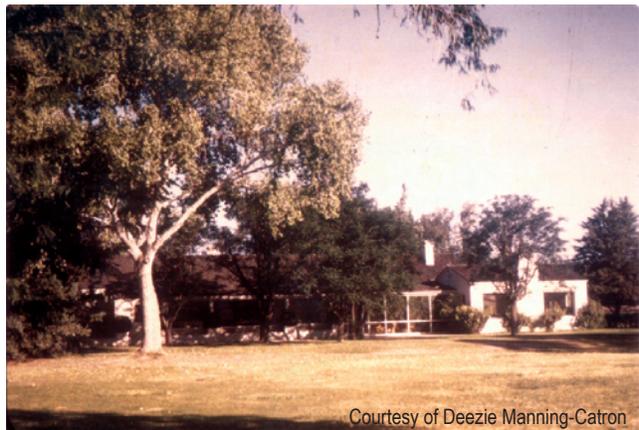


Keyplan



Building Legend

- A** Native American Interactions
- B** Early Ranch Style Architecture
- C** Railroad Impact on Ranching
- D** Evolution of Cattle Breeds
- E** Ranch Hand Artifacts
- F** Irrigation Systems and Agriculture



Courtesy of Deezie Manning-Catron

Proposed Use and Building Description

This building will be used to interpret the ranching traditions of Northern Sonora and Southern Arizona since the Gadsden Purchase of 1854. Exhibits will focus on new patterns of settlement and economic activity that emerged in the Frontier West as homesteaders and land speculators moved into the region. The intersection of different cultures, including interaction with Native Americans inhabitants, will be interpreted.

The impact of national transportation networks (stage coach and subsequent railroad lines) on economic activities, including ranching, will be presented. Likewise, changes in irrigation and agricultural practices, including the development of the Canoa Canal and other irrigation infrastructure will be featured. The evolution of ranching from subsistence farming on several acres to a gentleman’s profession on several hundred thousand acres will be presented. The collection and display of ranch artifacts and equipment will be used to further the story of ranching since 1854.

The Big House, as it is commonly known, was built for Howell Manning, Sr. and his second wife in 1935. As an early ranch-style building, this architect-designed structure can be used to interpret the evolution of the ranch house. Other than minor interior modifications and the possible addition of two small rooms near the kitchen, the residence has remained essentially unaltered since 1935. Opportunities to use this building for special events, including exhibits and receptions are presented by its open floor plan and its connection to a landscaped patio and lawn on the east side. As part of the building’s restoration, the kitchen will be made functional for special events and receptions.



Photo by Howell Manning, Jr.



Photo by Howell Manning, Jr.



Courtesy of Statistical Research



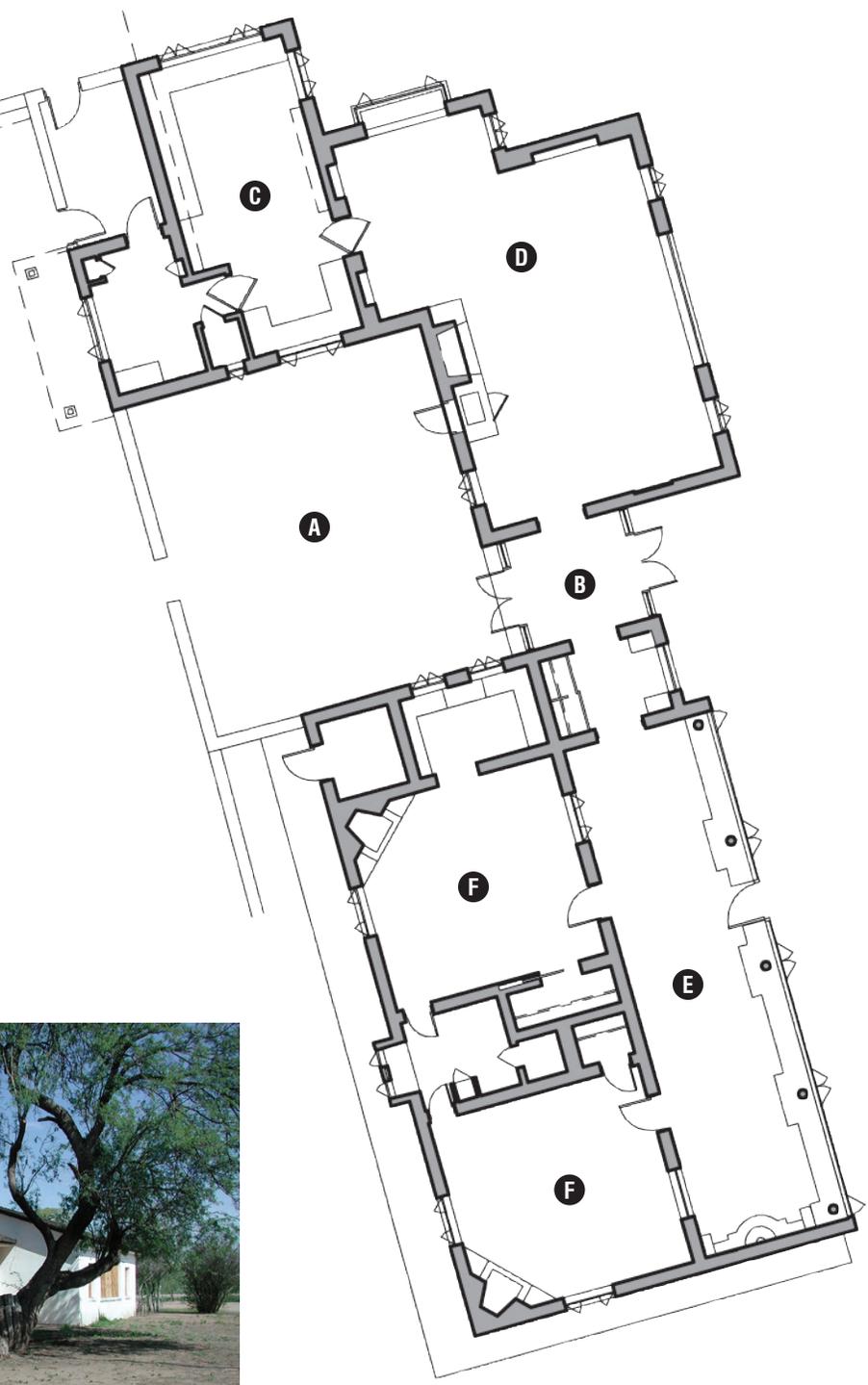
6 Ranch Owners House Museum
Howell Manning, Jr. Family House



Keyplan

Building Legend

- A** Courtyard
- B** Entry
- C** Kitchen
- D** Dining and Living
- E** Covered Porch
- F** Bedroom



Proposed Use and Building Description

The Long House, as it is commonly known, will be restored to its early 1950s appearance as a house museum interpreting the life of the ranch's owner, the Manning Family. Manning Family furnishings may be collected and returned to the building for display and interpretation. Courtyards around the buildings will be restored and will provide opportunities for interpretation of historic plants and kitchen gardens.

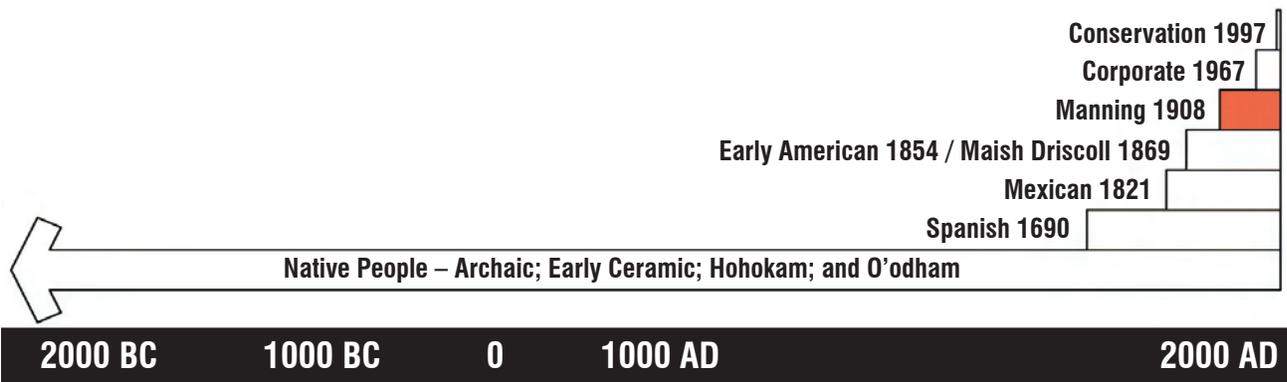
The Long House originally contained sleeping rooms and an open porch for Howell Manning Sr.'s two sons. In 1948, a second wing was added to create a completely functional residence for Howell Manning, Jr. and his new wife, Deezie Manning-Catron. The second wing included a breezeway connection, a living room/dining room, a kitchen and a utility room. The former porch was enclosed to create an inviting sunroom and circulation space. Architecturally unique features include the living room fireplace constructed of stacked flagstone slabs, and the kitchen cabinets and countertops constructed of Mexican cedar. The building retains a high degree of integrity with most historic features and spaces intact. Missing features and furnishings will be reconstructed based on documentary evidence.



Courtesy of Deezie Manning-Catron



Photos by Howell Manning, Jr.



7 Working Ranch Center

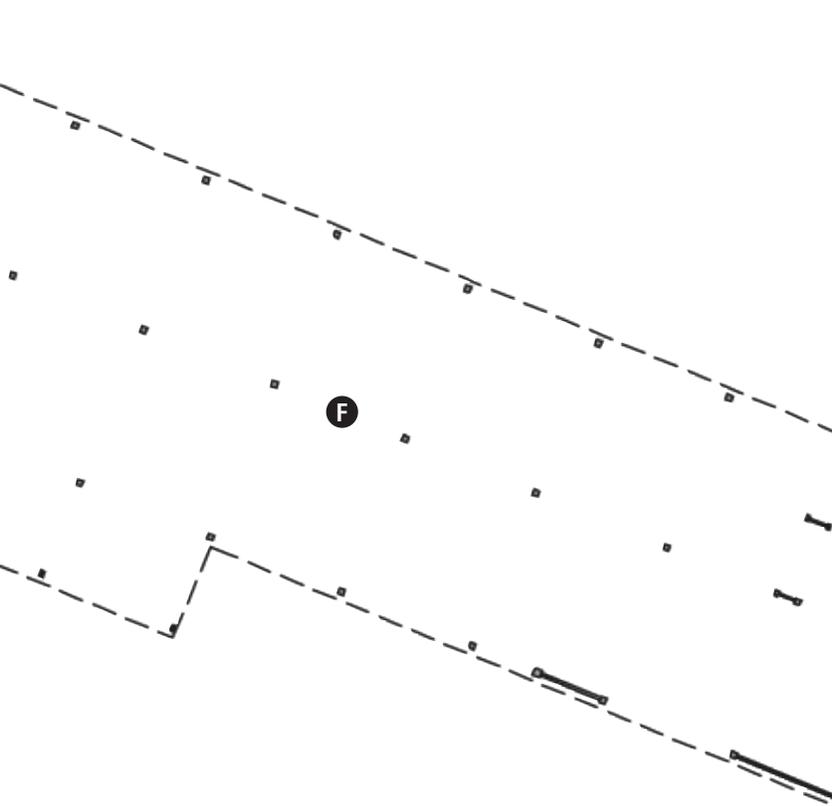


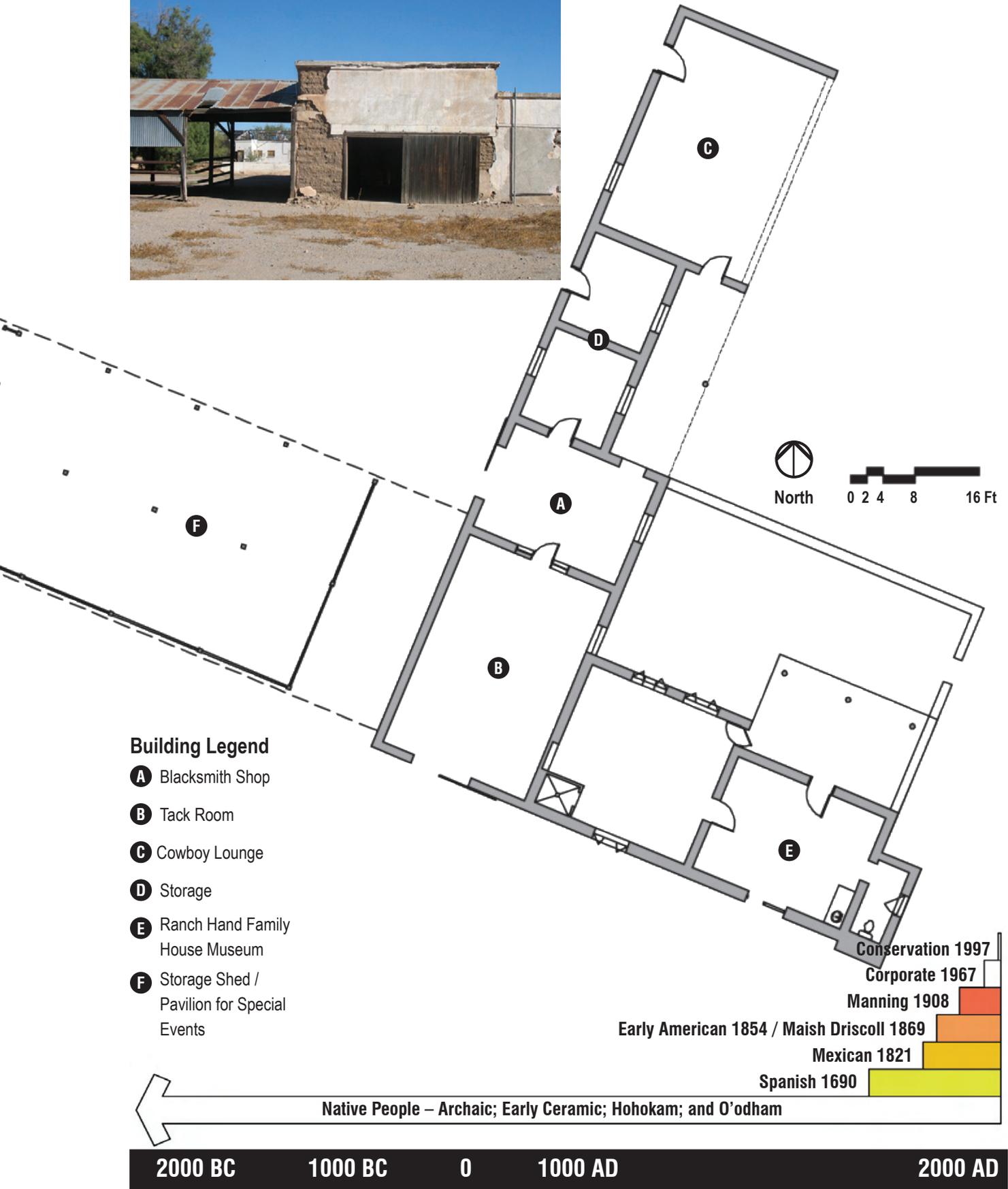
Keyplan

Proposed Use and Building Description

At the Working Ranch Center, visitors will have the opportunity to see how a ranch functions by viewing living history demonstrations and exhibits on ranch activities and ranch life. The Working Ranch Center will be integrated with activities in the adjacent corrals and pastures and will support a variety of the ranch's interpretive and programmatic elements including potential heritage breed cattle operation and agricultural fields.

At the heart of the working section of the ranch is the utility building. The historic blacksmith's shop and tack room will be restored and used for demonstrations and visitor activities. A lounge for the cowboys taking part in living history demonstrations is included in the northern portion of this structure. Probably one of the earliest buildings on the ranch, the utility building is interconnected with two other structures. To the east, is an 890 square foot employee's residence comprised of a bedroom, living room/kitchen, and toilet. This space will be used as a ranch family house museum, interpreting the life of a 20th century family working on the ranch. To the west, an equipment storage shed, added at a later, unknown date, can be used to store equipment or machinery. This largely open, post and beam structure could serve as a covered pavilion for special events at the ranch.





10 Corrals, Stables, and Associated Structures



Keyplan

The word *retaque* comes from the Spanish verb, *retakar*, meaning to “stack up.” In this case, horizontal lengths of mesquite wood are carefully fitted and laid on top of one another to a height that cattle cannot jump.



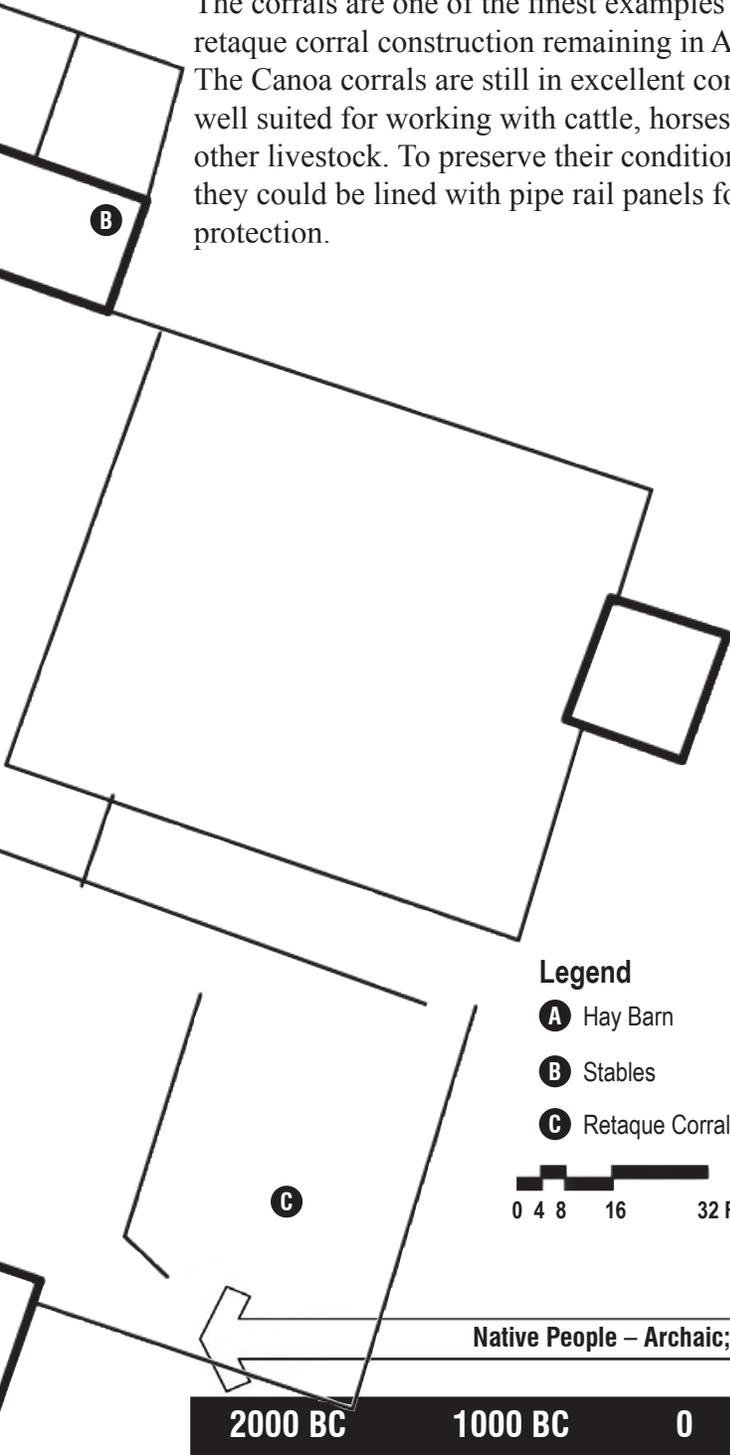
Photo by Bob Sharp

Note: Plan shown is for reference only. Measured drawings of the corrals and associated structures have not been completed.

Proposed Use and Building Description

The southern edge of the Heritage Area is defined by the ranch's massive corrals. The historic corrals will be used to work heritage breed cattle and to share other cowboy and ranching skills and activities with the visitor.

The corrals are one of the finest examples of retaqué corral construction remaining in Arizona. The Canoa corrals are still in excellent condition, well suited for working with cattle, horses and other livestock. To preserve their condition, they could be lined with pipe rail panels for protection.



Legend

- A** Hay Barn
- B** Stables
- C** Retaqué Corrals



North



Native People – Archaic; Early Ceramic; Hohokam; and O’odham

2000 BC

1000 BC

0

1000 AD

2000 AD



Photo by Howell Manning, Jr.

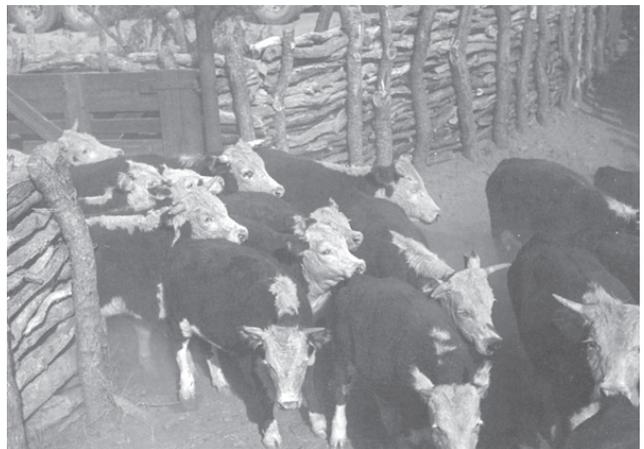


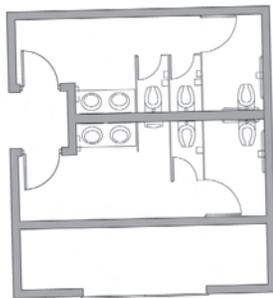
Photo by Howell Manning, Jr.

Heritage Area Visitor and Facility Support Buildings

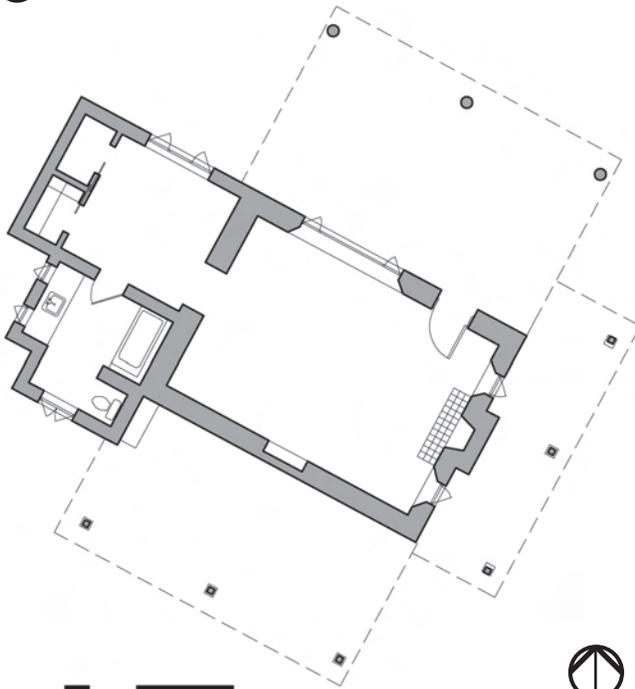


Keyplan

11 Restroom / Storage



12 Volunteer's Lounge



0 2 4 8 16 Ft



North



Proposed Use and Building Description

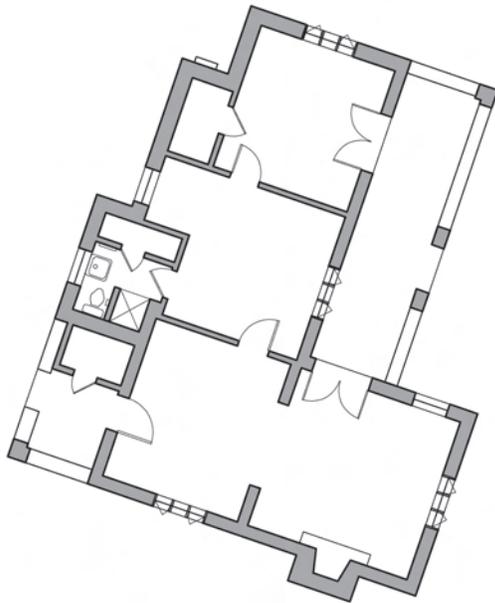
New restrooms will be housed in the historic garage located between the Long House and the Big House. This wood frame structure can be adapted to provide accessible restrooms for visitors and is well positioned to serve receptions and events on the lawns surrounding both houses. The structure can easily be tied into the existing septic system.



Proposed Use and Building Description

Originally used as a guest house, this 850 square foot building contains a living room, bedroom, and bathroom. Mud adobe walls and deep shade structures help this building adapt to its desert setting. A cozy interior, featuring walnut paneling throughout, lends this building to active use by volunteers and docents. Structural upgrades, along with preservation and rehabilitation of the building, were completed in early 2007.

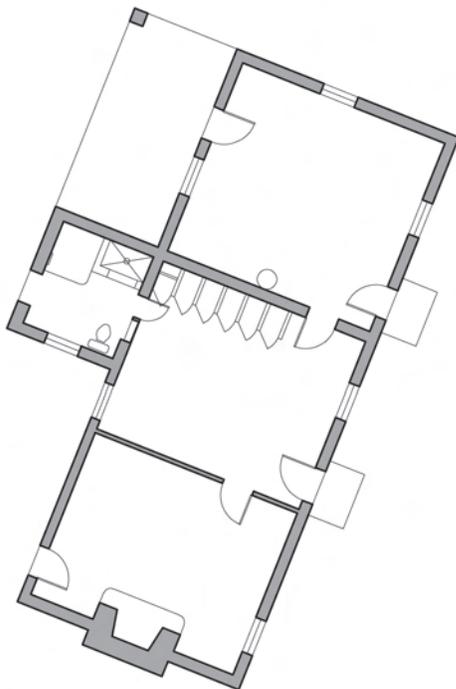
14 Caretaker's Cottage



Proposed Use and Building Description

This 1,000 square foot building was originally an employee cottage that included a living room, kitchen, office, bedroom, and bathroom. The stuccoed adobe wall surfaces are capped by a vernacular cross-gabled corrugated metal roof. Two ample porches give interest to the form, shading the interior of the building, and creating sheltered outdoor areas. Structural upgrades, along with preservation and rehabilitation of the building, were completed in early 2007.

Office for Trail Ride Operations



Proposed Use and Building Description

This 1,100 square foot building was used as a working bunkhouse. The plan is comprised of three main chambers and an attached bathroom and porch. Constructed between 1948 and 1955, it is the newest structure on the ranch and the only structure on site built from fired adobe. It is located away from the other residential structures and its principal façade faces east, possibly to allow visual surveillance of the nearby corrals. It will be used by the trail ride operator as an office and possible residence.



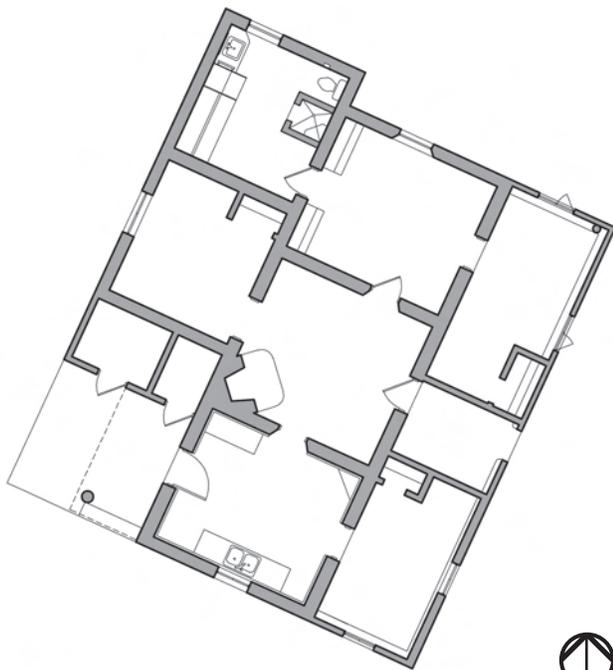
North

Heritage Area Visitor and Facility Support Buildings



Keyplan

Residence / Offices for Park Staff



North



Proposed Use and Building Description

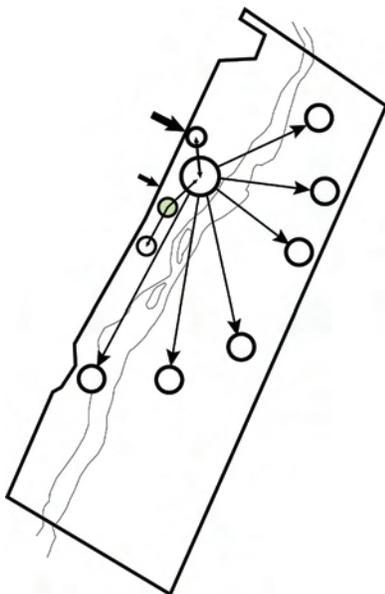
Commonly referred to as the South House, this building is located south of the corrals. The 1,400 square foot structure appears to have developed over time, beginning sometime after 1935. It was once a traditional linear plan comprised of three adobe rooms. Over time the eastern porch was enclosed, small shed additions were added to the west, and several of the original window and/or exterior door openings were altered. The future use of this building will be offices for park staff.



Equestrian Center

The existing approximately thirty acre equestrian facilities would remain in its current location and could support both a specialty equestrian training center and a special event area and arena. The specialty training is seen as having little public benefit, but is an historic land use, a modern outgrowth of the ranching traditions of the region, and a good fit for the site. Special events might consist of rodeos, “mutton busting,” roping events, and “rawhide” pulls.

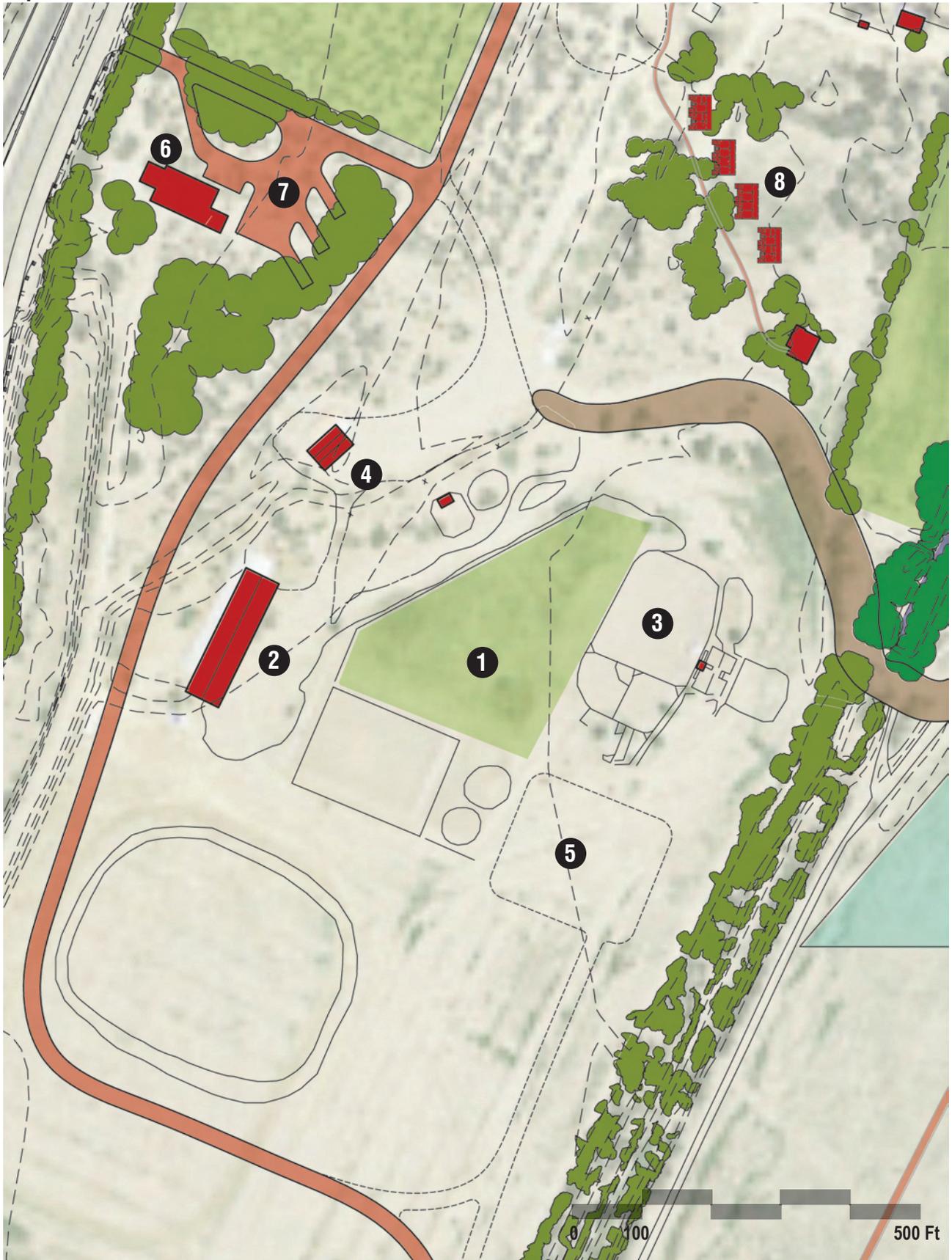
The landscape around the equestrian center can consist of predominately trees (mesquites) to accommodate the functional use of this area. A six acre forage area may be included.



Situated between the Heritage Area and the Equestrian Center, four new bunkhouses are proposed for overnight stays at the ranch. The bunkhouse will provide accommodations for a wide variety of people and groups visiting the ranch. School groups visiting the ranch for several days to take part in an environmental education program could stay at the bunkhouses. University-level, research interns could stay in a bunkhouse while working on special in-depth research projects. Groups could rent the bunkhouse for special events, including family reunions and office retreats. The bunkhouses would also provide housing for people attending the ranching skills workshops or other trainings at the ranch.

Each bunkhouse measures about 2,300 sq.ft. and features four sleeping rooms and a galley kitchen. A covered porch extends the entire length of building and functions as both the circulation spine and as a gathering place for activities. The four sleeping rooms can sleep up to four people each and feature two bunk

Equestrian Center Overview



Programmatic Elements

- 1 Forage Area
- 2 Existing Equestrian Center Stables
- 3 Existing Arena
- 4 Existing Equestrian Center Residence
- 5 Overflow Parking for Equestrian Events
- 6 New Maintenance and Service Building
- 7 R.V. Spaces for Seasonal Site Hosts / Caretakers
- 8 New Bunkhouses

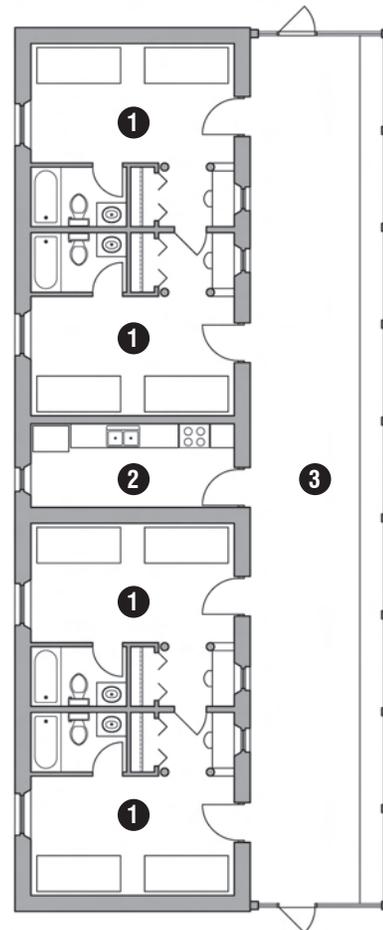
beds, a bathroom, closet, and small writing surface. A total of sixty-four individuals can be accommodated in the 16 sleeping rooms.

The buildings are modeled after the existing Foreman’s House with its thick adobe walls and generous porch. The buildings should be sited to take advantage of views to the east and southeast. Additionally, passive solar and sustainable design practices could be accomplished through proper orientation of the building, appropriate placement of openings, and the use of local materials

The bunkhouse area landscape can serve as a transition between the heritage area and the more minimal landscape of the equestrian area. The landscape planting would re-establish native trees, shrubs, cacti and grasses found in the surrounding semi desert grassland and include trees such as mesquites, Mexican alder and hackberry to integrate with the heritage area. Pedestrian circulation will be defined from the bunk houses to the arena area.

A new maintenance and service building, to serve the entire park, is proposed adjacent to the Frontage Road at an existing driveway into the site. This area will also have space for three recreational vehicles to be used by seasonal site hosts or caretakers living at the park.

New Bunkhouse Plan



Building Legend

- 1 Four person bunkroom
- 2 Galley Kitchen
- 3 Porch / Gathering Space



Courtesy of www.ranchoesmeraldanogales.com

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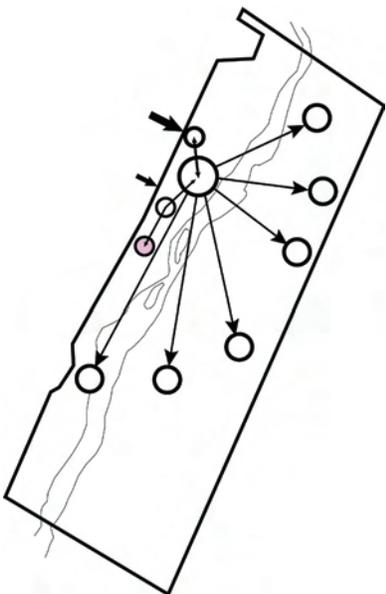


Courtesy of Statistical Research

Special Events Campground

At the south end of the public access area, situated in the niche between the canal, historic reservoir, and mesquite bosque is a multi-use campground with twenty sites. It would be designed to accommodate equestrian trailers and intended as a camp site for Anza trail riders, both as a base camp and as an overnight stop for riders based up or down river. It would also be used as a site for overnight riders from the hack stable, star gazing events, scout troops or similar, but would not be available on a drop-in basis.

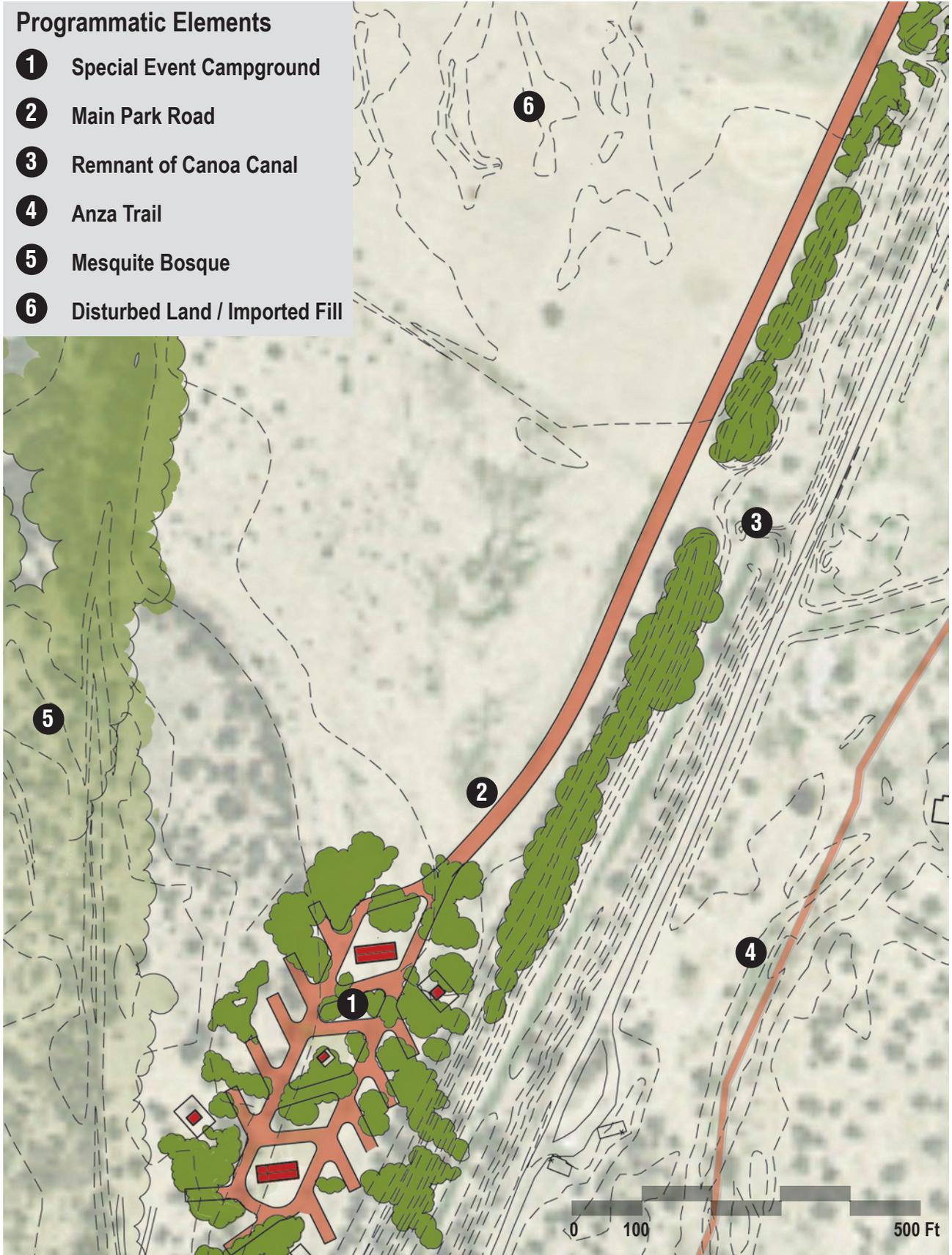
The campground landscape can serve several needs: shade and visual screening; integration of the camp area into the surrounding desert grassland/xeroriparian context; mitigate the disturbed land (imported fill from off-site) to the north; and to provide definition to the vehicular and pedestrian circulation. The planting strategy can begin with the preservation or transplantation of any significant native vegetation in the area and with the removal of any invasive plants. Additional planting of native mesquite, medium sized shrubs such as creosote, hackberry and palo verde, native bunch grasses and cholla cacti can further develop the structural diversity of the landscape for wildlife habitat. Mesquite and medium sized shrubs can be used where needed to buffer between adjacent conflicting uses. A native seed mix can be applied to the perimeter area, the main road edges and the disturbed land.



Special Events Campground Plan

Programmatic Elements

- 1 Special Event Campground
- 2 Main Park Road
- 3 Remnant of Canoa Canal
- 4 Anza Trail
- 5 Mesquite Bosque
- 6 Disturbed Land / Imported Fill



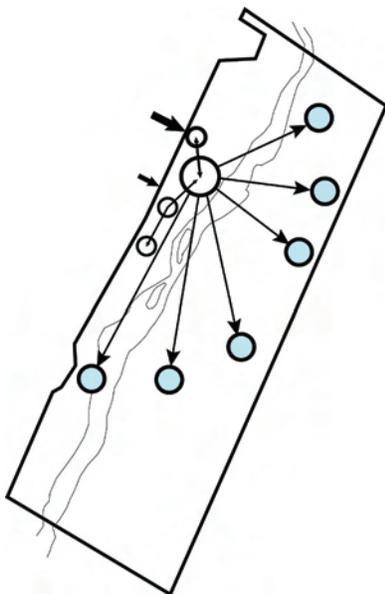


Courtesy of SRI / Richard Willey

Remote Interpretive Sites

Remote interpretive sites will offer visitors an opportunity for a more in-depth experience and understanding of the site and its history. The location of important site features and historical events can be revealed to the visitor by on-site interpretation taking the form of interpretive signage, or possibly dioramas, at focal points, and potentially at clearly identified demonstration reconstructions. Other interpretive techniques, utilizing the latest in wireless technology, are possible and are more fully discussed in the interpretation report accompanying this report.

In some cases, additional research and /or archeology is required to locate, identify, and interpret specific resources. Remote interpretive sites offer the prospect of seeing on-going research at the site.



Bringing visitors beyond the Heritage Area also provides opportunities to interpret the larger landscape. Areas of the Santa Cruz Valley and Santa Rita Mountains view sheds are intact and can be used to offer windows into the past and to contrast changes to the environment. Understanding how the landscape has changed is critical to understanding Canoa Ranch and its significance.

Many of these remote sites contain resources that are significant to tribal groups and researchers. The utmost care will be taken preserve and protect their condition and locations. In the case of archaeological sites, it is suggested that a representative location be selected for interpretation rather than an actual archaeological site. In most cases, guided, docent-led tours will be required to access remote interpretive sites.

Additional shade and cover at remote sites could be provided by enhancing the native vegetation with passive water harvesting.

Remote Interpretive Sites Overview

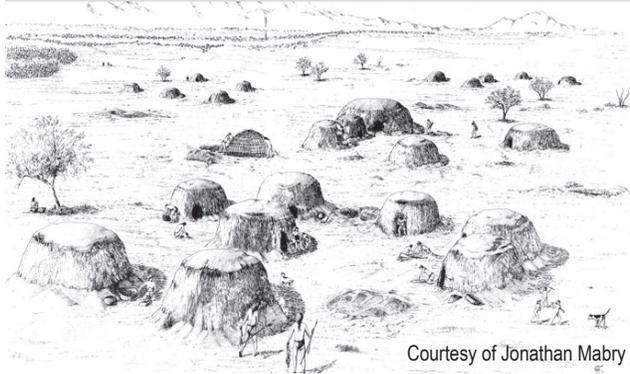
Programmatic Elements

- 1 Native People
- 2 La Canoa / Spanish *Paraje*
- 3 Ortiz Ranch House
- 4 Canoa Inn and Lumber Camp
- 5 Stage Stop
- 6 Maish South House
- 7 Canoa Canal
- 8 Manning Era Improvements
- 9 Corporate Well Site
- 10 Conservation Site



Remote Interpretive Sites

1 Native People



Courtesy of Jonathan Mabry

Public visitation to significant archaeological sites will be prohibited. Trails with signage, or possibly dioramas, at focal points, and potentially at clearly identified reconstructions will provide a vantage into prehistory.

2 La Canoa / Spanish *Paraje*



La Canoa, the Spanish *paraje*, was a regular stop on the Camino Real and believed to be the spot of the Anza camp site. It may have been located at the seep site and / or the traditional crossing point at the Santa Cruz River. Additional research and / or historic archaeology will be required to locate, identify, and interpret.

3 Ortiz Ranch House

The Ortiz homestead is believed to have been located on the current 4,800 acres, but additional research and archaeology needs to be completed to locate this site.

4 Canoa Inn and Lumber Camp



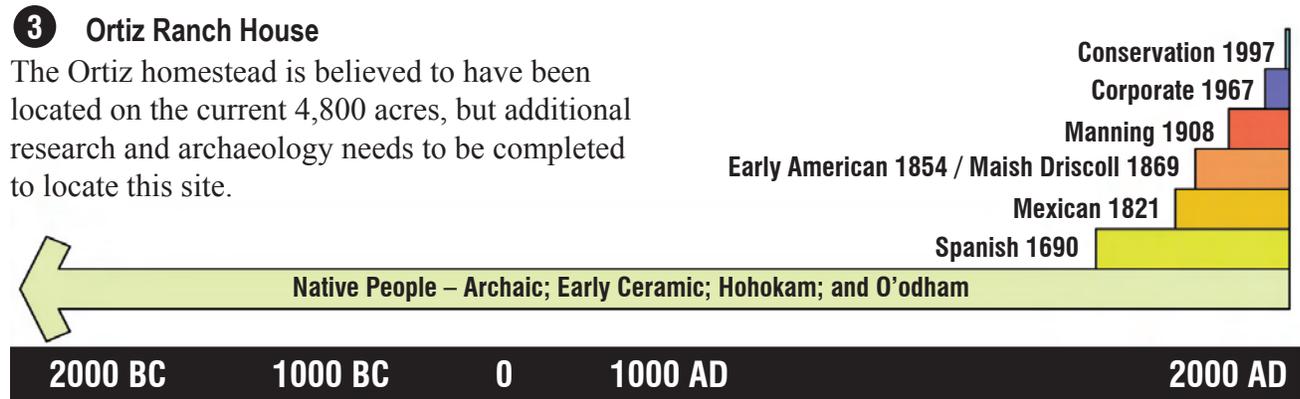
The Canoa Inn, site of the Tarbox massacre, Crossroads Tavern and lumber sales operation are believed to have been located in the southeast corner of the current 4,800 acres but additional research / archaeology will be required to located and interpret.

5 Stage Stop

The Canoa Stage Station was possibly located west of the river, towards the southern boundary of the site. Maish and Driscoll also are believed to have developed buildings at the site, but to date only scattered artifacts have been located and additional research and / or archaeology is required.

6 Maish South House

Maish and Driscoll are believed to have had a structure near the head of the Canoa Canal. Additional research and / or archaeology is required.



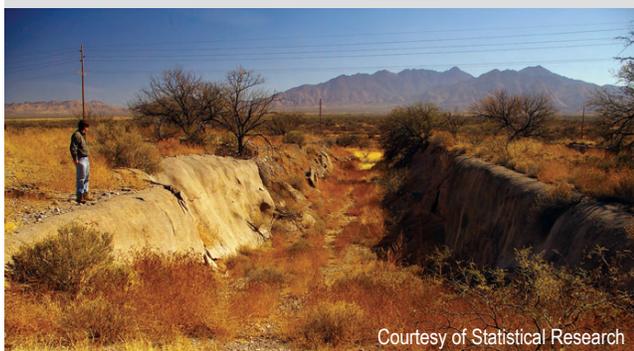
7 Canoa Canal



Courtesy of UA Special Collections: Files of George E.P. Smith

In 1887, Maish and Driscoll initiated the Canoa Canal Company with the intention of bringing water to Tucson. While they were not successful in bringing water to Tucson, over one mile of canal was constructed and it is largely intact in its original alignment. Additional research is required to understand the use of the canal.

8 Manning Era Improvements



Courtesy of Statistical Research

Reshaping of the land for irrigation and agriculture during the Manning Period left an indelible impression on the land. The west bank of the river is rich with irrigation, water collection, flood control, and ranching and agricultural infrastructure (canal head, pit silos, berms, concrete channels, lift stations, well sites, and so on) that tell an important story of human interaction with the land.

9 Corporate Well Site



Water is a commodity highly valued by industry, who have gone to enormous lengths to control it for their use. Water rights at Canoa have been separated and sold for mining, limiting how the land can be used. Several wells remain active, some near the public access zone, and could be interpreted to tell the contemporary water story.

10 Conservation Site



Canoa Ranch was purchased by Pima County for conservation purposes. A number of conservation projects are already underway, including flood plain monitoring and a burrowing owl habitat project. In the future, many more sites will undergo ecological restoration and natural succession offering a variety of interpretative opportunities.

Capital Costs

Rehab historic structures:	\$4,250,000
New buildings:	\$4,200,000
Exhibits:	\$1,500,000
Flood Control/reclaimed water :	\$2,800,000
Landscape/field development:	\$1,200,000
Trails and recreation:	\$ 800,000
Anza Trail:	\$ 800,000
Corrals, hay barn, and stables:	\$ 450,000
Campground:	\$ 500,000
Equestrian Center:	\$ 200,000
Remote sites:	\$ 750,000
Roadways;	\$ 400,000
Water and sewer infrastructure:	\$ 300,000
Subtotal:	\$18,150,000
Contingency @ 10%	\$1,815,000
Total	\$19,965,000



CANOA RANCH

Interpretive Approach
Canoa Ranch Master Plan

Ralph Appelbaum Associates
November 2006



“La Canoa” : the natural spring that was known as a perennial source of water by Spanish explorers and later travelers.

INTRODUCTION

Canoa Ranch is rich in history, learning experiences, and potential activities for a wide range of visitors. It is a place where one can look back in time and look forward to the future. It is resonant with many layers of history and is, in a sense, a viewpoint into southern Arizona history — but on a deeply personal level. Who lived here? Who stopped here en route to other places? What was this landscape like over time? What does this place tell us about our relationship to land, to cultures, and to history? These are profound and meaningful questions, and all of them can be touched upon and explored at this extraordinary place. Interpretive opportunities for Canoa are numerous and include the chance to delve into ranching traditions, environmental and conservation issues, the daily life of Canoa inhabitants over time, and historical timelines that cross cultures and periods of history. In addition, Canoa is a place that is well suited to living history, a site where visitors can interact and learn from docents and other specialists.

The following is an overview of an interpretive approach to Canoa Ranch. It consists of an initial palette of strategies, techniques, and experiences that could be developed for this site. These initial approaches are the result of valuable input from the Canoa Master Plan’s team of specialists and historians who provided their knowledge and expertise on the history and potential of the site.



INTERPRETIVE GOALS

To bring to life the unique and deep history of this place

To encourage a sense of discovery in all visitors

To foster new ways of thinking about our relationship to the environment

To provide experiences and learning opportunities for a wide range of visitors





KEY THEMES

Ranching and its role in the history of southern Arizona

The changing landscape and the importance of water

Family histories and cultural identities

Continuity and change



Lake at Canoa Ranch



Representative pottery from Santa Cruz Valley



Herding cattle at Canoa Ranch



The Manning children



WHO WILL COME TO CANOA?

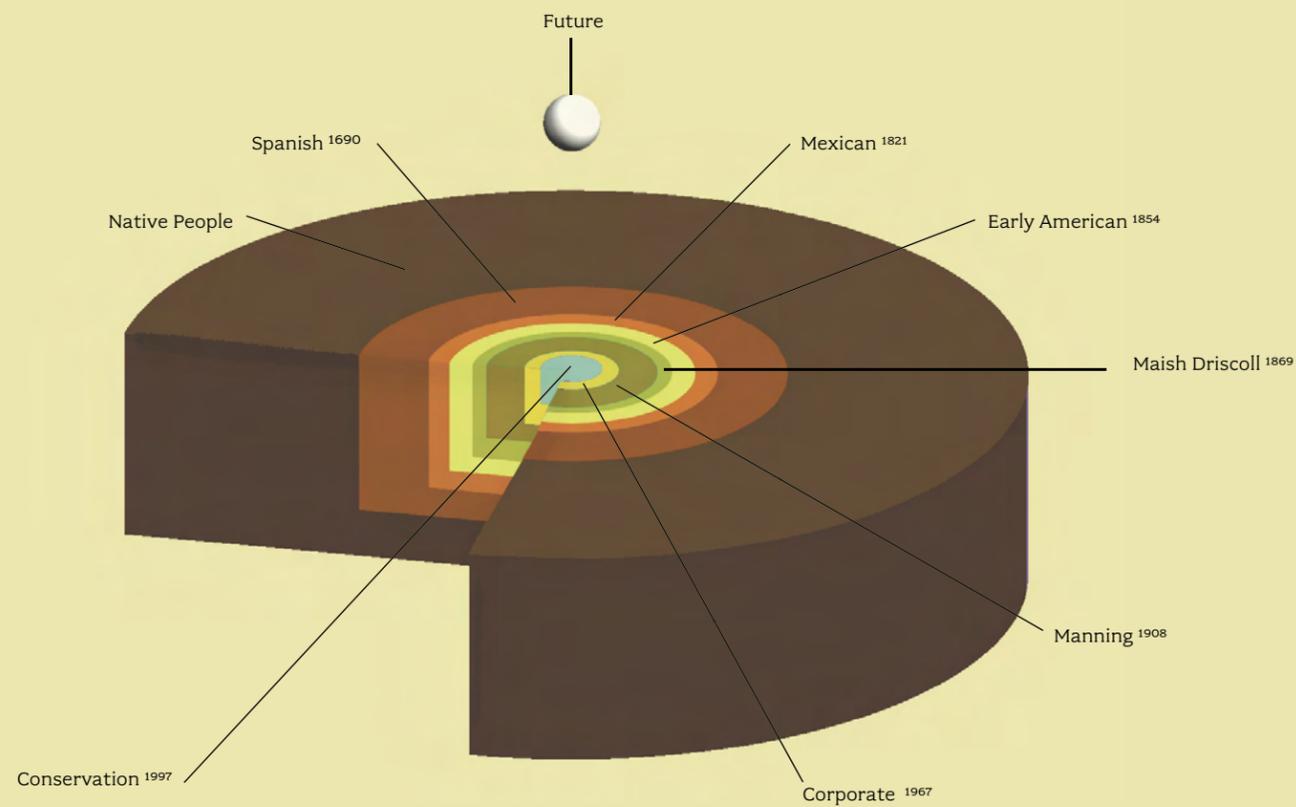
A wide range of visitors will find Canoa of interest. Among these are:

- Local families and school children*
- American tourists*
- Mexican tourists*
- People with interest in ranching*
- People with interest in the environment*

INTERPRETIVE STRATEGIES & TECHNIQUES

Canoa offers visitors a wonderful array of activities and experiences, from viewing multilayered exhibits inside restored buildings to participating in living history demonstrations to wandering through trails. An interpretive approach to Canoa is characterized by a respect for the place — the buildings, the multiple stories and perspectives, the changing landscape. Accordingly, the strategies suggested here employ an array of techniques that reflect the significance and location of interpretation, whether it is inside the building or outside on the site. Focused views, multiple perspectives, in-depth storytelling, and exploration through trails and way-finding are some of the options that could be developed here.

ORIENTATION SYSTEM



From the beginning of their visit, visitors will be oriented to the many things they can do and to the deep layers of history and storytelling they can access throughout the site. An Orientation System introduced in the Visitor Center and found on every entry ticket will be repeated graphically in the exhibits and interpretive structures throughout the site. This Layers of History guide is linked to locations on the site map that will cue visitors to the period of history they are encountering at the moment. It will also remind them how many layers they can explore on this visit and on repeated visits to Canoa.



Master bedroom fireplace



INTERIOR RESTORATION AND EXHIBITS

Interior views of Deezie and Howell Manning, Jr. family house in 2006 and ca. 1950



Living room fireplace



Authenticity and the power of place are two key attributes of Canoa Ranch. The buildings are an important way for visitors to experience history by going back in time to see how people lived, whether they are members of the Manning family or people who worked on the ranch. Detailed restoration with furnishings can be accomplished in some of the rooms, while interpretive exhibits can be installed in others. Exhibit techniques can include treatments and structures that do not impact the architecture while providing different levels of information. These may include deeper content for those with a keener interest in a particular subject or a set of children's panels to guide younger visitors through the interior exhibit spaces.



Indoor porch





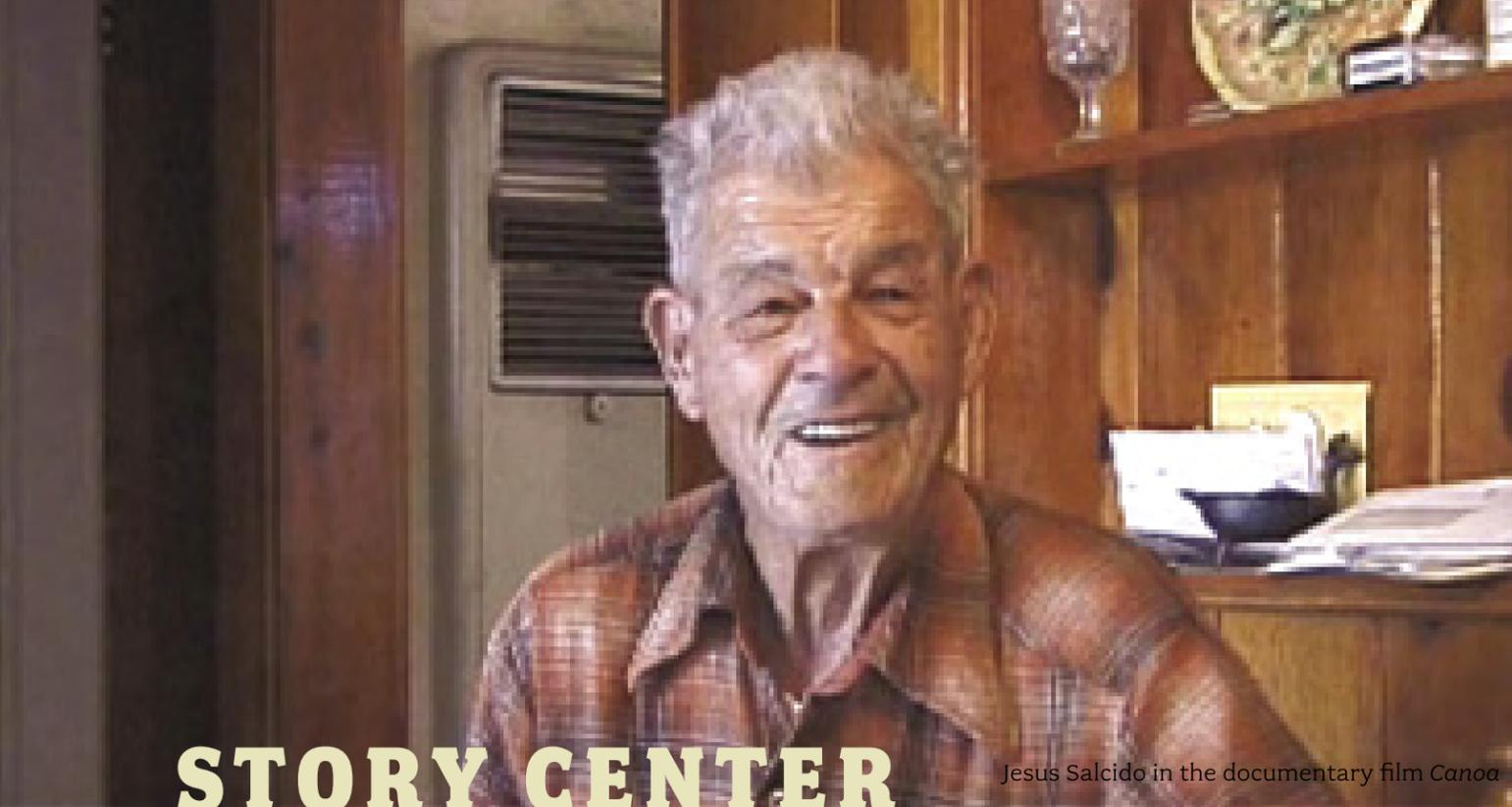
LIVING HISTORY



The daily activities of those who lived and worked at Canoa can be brought to life by living history demonstrators and docents. Visitors will be able to learn about ranching firsthand and also participate in various aspects themselves to get a deeper understanding of the hard work and skills needed for life on a ranch. Seeing cattle at close range, and learning more about their habits, can be fun for younger visitors and a memorable way to engage them in the past and the future.



What does it feel like to ride a horse and to try to steer cattle? What do you have to know to find water? How do you raise livestock? Why does the blacksmith have one of the most important jobs on a ranch? Where would you go to school if you lived here?



STORY CENTER

Jesus Salcido in the documentary film *Canoa*



VIEWPOINTS & LENSES

Besides the numerous stories that visitors will encounter throughout the site, there will be a dedicated place to record and access those of the many people still alive that have connections to Canoa. These oral and video histories will flesh out the details of the complex interplay of families, lives, and cultures, and document them for posterity. Here visitors can hear what life was really like as they get multiple perspectives on events, existence, and the land. Through them, perhaps, they can answer the question: What happened at Canoa?

The collection of these oral histories could be linked to other efforts conducted by museums and historical sites both regionally and nationally.

At various locations on the site, visitors will encounter a set of Viewpoints that provide interpretation in a variety of ways: creating “then and now” contrasts, providing multiple perspectives on a story, or focusing the visitor’s view on a particular feature of the landscape or building. For example, interpretation connected to Life on the Ranch stories can show visitors what buildings looked like at a certain time as well as highlight the way daily life might have been experienced by a member of the Manning family who owned the ranch or a member of the Salcido family who worked on the ranch.

Further into the site, visitors can learn about the importance of water at Canoa and how the landscape has changed over time. In other areas, they can access information about Native American settlements. These Viewpoints could be located at many places throughout the site that act as signposts for stories and features of the landscape. They could become a way to accumulate information and also encourage visitors to return to Canoa to expand their journey.

NATIVE AMERICAN LIFEWAYS

Canada's First Peoples



"They call themselves O'odham. The word means 'People,' but it means more than that. It also means 'Those Who Emerged from the Earth.' It means sand, or dry earth, endowed with human quality."



NATIVE AMERICAN LIFEWAYS
Canada's First Peoples





LIFE ON THE RANCH
The Manning Family

In 1910, the Manning family moved to the
 Rancho de la Cruz in the heart of the
 San Antonio Valley. The house was built
 in 1910 and is one of the few remaining
 of its kind. The house was built by
 the Manning family and is a fine
 example of the architecture of the
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 example of the architecture of the
 time. The house is a fine example of
 the architecture of the time.





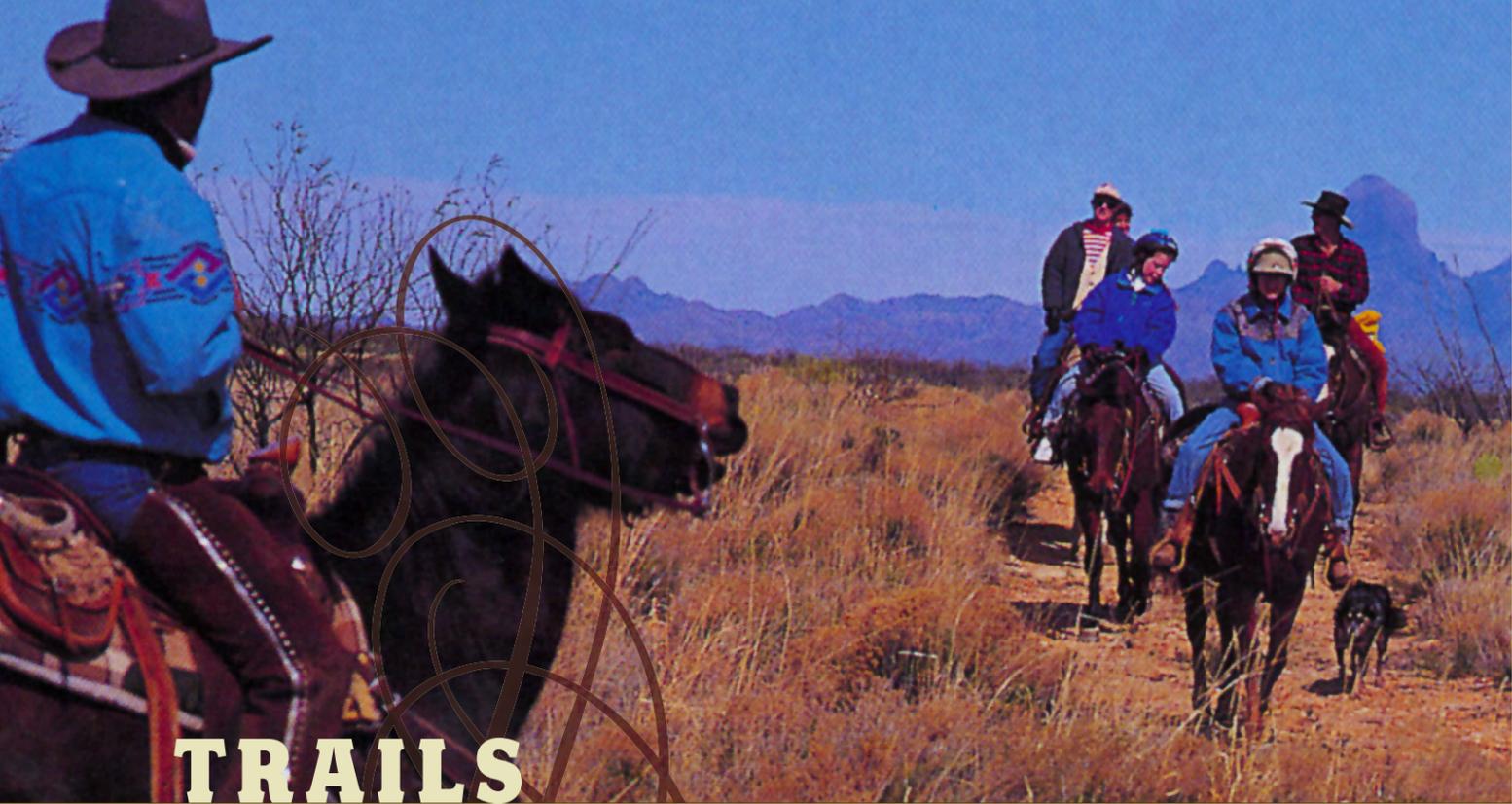
LA CANOA

Con Agua, Sin Agua



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TRAILS

Portrait of Juan Bautista de Anza



Canoa can be experienced in more active ways while still providing opportunities for learning by way-finding systems that could include physical paths, maps, guidebooks, and signposts. Visitors can hike along part of the Anza Trail and learn of other historic routes and settlements found here. They will find that Canoa was established along the route of the Camino Real and that it was a fording place

across the Santa Cruz River, as well as a place of refuge for travelers, long before it became a working ranch.

Trails through various parts of the site are also a means for people to return to Canoa for a different kind of exploration.

San Francisco

CA

San Luis Obispo

Los Angeles

NV

UT

AZ

Tucson

Nogales

The Anza Trail

TECHNOLOGY

Opportunities exist for the site to be accessed through simple technologies: cell phone podcasts, audio tours, or special zones with audioscapes. Today's technology allows us to customize the experience to the diverse needs of various visitors. It offers opportunities for self-directed learning, collaboration, and reflection. Interactive technology allows us to engage younger audiences in exciting ways that make abstract concepts accessible. And finally, technology provides a simple way for visitors to access information in their own language.



VISITOR EXPERIENCES



Canoa vaqueros at chuckwagon on roundup

With its wide range of learning opportunities, Canoa is a place where visitors can choose to organize their time to access stories and events of particular interest. Here are three examples of different kinds of visits:

The Foreman's House, 2005

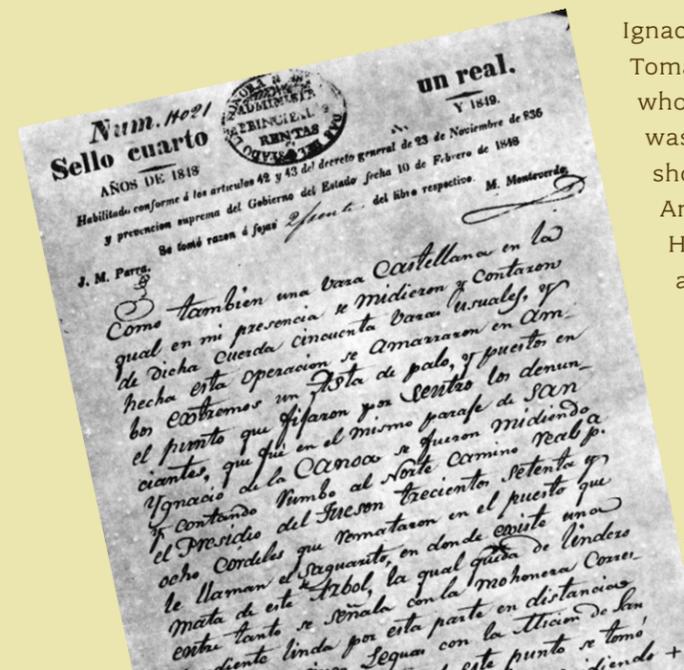


Mexican Tourist

Some visitors from Mexico may be interested in exploring the history of Mexican ranching traditions — from the story of the Ortiz brothers and the Canoa land grant to how the ranch developed during that time. The story of the land grant system, its impact in southern Arizona, and the establishment of Hispanic-American families can be extrapolated and expanded upon for a broader historical view.

Ignacio and Tomas Ortiz

Tomas and Ignacio Ortiz were sons of Augustin Ortiz, who in 1812 had settled on land west of Tubac. Tomas was born in Tubac in 1792. He died at the age of 85 shortly after completing the sale of Canoa to two Americans, Frederick Maish and Thomas Driscoll. His brother Ignacio was an enthusiastic prospector and miner, said to be knowledgeable about all the mines of Sonora. Ignacio was a member of an 1856 convention in Tucson held to promote territorial status for this new area of the United States. The following year he was killed by Papago Indians as he returned from a trip to California.



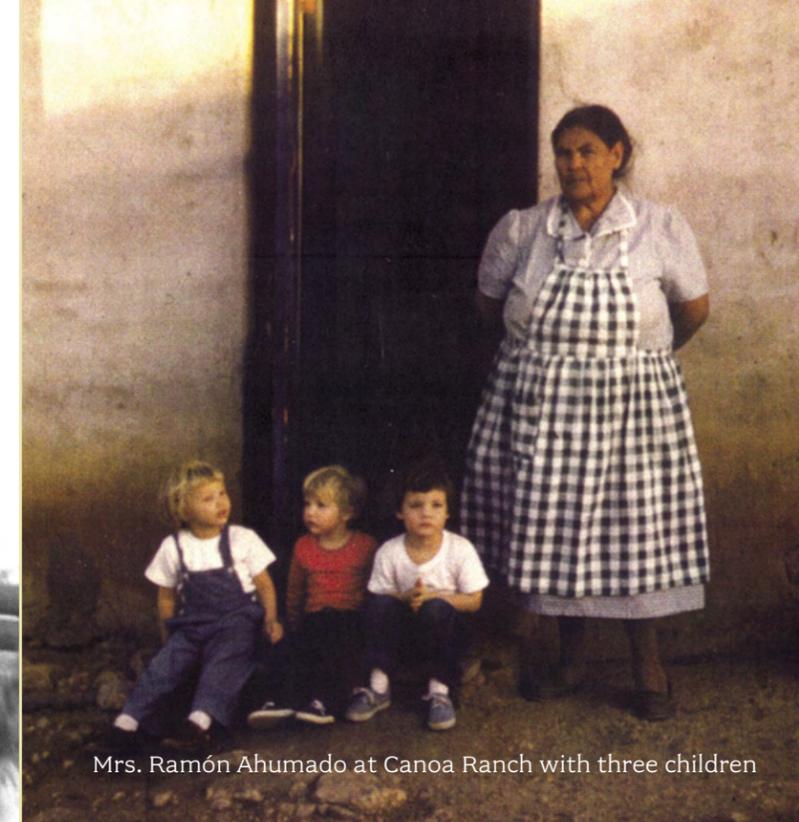
Land claim document, 1848



The Manning children



Howell Manning, Jr. with Deezie in corral at Canoa Ranch



Mrs. Ramón Ahumado at Canoa Ranch with three children

Schoolchildren

A busload of schoolchildren could be brought to Canoa to learn about the environment and conservation using Canoa as a case study. They can be taught how to “read the land” and to understand and identify the changes to the landscape over time. The ranch offers a perfect environment to raise awareness on what decisions and natural events created those changes. What happened to the water is the most basic question to pose to young visitors. What can we learn from this for the future?

Although the site of La Canoa was well known by Spanish explorers and later travelers as a natural spring that was a perennial source of water, today it is a ranch without water. In the past, however, the ranch used many remarkable methods of collecting water from various sources. Every drop was valued. A key story of Canoa is that of water scarcity and creative use. Young visitors could benefit from these lessons and examples of the past.

Local Tourist

Local visitors who have a particular interest in what ranch life was like during the Manning era may relish historical tidbits such as the fact that the ranch was once known for its fine Arabian horses or that 40 to 45 ranch hands lived there year-round. There was a ranch school for the children at one time. And the Mannings and their crew spent their days on horseback and rose as early as three a.m. to herd, round up, brand, and load up cattle for market.



THE FUTURE

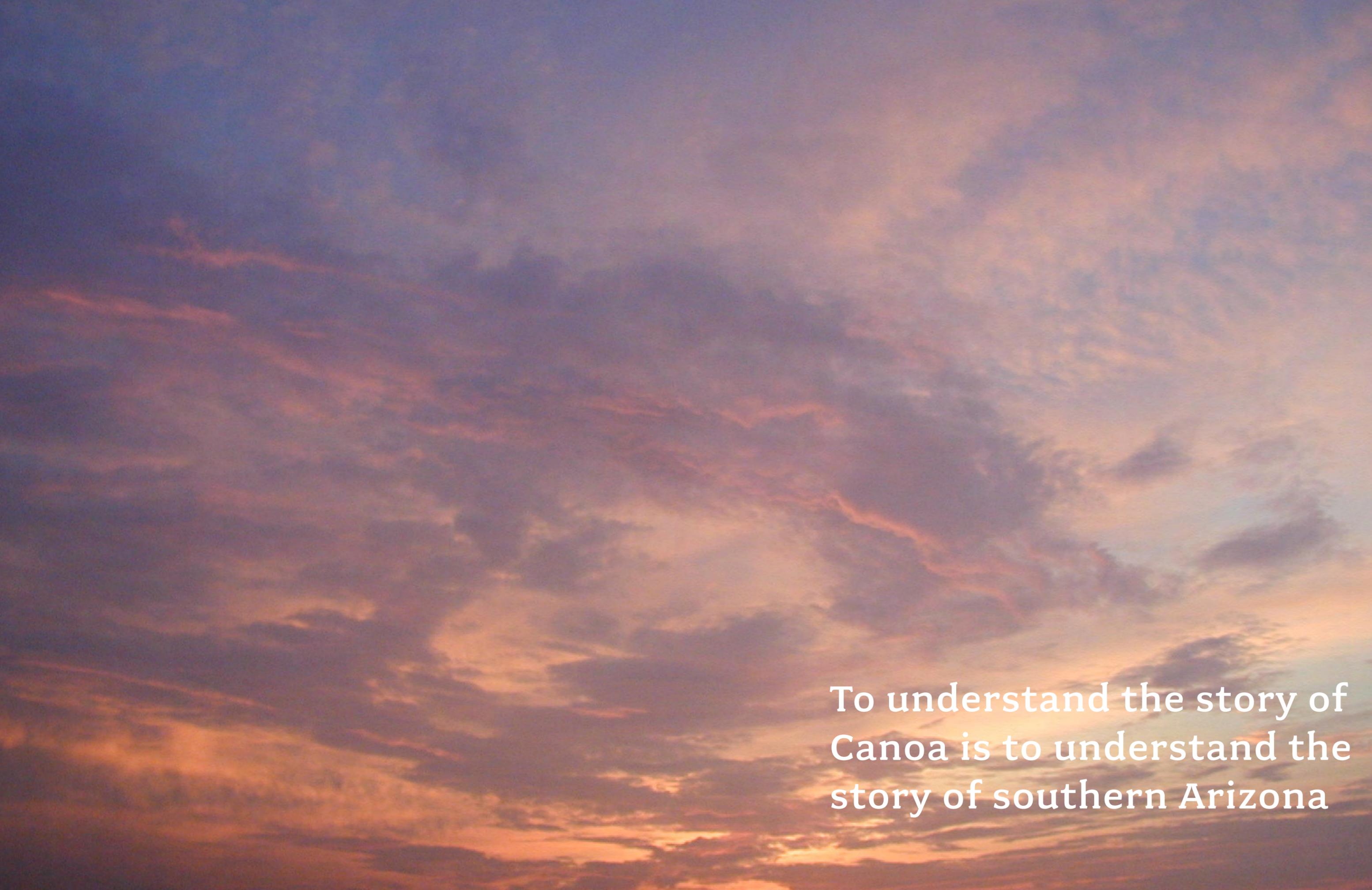
Canoa will be a place that both explores the past and looks to the future, a place that can embrace collaboration with experts in new ways of farming, ranching, and restoring the environment. The possibilities for Canoa are limitless, and the opportunities for ongoing development of interpretation, programming, and education are deep and rich.



An evolving landscape



Continuity and change

A dramatic sunset sky with orange, yellow, and blue clouds. The text is overlaid on the bottom right of the image.

To understand the story of
Canoa is to understand the
story of southern Arizona

pg. 5
Photograph by Howell Manning, Jr.

pg. 6
left to right
Photograph by Howell Manning, Jr.

Photograph by Jonathan Mabry

Photograph by Howell Manning, Jr.

Photograph by Howell Manning, Jr.

pg. 12, 13
Photographs of interiors ca. 1950 by Howell Manning, Jr.

pg. 16
Courtesy of Tomas Javier Castillo, 2003

pg. 29
Photograph by Howell Manning, Jr.

pg. 30-32
Photographs by Howell Manning, Jr.

The rendered images presented in this document represent potential concepts for proposed environmental and interpretive treatments for the Canoa Ranch Master Plan. The images were prepared for the exclusive use of Poster Frost Associates (PFA) as part of its Master Plan Report and may not be reproduced, retransmitted or otherwise used without the express permission of PFA and Ralph Appelbaum Associates.

Market and Operating Potential of the Canoa Ranch Master Plan

FINAL REPORT

**Prepared by:
ConsultEcon, Inc.**

**Prepared for:
Pima County**

December 2006

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EXECUTIVE SUMMARY

ConsultEcon, Inc. was retained by Poster Frost Associates as part of a consultant team retained by Pima County to provide economic and management consulting services for the Canoa Ranch Master Plan. Throughout the planning process, ConsultEcon, Inc. supplied economic research and critical feedback of the planning elements that would affect Canoa Ranch's potential as a heritage attraction. This executive summary presents the results of this work, incorporating reports published in April 2006 as a part of the Canoa Ranch Master Plan Background Report and new information based on the final master plan building and interpretive programs.

Evaluation of Location, Site, and Opportunities

Research into the potential of Canoa Ranch to serve resident and visitor markets as a heritage attraction indicate that it is well-located and appropriate in size and scale. Accessibility and location are considered a great advantage of the 4,800-acre site. Canoa Ranch is located in Green Valley, along Interstate 19 (I-19) approximately 37 miles south of Tucson, Arizona. With adequate highway signage, Canoa Ranch will be easily found by drivers. The location benefits from heavy north south traffic between Tucson and the Mexican border at Nogales. Well-known complimentary points of interest such as Tubac Presidio State Historic Park, Tumacácori National Historical Park, and Madera Canyon in the Coronado National Forest lie south of Canoa Ranch, so with signage, it will be visible to tourists driving to or from these destinations. Care should be taken to ensure nearby developments do not encroach on scenic sightlines, or cause noise and light pollution.

The site has a compelling array of ranching structures and architectural heritage, the 'stories' of the former inhabitants of the ranch, and opportunities for outdoor recreation and learning. There are numerous interpretive themes that have been identified for interpretation at Canoa Ranch. The experience of other historic ranches in Southern Arizona indicates there is a great desire to preserve and make them available to the public for heritage education. Living history museums through the U.S. also indicate that there is a public demand for this type of historic site.

There are several opportunities that will potentially add value to Canoa Ranch's visitor appeal. The Juan Bautista de Anza Trail National Historic Trail passes through the site. This provides opportunities for interpretation of the historic trail, and will make Canoa Ranch more visible through related promotional materials such as maps, brochures, and highway signage. Likewise, the designation of the proposed Santa Cruz Valley National Heritage Area would provide excellent benefits for Canoa Ranch and the whole region. Canoa Ranch has been proposed as the headquarters for the Santa Cruz Valley National Heritage Alliance, the managing organization for the National Heritage Area, giving the ranch more exposure. Additionally, the site would also host (on a rotating basis) the annual Santa Cruz Valley Heritage Festival. The designation of the National Heritage Area has important funding implications because the federal government may grant up to \$1 million annually for a number of project types including historic preservation, educational programs, or tourism promotion among others.

Overview of Resident Market

The overall Resident Market Area for the Canoa Ranch project is defined as Pima County and Santa Cruz County. The Resident Market Area is considered a visitor base and is the population that would

be within appropriate distance to visit Canoa Ranch as part of a day-trip. Tucson area attractions are known to be very well supported by the resident population.

The 2005 population estimate for both counties is 965,600, which is projected to increase to over 1.1 million in 2011. The 2005 median household income for the Resident Market Area is \$34,700, which is about 13 percent lower than U.S. and Arizona medians. Due to the high number of retirees living in the area, Pima County has a large share of population age 50 and up. The town of Green Valley (pop. 17,300) has an average age of over 70. Santa Cruz County has a lower share of 50+ residents than nationally, but a higher share of 0-17 year olds.

Within the overall Resident Market Area, the Primary Market Area is defined as the population within a 15-mile radius of Canoa Ranch. The 2006 population estimate of the Primary Market Area is 39,797, projected to increase to 48,795 in 2011. This market lives closest to the site, would have the most knowledge of the project, and would be more likely to have repeat visitation. The Secondary Market Area is defined as the remaining portion of Pima and Santa Cruz Counties. Visitors to Canoa Ranch who do not live in either County are considered tourists.

Overview of Tourist Market

The tourism industry in Pima County, and the larger region of Southern Arizona, is strong and growing. According to the Arizona Office of Tourism, the 'Tucson and Southern Arizona' region accounts for 14.4 percent of the state's overnight trips in 2004 — this translates to over four million trips. According to the Travel Industry Association, in a report presented by Nichols Tourism Group, Tucson drew an estimated 3.5 million visitors in 2002. Of these, about 72 percent are leisure travelers. Overnight leisure travel in Arizona is strongest in the winter months, especially in Southern Arizona. While the number of day-trips is not included in the estimates above, this can be an important market segment. In addition, there is a large Mexican visitor market in the region, many of which are day-trippers. With sufficient signage, advertising, and outreach, the Mexican market could be a strong component of attendance.

Canoa Ranch is located approximately 37 miles from downtown Tucson. As most visitors to Tucson have access to an automobile, it is close enough to warrant a day-trip or a half day-trip by a visitor to Tucson. At its location, Canoa Ranch would compliment other attractions along I-19, creating a critical mass of complimentary historic sites in the area. Historic and nature related attractions are among the most popular destinations in the region. A number of these well-visited points of interest are found south of Tucson along I-19, including the Titan Missile Museum, Tubac Presidio State Historic Park, Tumacácori National Historical Park, and Madera Canyon in the Coronado National Forest, which attest to the excellent location of Canoa Ranch and the level of tourist potential.

Ranching Heritage Industry Profile

An important part of the work was to review other comparable projects. Following is a summary of characteristics of profiled ranch-related heritage education sites, relevant trends, and lessons learned from research into such attractions. Case studies of relevant facilities that can be considered comparable to Canoa Ranch help to inform planning parameters for the project such as attendance potential, operating budgets, staff composition, and provide a general sense of varying types of programs and operating models. It should be noted that there are no perfect comparable projects to Canoa Ranch as each site will have its own unique circumstances.

- ◆ **Mission and Programs** – The ranch related attractions profiled have unique missions and programs. Education, preservation, and programming about heritage is a primary mission of these sites. Several, such as George Ranch Historical Park and El Rancho de Las Golondrinas are living history oriented — regularly featuring costumed interpreters demonstrating life and industry as it was in historic periods. Agriculture and cattle ranching is a primary interpretive theme as well. Another common mission is to simply preserve historic structures and teach the general public about them. Additionally, preservation of open-space is a common goal — the sites range in size from 47 to 1,200 acres.
- ◆ **Governance** – Heritage education sites can potentially be operated by a number of types of organizations including local or state government, non-profit organizations, or in some cases such as dude ranches, by private companies. The profiled attractions are typically non-profit or government operated. While non-profit organizations do not pay income taxes on revenue, they often raise a substantial portion of their revenue from unearned sources (e.g. gifts, grants, or endowment) to carry out their mission. Examples of government operated facilities include the state-run New Mexico Farm and Ranch Heritage Museum. Government operated facilities, as well as non-profit organizations have unique sets of challenges, many of which are related to consistent funding for programs and operations. Often the facilities that are linked to county, state, or even federal government have access to resources that are not usually available to stand alone non-profits. For example, a state or county run site may be able to borrow special equipment at no extra cost, or it might have access to technical expertise in the administrative offices.
- ◆ **Historic Sites and Interpretation** – Due to the unique history, the corrals and the ranch house, and the indigenous history on the site, Canoa Ranch will certainly be a historic site with opportunities for interpretation of a number of historic and cultural themes. Four of the profiled ranch related attractions have historic structures on site, which serve as a central point of interest. The living history concept is one that has been used extensively at historic sites (real or re-created). This generally implies programs re-enacting life (e.g. cooking, farming, craft making) as it was during the historic period being interpreted. The high cost of operating living history sites results in high operating expenses. The George Ranch Historical Park, whose adult admission fee is \$9.00, has the highest operating cost and the highest admission fee. Some sites have maintained living history on a special event basis (e.g. war reenactments, cultural festivities, holiday programs, weekend programs) to maintain visitor interest but without the day-to-day costs personnel costs of living history. Increasingly, the benefits of drawing the visitor into active participation (rather than passive ‘watching’) have become evident.
- ◆ **Tourist and Resident Market** – The visitor markets available to the profiled attractions are similar in that most are located in or in relatively close proximity to a metro-market. As Canoa Ranch is 37 miles from Tucson, most of these attractions are within 50 miles of cities. Most of these attractions benefit from both tourist and resident markets. However, due to the educational orientation (especially for school children) of these attractions, they tend to draw more attendance from local residents. Therefore, the need for new programming to draw repeat visitors is very important. Good visibility is needed for significant tourist visitation. The New Mexico Farm and Ranch Heritage Museum, like Canoa, is geographically located to benefit from potential Mexican visitors. While there has been some impact on yearly festivals and special events, generally the attendance draw has not been significant from the Mexican visitor market.

- ◆ **Attendance** – Annual attendance at the profiled ranch related attractions ranges from 7,000 to 200,000 visitors. A wide range was chosen to demonstrate the different type of attractions and how they are dependent on a number of factors including:
 - Available visitor (tourist) market and resident market population
 - Location and accessibility
 - Site quality and influence of adjacent land uses
 - Programs offered
 - Size and quality of exhibitry
 - Price/value relationships
 - Marketing
 - Local competition for leisure time and dollars
- ◆ **Price** – Adult admissions prices for the five profiled attractions range from \$3.00 to \$9.00 per person. Some state parks charge per vehicle rather than per person. The average adult admission price among the profiled attractions is \$5.00. Generally, compared to visitor attractions, these profiled facilities are modestly priced. Admission prices should be set to be affordable for families living in the region, and should be competitive with other local attractions, while at the same time being high enough to help support the budget through earned revenue.
- ◆ **Operations and Budget** – The size of an operating budget is dependent on a number of factors including facility size and number of visitors, sources of funding, and the mission of the organization. Operating budgets vary from \$500,000 at MacGregor Ranch to almost \$3 million at George Ranch Historical Park. More complex operations might include extensive programming, marketing, and facility rentals and catering. Some facilities operate on a more minimalist approach and may include minimal staffing and maintenance costs, such as that sometimes found in state and county parks. Often operations such as state or local parks are supported by larger administrations that provide value to the park or attraction in terms of expertise, business planning, maintenance, equipment use, and other services that may not be apparent in the operating budget. These support structures and shared costs contrast to the non-profit model in which an organization often must support itself entirely both in terms of operating revenue as well as other types of support (e.g. operating expertise, political support, maintenance costs, bookkeeping).
- ◆ **Personnel** – Among the profiled sites, the number of full-time equivalent employees (FTEs) ranges from 6 to 35. Personnel costs often make up the majority of budget expenses. Living history attractions require larger staff sizes, as do other programming-heavy attractions, and thus are more expensive to operate than the smaller, less ‘attraction’ oriented sites. Some of the more minimalist operations are historic sites or parks where the emphasis is on self-guided tours — especially outdoor touring. Also, organizations such as MacGregor Ranch intentionally serve a small market as their budget allows, thus keeping staff-size small. The type of attraction and organization envisioned has much to do with the site’s personnel profile. The importance of volunteers at the facilities profiled must be stressed. If properly organized, docents can replace personnel at certain positions, thus saving salary expenses, which could result in a more economically viable operation.

Overview of Canoa Ranch Master Plan and Proposed Fee Structure

The Canoa Ranch Master Plan contains multiple goals, including conserving land, preserving ranching heritage, and creating a public park. The latter two items are the primary concerns of this study because they have the potential to earn revenue to support Canoa Ranch's operations. To this end, this report makes a distinction between the primary public access area, referred to as the park, and the Heritage Area, which is an attraction within the park. The park includes an orientation center, gift shop, picnic areas, restrooms, a lake, walking trails, a restaurant, and a conference center as well as a possible headquarters for the Santa Cruz Valley National Heritage Area when federal legislation enables its creation. The Heritage Area consists of the existing ranch area, its buildings, and corrals that will be restored and converted to accommodate exhibits as well as other interpretive programming.

As conceived in the master plan, a two-tiered fee structure is proposed for Canoa Ranch, which is similar to another Tucson area attraction, Colossal Cave Mountain Park. Under these circumstances, visitors pay to park at the site, which grants them access to the park amenities listed above. Once visitors have parked, they may purchase tickets to the Heritage Area. All visitors will be required to pay the parking fee, but tickets to the Heritage Area will be an additional and optional charge. Local residents and regular park users will be able to purchase an annual parking pass, giving them unlimited access to the park at Canoa Ranch.

Attendance Potential Summary

Preliminary attendance potential was developed for three different options. For the final plan, this attendance analysis includes overall park attendance to Canoa Ranch and attendance to the Heritage Area. The stabilized park attendance potential range at the Canoa Ranch is 62,900 to 134,100, with a mid-range estimate of 98,500 visitors. This may be a conservative estimate for the number of people attending the park, particularly with the presence of a water resource. The estimated stabilized mid-range attendance at the Heritage Area is 59,100, or 60 percent of overall park attendance. The attendance analysis assumes that the project will be aggressively marketed, competently operated, and will receive full community support in the public and private sectors.

Operating Potential Summary

Canoa Ranch is assumed to operate as a park in the Pima County park system. Operating revenues of Canoa Ranch will be derived mainly from parking passes and ticket sales, but substantial additional earned revenue can be derived from other sources such as gift shop sales, facility rentals, a restaurant, and bunkhouse rentals. Canoa Ranch has the potential for current dollar project earned revenues of approximately \$1.1 million in a stable year of operation (year 4) based on this plan. Outside support and contributions are expected to be necessary to the financial viability of Canoa Ranch. There is a need for additional contributed revenues estimated at approximately 22 percent of operating costs in a stable year (year 4).

The Canoa Ranch operating profile has stable year (year 4) expenses of approximately \$1.3 million. These operating costs are in line with industry standards. The operating revenue and expense analyses are based on achieving break-even operations. Comparisons of operating benchmark data from the comparable ranch attractions indicate the reasonableness of the Canoa Ranch operating plan.

The staffing profile includes a staff of 15 full-time, 9 part-time year-round and seasonal employees, for a total of 19.5 full-time equivalent positions. Personnel salaries and wages as projected are

approximately 51 percent of total expenses at the facility, which is typical in the industry. A strong cadre of volunteer docents, who would have educational and interpretive duties as well as assisting with special projects and other important functions, will be vital to the successful operation of the facility.

Section I
INTRODUCTION AND ASSUMPTIONS

In preparing this report, the following assumptions were made. This study is qualified in its entirety by these assumptions.

1. The size and design of the Canoa Ranch and its exhibits will be appropriate to the market potential, and will serve to create a high quality, stimulating attraction with broad-based audience appeal and a distinctive image. The proposed improvements will create reputations as unique attraction and facilities in the region. This distinction will give them further visibility as “must-see” attractions and educational experiences. The entrances to the sites will be highly visible and well signed.
2. Canoa Ranch will be competently and effectively managed. Aggressive promotional campaigns will be developed and implemented. The admission prices for the paid elements of Canoa Ranch will be consistent with the entertainment and educational value offered, and with current attraction admissions prices for other comparable visitor attractions.
3. There will be no physical constraints to impede visitors to the facility, such as major construction activity. Changes in economic and social conditions due to events including, but not limited to, major recessions, major environmental problems or disasters that would negatively affect operations and visitation may impact on the findings in this study, including visitor projections.
4. Every reasonable effort has been made in order that the data contained in this study reflect the most accurate and timely information possible, and it is believed to be reliable. This study is based on estimates, assumptions and other information developed by ConsultEcon, Inc. from its independent research efforts, general knowledge of the industry, and consultations with the client and other consultants. No responsibility is assumed for inaccuracies in reporting by the client, its agents, representatives and consultants, or any other data source used in the preparation of this study. No warranty or representation is made that any of the projected values or results contained in this study will actually be achieved. There will usually be differences between forecasted or projected results and actual results because events and circumstances usually do not occur as expected. Other factors not considered in the study may influence actual results.
5. Possession of this report does not carry with it the right of publication. This report will be presented to third parties in its entirety and no abstracting of the report will be made without first obtaining permission of ConsultEcon, Inc., which consent will not be unreasonably withheld.
6. This report may not be used for any purpose other than that for which it was prepared. Neither all nor any part of the contents of this study shall be disseminated to the public through advertising media, news media or any other public means of communication without the prior consent of ConsultEcon, Inc.
7. Outputs of computer models used in this report and numbers cited in text are rounded. These outputs may therefore slightly affect totals and summaries.

8. This report was prepared during the period July 2005 to December 2006. It represents data available at that time.

Section II

BASELINE EVALUATION OF CANOA RANCH

This section provides an initial overview and research into the viability of Canoa Ranch as a heritage education site from a market perspective.¹ It takes into account factors such as accessibility and visibility from major population centers and travel corridors, the surrounding land uses, the components located on the site, tourism potential in the area, and opportunities for partnerships. This study assumes Canoa Ranch will be developed as a historic site and heritage education center based on the numerous points of interest the site has to offer including historic ranch structures, the historical eras represented, the diverse peoples who have inhabited the site, horseback and walking trails, and the environmental education that can be taught at the site.

SITE EVALUATION

Following is an evaluation of the Canoa Ranch site in terms of location, visitor accessibility, site visibility, and surrounding land-uses.

Accessibility and Visibility

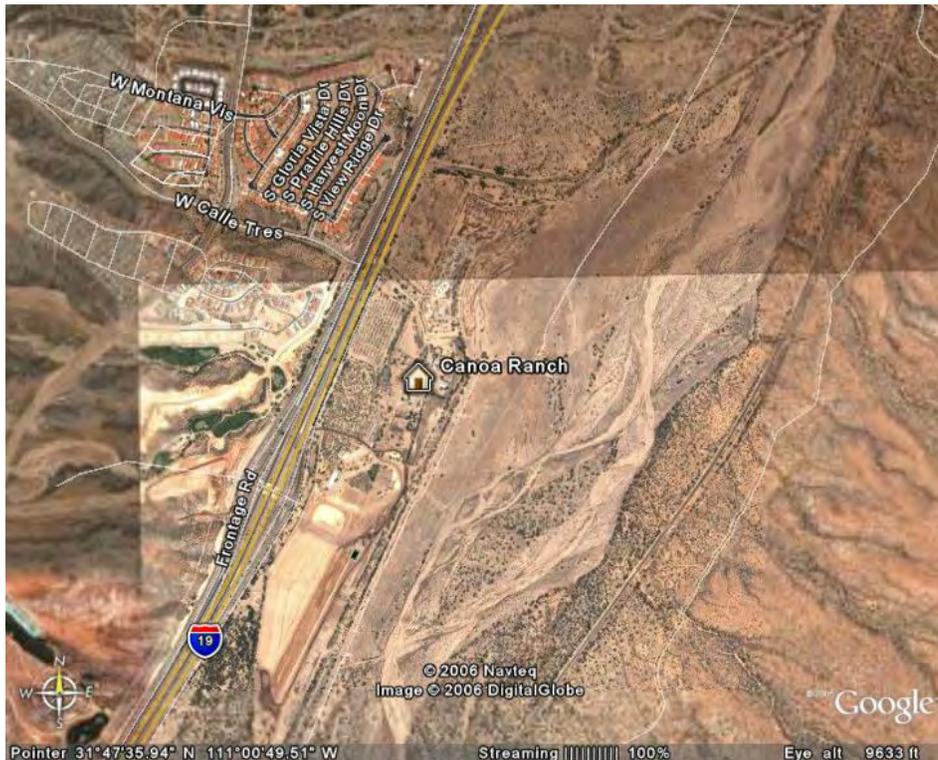
Canoa Ranch is located on the east side of Interstate 19, almost directly across from the residential community of Green Valley (pop. 17,300). The Tucson Metropolitan Area (pop. 924,500) is located approximately 37 miles north, a drive of approximately 40 minutes. Nogales, Arizona (pop. 20,800) and its neighbor, Nogales, Mexico (pop. 160,000) are located about 35 miles to the south of Canoa Ranch. The site is in a very low density area and is currently accessible by automobile. The site is currently accessed by frontage roads at exit 56 from I-19.

The ease of finding the site and distance from Tucson is considered an important asset, as attendance to heritage sites is often affected by its location and ability to be easily accessed, as well as its ability to draw unplanned visits by pass-through travelers. A positive aspect of the golf club, resort, and residential developments in Green Valley which have also assumed the name 'Canoa Ranch', is that drivers are increasingly familiar with the name and general location of Canoa Ranch south of Tucson.

¹ This section of the report was originally produced in memorandum form in January 2006 and published in the Canoa Ranch Master Plan Background Report, April 2006. It has been modified for the purpose of integrating into this report format and includes information available at that time.

It will be important that signage distinguishes the historic ranch property from these similarly named developments. **Figure II-1** shows the approximate location of Canoa Ranch.

Figure II-1
Location of Canoa Ranch



Source: Google Earth.

Surrounding Land Uses

The area surrounding Canoa Ranch on the east side of I-19 is generally undeveloped or lightly developed to the East and South. There are suburban developments at Green Valley to the North and West of the site, linearly along I-19. Homes and golf courses lie directly across the interstate from the ranch house complex and are visible from the ranch house site. Green Valley is a community with a large retired population. It is likely that Canoa Ranch will be of interest to Green Valley residents, and they will appreciate it as a public green-space — potentially with walking trails and opportunities for bird watching, star gazing, and other passive activities. The surrounding land uses for Canoa Ranch appear to be appropriate for the type of destination that is envisioned. It will be very important to preserve — where possible — the scenic and rural qualities that Canoa Ranch enjoys. Southern Arizona has a wealth of outdoor recreation opportunities, therefore visitors might easily dismiss an area

that is considered noisy, visually unpleasant, or overdeveloped. Care should be taken to preserve scenic sightlines, manage noise, and manage new development near Canoa Ranch.

There are some very low density residential areas to the southwest of the property backing up to the Santa Rita Mountains, which serve as a scenic backdrop for Canoa Ranch, approximately 8 miles east of the site. The mountains are protected as part of the Mt. Wrightson Wilderness, a popular destination for hikers and outdoor enthusiasts. The primary access point is located within the Madera Canyon Recreation Area, where roads and parking areas are paved — visitor use the Continental Road exit (exit #63). The Smithsonian Observatory on top of Mt. Hopkins, can be seen from the Ranch. This is also a minor tourist draw, accessed through the town of Amado, 12 miles to the South.

OVERVIEW OF RESIDENT MARKET

The following is an assessment of the Resident Market Area population and demographics for Canoa Ranch. The Resident Market Area for a visitor destination is typically considered the area from which residents would be likely to visit the site as a day-trip. A preliminary Resident Market Area for a heritage education site at Canoa Ranch has been defined as Pima and Santa Cruz Counties. Further development of the business plan for the site may entail a more refined definition of the Resident Market Area incorporating Primary, Secondary, and Tertiary Market Areas. Data in **Table II-1** show 2005 population estimates and 2010 projections for the Resident Market Area.

The site was purchased by Pima County with a goal of open-space and historic preservation, thus County residents will be the chief beneficiaries of Canoa Ranch. Pima County has a 2005 population estimate of 924,500.² It is expected to grow by 9.3 percent by 2010. Most of Pima County's population resides to the north of Canoa Ranch in Tucson, which comprises the vast majority of the County's population.³

Canoa Ranch is located about five miles from the Santa Cruz County border and is approximately 35 miles from the border towns of Nogales. Due to its close proximity, Santa Cruz County residents are also considered part of the Resident Market Area for Canoa Ranch. Santa Cruz County has a 2005

² 2005 population estimates are sourced to Sales and Marketing Management, 2005 Survey of Buying Power. The Arizona Department of Economic Security's official population estimate as of July 2004, is 931,210 for Pima County, and 41,985 for Santa Cruz County.

³ The Tucson Metro Area is defined as Pima County; thus their demographic characteristics are exactly the same.

population estimate of 41,100, and is projected to grow 7.3 percent by 2010. Combined, the Resident Market counties have an estimated 2005 population of 965,600. This total is projected to grow 9.2 percent over the next five years to over one million, which will increase the visitor market size for Canoa Ranch.

The town of Green Valley is very close to Canoa Ranch. The residents of Green Valley can also be seen as beneficiaries of the site, and are likely to be among the most frequent users, given its proximity. Green valley had a population of 17,300 in 2000 — the most recent estimate available. Green Valley is primarily a community for retirees. According to the 2000 census, the median age is 72.2; and approximately 82 percent of its households have an occupant who is over the age of 65. There are very few children or families in Green Valley. It is expected that Canoa Ranch will provide a resource for leisure activity — and volunteer opportunities — for the residents of Green Valley and other area residents.

Table II-1
Estimated 2005 and Projected 2010 Residential Market Population

	2005 Population Estimate	2010 Population Projection	Percent Change
Pima County	924,500	1,010,300	9.3%
Tucson City	521,000		
Green Valley ^{1/}	17,300		
Santa Cruz County	41,100	44,100	7.3%
Nogales City	20,800		
Total Resident Market	965,600	1,054,400	9.2%

1/ Green Valley population estimate is from the 2000 U.S. Census.

Source: Sales and Marketing Management, 2005, Survey of Buying Power.

Data in **Table II-2** compare median household income (EBI)⁴ among the two resident market counties. Pima County is somewhat more affluent with a household income of \$34,900; Santa Cruz County

⁴ Measured as “Effective Buying Income,” - personal income less personal tax and non-tax payments (disposable income). It is a proprietary measure of income developed by Sales and Marketing Management.

follows with \$29,400 per household. The weighted average of this market area is \$34,700. Both the median household income levels of the State of Arizona and the U.S. are about 13 percent higher, more than \$39,000.

Table II-2
Median Household Income

	Median Household Income
Pima County	\$34,900
Santa Cruz County	\$29,400
Weighted Average	\$34,700
<i>State of Arizona</i>	<i>\$39,500</i>
<i>U.S.</i>	<i>\$39,300</i>

Source: Sales and Marketing Management, 2005, Survey of Buying Power.

Data in **Table II-3** provide an age profile for Pima and Santa Cruz counties. Combined, the two counties have an age profile that is fairly similar to the U.S. and the State of Arizona. Southern Arizona is known as a retirement haven. This is evident in Pima County, where the ratio of residents 50+ is higher than the State or National average. Santa Cruz County, whose population is much smaller, has a much younger population, with fewer 50+ residents, and a very high 0-17 population. Given the attendance support for other attractions and historic sites in Southern Arizona, the age profile does not appear to be a detriment to the Canoa Ranch visitor market, as older citizens are more often associated with visitation to historical and heritage sites

Table II-3
Age Profile

	0-17	18-24	25-34	35-49	50+
Pima County	24.8%	10.2%	13.8%	20.4%	30.8%
Santa Cruz County	33.5%	9.1%	10.3%	19.6%	27.5%
Weighted Average	25.2%	10.2%	13.7%	20.4%	30.7%
<i>State of Arizona</i>	<i>27.8%</i>	<i>9.1%</i>	<i>14.2%</i>	<i>20.5%</i>	<i>28.4%</i>
<i>U.S.</i>	<i>24.9%</i>	<i>9.9%</i>	<i>13.5%</i>	<i>22.4%</i>	<i>29.4%</i>

Source: Sales and Marketing Management, 2005, Survey of Buying Power.

OVERVIEW OF TOURIST MARKET AND AREA ATTRACTIONS

Tourists may be an important market segment for the Canoa Ranch project. Arizona is a popular travel destination, with an estimated 27.8 million overnight trips to or within the State in 2004.⁵

Leisure visitors comprise 78 percent of these trips. An estimated 14.4 percent of Arizona leisure trips were taken in the “Tucson and Southern” area of Arizona (approximately 4,003,000 trips). Overnight leisure travel in Arizona is strongest in the winter months, especially in Southern Arizona.

Approximately 63 percent of leisure visitors traveled there by automobile as their primary means of transportation. In 2004, Arizona attracted more than 633,000 overseas visitors, not including visitors from Mexico and Canada. Visitors to Arizona from Mexico are also a major market, with 23 million Mexican visitors - almost exclusively from the neighboring state of Sonora. Pima County leads the State in expenditures by Mexican visitors with 31 percent of the total. Depending upon the way that Canoa Ranch is developed, the Mexican visitor could be an important sub-market for the project.

Travel to the Tucson Metro Area is growing strongly. According to TIA, in a report presented by Nichols Tourism Group, Tucson drew an estimated 3.5 million visitors in 2002, an increase of approximately 30 percent from the 1998-1999 estimate of 2.7 million.⁶ Of these, about 72 percent are leisure travelers. The impact of day-trip tourism (not counted in these estimates) should also be considered. With Mexico 70 miles away, and Phoenix 120 miles away, there is significant day-trip visitation potential to the Tucson area. Visitors to Tucson visit historical places/ museums at rates higher than the State of Arizona or U.S. as a whole. This indicates a market predisposed to historical and cultural topics.

Canoa Ranch is located approximately 37 miles from downtown Tucson. As most visitors to Tucson have access to an automobile, it is close enough to warrant a day-trip or a half day-trip by a visitor to Tucson. In fact many tourist attractions are located outside of the City. For example, the Arizona-Sonora Desert Museum (460,000 annual visitors) is located 20 miles from Downtown. There are several other popular historic attractions along I-19 toward Nogales. At its location, Canoa Ranch would compliment these attractions, creating more critical mass in the region as a destination for historic sites.

⁵ Source: Arizona Tourism Statistical Report, 2004

⁶ Source: University of Arizona study, *Tourism in the Tucson Metropolitan, 1999*.

Tourism Along Interstate-19

I-19 is a well-traveled route for tourists heading to locations south of Tucson, or visiting Nogales. It is also well-traveled by Mexican visitors traveling northbound, and returning southbound. Following is a description of other relevant tourist attractions south of Tucson. **Figure II-2** shows the approximate location of Canoa Ranch in relation to other local tourist attractions along I-19.

Figure II-2
Tourist Destinations Along I-19



Source: ConsultEcon, Inc.

Nearby Historic Attractions

San Xavier Del Bac - a National Historic Landmark and functioning parish church, is 9 miles southwest of Tucson, Arizona, off I-19 on San Xavier Road on the San Xavier Reservation. Called the "White Dove of the Desert," San Xavier Del Bac is one of the most beautiful mission church complexes in the Southwest. The original mission was founded in 1692 by a Jesuit missionary, Father Eusebio Francisco Kino, to serve the Sobaipuri Indians (O'odham). The present church was built by the Franciscans between 1783-1797. A self-guided tour is available daily from 8:00 a.m. to 6:00 p.m. except during services. An estimated 300,000 persons visit the mission annually.⁷

⁷ Source: Center for Desert Archaeology. Santa Cruz Valley National Heritage Area Feasibility Study.

Tubac Presidio State Historic Park - San Ignacio de Tubac was established in 1752 in response to the Pima Indian Rebellion. Tubac is the oldest of the three Spanish presidios founded in Arizona and was once considered the official capitol of the region. The Park and museum highlight the contributions of American Indians, Spaniards, Mexicans and Anglo-Americans to Arizona's history and development. The museum also has exhibit areas dedicated to the contributions of ranching to the region. The State Park has drawn 15,000 to 17,000 visitors annually in recent years. The town of Tubac is known as a center for arts and crafts and draws many more visitors than the State Park

Tumacácori National Historical Park - San José de Tumacácori was founded by Jesuit missionaries in 1691. Constructed in 1757, the original mission included a small church and compound. In 1799 a more imposing church with a painted interior was built by Franciscan missionaries. Other sites in the mission compound include a small mortuary chapel, the ruins of the convento (missionary residence), a granary, remains of an Indian village, a historic cemetery and the remains of the mission garden and orchard. The National Park Service charges an admission of \$3.00 at Tumacácori and draws approximately 50,000 visitors annually.

Other Attractions Near I-19

Madera Canyon Recreation Area – Nestled in the middle of the Santa Rita Mountains in southeast Arizona, Madera Canyon is renowned for its outstanding scenic beauty, diverse plant life, and recreation opportunities for hikers, birders, and nature lovers. There are 260,000 visitors annually.⁸

Smithsonian Astrophysical Observatory – Located at the base of Mt. Hopkins in the Santa Rita Mountains, 56 kilometers (35 miles) south of Tucson and just within the boundary of the Coronado National Forest, the Fred Lawrence Whipple Observatory Visitors Center features exhibits on astronomy and astrophysics, natural science, and cultural history. Guided, reserved-seat bus tours for the general public are conducted Mondays, Wednesdays, and Fridays from mid-March through November. Approximately 5,000 visitors pass through the Visitor Center annually — about half take the tour. Many of these visitors are retired persons — often with relatives. Approximately 20 percent are from the Tucson area, 10 percent are from Phoenix, and the remainder are from Green Valley and the residential areas south of Tucson.

⁸ Source: Center for Desert Archaeology. Santa Cruz Valley National Heritage Area Feasibility Study.

Titan Missile Museum – Located approximately 25 miles south of Tucson, the Titan Missile Museum is the only publicly accessible Titan II missile site in the nation. It is operated by the Pima Air and Space Museum. Admission tickets are sold separately or in a combination deal; adult admission is \$8.50. According to the American Association of Museums Directory, there are approximately 50,000 annual visitors to the Titan Missile Museum.

Mexican Visitor Market in Arizona

Mexican visitors represent a major potential source of visitation to Canoa Ranch. In 2001, the last year for which visitation data is available⁹, over 23 million Mexican visitors came to Arizona; almost exclusively from the neighboring State of Sonora. Pima County and Santa Cruz Counties garner over 55 percent of the spending by Mexican visitors. Tucson is located approximately 72 miles from Nogales, Sonora, and Canoa Ranch is about 42 miles from Nogales. The State of Sonora had a 2000 population of 2.2 million (historic growth rates would have it approaching 2.6 million in 2005). The population of Nogales, Sonora, rose from 110,000 in 1995 to 160,000 people in 2004. Local authorities say the actual number of residents in Nogales is in the 250,000 to 300,000 range.¹⁰ In 2004, approximately 11.7 million non-US citizens crossed the border from Mexico into Nogales, Arizona, according to data from the U.S. Customs & Border Protection. While there is not a precise breakout of pedestrian visitors vs. automobile traveling visitors, there is a record of 3.36 million vehicle crossings in Nogales. The volume of traffic at the Nogales border and the economic impact data of Mexican visitors to Arizona and Pima County indicate a very large potential market segment for Canoa Ranch.

PRELIMINARY EVALUATION OF SITE AS A POTENTIAL VISITOR DESTINATION

The Manning House and the collection of other historic structures (school house, servant's quarters, stables, corrals etc) and pre-historic archeological sites found on Canoa Ranch property provide interesting and compelling 'stories.' The site has an appropriate and coherent scale for development as a place for heritage education and recreation. Potential interpretive themes related to life on the ranch, and in the region, include the following:

- ◆ cattle ranching;

⁹ From the University of Arizona's Economic and Business Research Program, The Economic Impacts of Mexican Visitors to Arizona 2001 dated July 2002. Study has not been updated since 2002.

¹⁰ Ruiz, Ruben A., Maria del Carmen Salazar and Luis Arvayo. "Growth: A mixed blessing: The booming population of Nogales, Sonora, creates stresses that the city's infrastructure is not equipped to handle" Arizona Daily Star. May 23, 2004.

- ◆ agriculture and livestock;
- ◆ western vernacular architecture;
- ◆ traditional Sonoran architecture;
- ◆ historic interior furnishings;
- ◆ history of a prominent family;
- ◆ the historic inhabitants (Native-American, Spanish, Mexican, Anglo-Americans, etc);
- ◆ natural and managed landscapes; and
- ◆ water resource management.

There is strong potential to interpret these interesting aspects of the ranch property at the site through exhibits, living history demonstrations, and special events. Such historic sites (real or re-created) have been developed in the Southwest and throughout the country. While there are still many elements of the site plan and program to be established, the preliminary judgment is that the site does hold strong potential for development as a destination serving local residents and tourists to the region.

There are a number of ranching-oriented historic sites in Southern Arizona including the following:

Empire Ranch – Located on a remote section of Highway 83 north of Sonoita (40 miles from Tucson), the Empire Ranch is early in the process of developing a historical education center around its ranching history. The Bureau of Land Management, who manage the ranch, and the non-profit Empire Ranch Foundation are working together on preservation of the historic structures and a master plan for the site. The historic structures on the site are similar in size and scale to Canoa Ranch.

La Posta Quemada – This working ranch is located 25-miles southwest of Tucson and is part of Colossal Cave Mountain Park. The ranch portion of the site features a museum, research library, a gift shop, and open-air café serving Mexican food. The Ranch Headquarters House on La Posta Quemada Ranch was built in 1967 (the original adobe Ranch house burned to the ground in 1965). Today it houses a museum with two focuses: the human history and the natural history of the caves and the Cienega region.

Roy P. Drachman-Agua Caliente Regional Park – This 101-acre Pima County park surrounds a perennial warm spring flowing into three large ponds. Interpretive signs explaining the geology and history of the warm spring and the natural and human history of the site are installed throughout the park. Several historic ranch buildings on the site have been preserved and restored. It is located on the far east-side of Tucson.

San Raphael Ranch State Park (in planning phase) – This public land, located in 60 miles from Tucson in Patagonia, features a historic pre-territorial ranch house with surround-house porches, barns, and windmills. The present land base of the ranch includes over 20,000 acres. Arizona State Parks has purchased 3,550 acres of land on the lower section of the Ranch. The Park is not yet open to the public, but plans are under way for nature walks, an historic house tour, and other activities to be offered.

Numerous ‘living history’ museums and other heritage centers about agricultural, ranching or rural life are found in other parts of the Southwest and in the U.S. and have operated as successful visitor destinations. Further research will include profiles of these ‘comparable’ sites to more fully understand and explain their relevant market and operating characteristics.

The site also holds excellent potential as a place for outdoor recreation and learning. Equestrian trails are proposed on the site. Currently there is a horse stable located on the site which will continue to operate and serve as a staging area for trail rides through the property. Walking trails will also be established through the Ranch leading to points of interest and marked with interpretive signs to inform the visitor about interesting geographic or historical features. There has also been some discussion about keeping several livestock animals on the site to preserve the feeling and character of a working ranch. These site features will provide an informative, interesting, and worthwhile experience for visitors. A full calendar of special events and programs would provide opportunities for repeat visitation by local and regional residents.

OPPORTUNITIES AND PARTNERSHIPS

Following are descriptions of potential opportunities for Canoa Ranch related to historic preservation/heritage education and regional tourism promotion.

Juan Bautista de Anza National Historic Trail - The trail was established in 1990 and commemorates the route followed by a Spanish commander, Juan Bautista de Anza, in 1775-76, when he led a contingent of 30 soldiers and their families to found a presidio and mission near the San Francisco Bay. The Anza trail passes through Nogales, Tumacácori, Tubac, and Tucson along the Santa Cruz River. As a key site along the trail, Canoa Ranch will be involved in future promotional material, maps, and signage. It may have access to funding for Anza trail preservation projects. Association with the trail will generally boost the credibility of the site as a worthy historic site to visit.

Santa Cruz Valley National Heritage Area – In 2005, a feasibility study for the proposed Santa Cruz Valley National Heritage Area was submitted to the National Park Service in an effort to add the region to the 27 existing National Heritage Areas in the U.S. Canoa Ranch is located in a very central, well-traveled route within the proposed boundaries. The goal of this designation would be to unite this 3,300 square mile region in a strategy for voluntary, broadly participatory resource management through decision making at a local level. Heritage and environmental education would be used, rather than

regulation, to build a stewardship ethic and encourage conservation. The National Heritage Area program is based upon several principals: Heritage Education, Voluntary Preservation, Security of Property Rights, and Local Management.¹¹ The direct benefit of the Heritage Area for Canoa Ranch — if approved — will be in the increased promotion and recognition of the area as a tourism region. Like the Anza National Historic Trail, the Santa Cruz Valley National Heritage Area will provide opportunities for promotion of Canoa Ranch as one of the key heritage education sites in the region. The opportunity for funding is another potential benefits to arise out of designation of the National Heritage Area.

Canoa Ranch has been proposed as the headquarters for the Santa Cruz Valley National Heritage Alliance, the local organization that will develop and manage the Santa Cruz Valley National Heritage Area. There would be a major positive impact for visitation to Canoa Ranch, as a headquarters for the Heritage Area, and one of the key heritage education sites. Project planners have suggested the site could be a key destination for heritage related conferences and events. Additionally, an annual Santa Cruz Valley Heritage Festival held at rotating sites is planned. Canoa Ranch is envisioned as one of the locations for the festivities, bringing thousands of visitors to enjoy music, food, arts and crafts, and heritage related traditions.

Funding for the National Heritage Area will be organized through a competitive program for projects and/or organizations to access match funding which will be appropriated to the National Heritage Area from Congress via the National Park Service. Each year the Santa Cruz Valley Heritage Alliance will accept proposals and create a list of priority projects for following year funding. Local sources of match funding will be identified and combined to create a total match with a \$1 million federal funding limit. As a preservation and heritage education site, Canoa Ranch would have the opportunity to apply for Federal funding, which could be instrumental in its development.

SUMMARY OF BASELINE EVALUATION OF CANOA RANCH

Preliminary research into the potential of Canoa Ranch to serve resident and visitor markets as a heritage education site indicates that it is well-located and appropriate in size and scale. Accessibility and location are considered great advantages of the site. Canoa Ranch is located approximately 37

¹¹ Source: Center for Desert Archaeology. Santa Cruz Valley National Heritage Area Feasibility Study.

miles from Tucson, and is less than a mile from residential developments of Green Valley. With adequate highway signage, Canoa Ranch will be easily found by drivers. The location benefits from heavy north south traffic between Tucson and the Mexican border at Nogales. Well known points of interest such as Tubac, Tumacácori, and Madera Canyon lie south of Canoa Ranch, so with signage, it will be visible to many of the tourists driving to or from these destinations. Care should be taken to ensure nearby developments do not encroach on scenic sightlines, or cause noise and light pollution.

A preliminary definition of the Resident Market Area for Canoa Ranch, the area from which residents could visit the site as a day-trip, includes Pima County and Santa Cruz County. The total population for this area is 965,600 and is growing rapidly. The median household income for the Resident Market Area is \$34,700, which is about 13 percent lower than the National and State medians. The overall age profile is fairly similar to the U.S. Due to the high number of retirees living in the area, Pima County has a large share of the population age 50+. The town of Green Valley (pop. 17,300) has an average age of over 70. Santa Cruz County has a lower share of 50+ residents than the U.S., but a higher share of 0-17 year olds. Tucson area attractions are known to be very well supported by the resident population.

The tourism industry in Pima County, and the larger region of Southern Arizona, is strong and growing. Tucson draws an estimated 3.5 million visitors annually. The 'Tucson and Southern' Arizona region comprises 14.4 percent of the State's overnight trips; or over four million trips. There is also a large Mexican visitor market in the region. With sufficient signage, advertising, and outreach, this market could be a significant component of attendance. Historic and nature related attractions are among the most popular destinations in the region. A number of these well-visited points of interest are found south of Tucson along I-19 including the Titan Missile Museum, Tubac Presidio, Tumacácori National Historical Park, and Madera Canyon which attest to the excellent location of Canoa Ranch and the level of tourist potential.

The site has a compelling array of ranching structures and architectural heritage, the 'stories' of the former inhabitants of the ranch, and opportunities for outdoor recreation and learning. There are numerous interpretive themes that can be taught at Canoa Ranch. The experience of other historic ranches in Southern Arizona indicates there is a great desire to preserve them and make them available to the public for heritage education. Living history museums through the U.S. also indicate that there is a public demand for this type of historic site.

There are several opportunities that will potentially add value to Canoa Ranch's visitor appeal. The *Juan Bautista de Anza Trail* passes through the site. This provides opportunities for interpretation of the historic trail, and will make Canoa Ranch more visible through related promotional materials such as maps, brochures, and highway signage. Likewise, the designation of the proposed *Santa Cruz Valley National Heritage Area* would provide excellent benefits for Canoa Ranch. In addition to the promotional boost the whole region would enjoy, Canoa Ranch has been proposed as the headquarters for the Santa Cruz Valley National Heritage Alliance, the managing organization for the National Heritage Area. Additionally, the site would also host (on a rotating basis) the annual Santa Cruz Valley Heritage Festival. The designation of the National Heritage Area also has important funding implications, as up to \$1 million annually may be granted by the Federal Government for a number of project types including historic preservation, educational programs, or tourism promotion among others.

Overall, the preliminary research into the location, available markets, opportunities and partnerships, and the potential visitor experience at Canoa Ranch indicate strong potential for the site as a center for heritage education.

Section III

INDUSTRY PROFILE OF RANCH RELATED HERITAGE SITES

This section discusses the concepts, visitor experience, and operations of several notable attractions that are comparable to Canoa Ranch.¹² This section provides an overview of the interpretive themes, programs, visitor markets, and operating economics of such facilities. Canoa Ranch will provide opportunities for heritage education with a focus on ranching history, cultural history, and nature while offering outdoor activities such as equestrian trails, walking trails, and preservation of open space. Case studies of relevant facilities that can be considered comparable to Canoa Ranch help to inform planning parameters for the project such as attendance potential, operating budgets, staff composition, and provide a general sense of varying types of programs and operating models. It should be remembered that there are no perfect comparable projects to Canoa Ranch as each site will have its own unique circumstances.

As America entered the 21st century and left many of its rural traditions behind, there has been a demand among the public for experiences that authentically reflect the history, atmosphere, and lifestyle of prior times and historic ways of life. This has resulted in the development of ‘living history’ museums; the preservation of historic farms and ranches; and the procurement of open spaces for the public benefit. The benefits of these measures have been evident in a number of facets; the education provided to local school children, tourists, and the general public about these regions or localities; the enhancement to tourism and economic development provided by educational attractions; the preservation of scenic and environmentally sensitive landscapes; and the inherent benefit of preserving and interpreting culture. There are a number of examples of these types of sites which are profiled in the following section, most of which relate to the historic ranching industry.

Types of Ranching Attractions

Arizona is one of the hubs of ranching history in the U.S. Due to its scenery and its many authentic

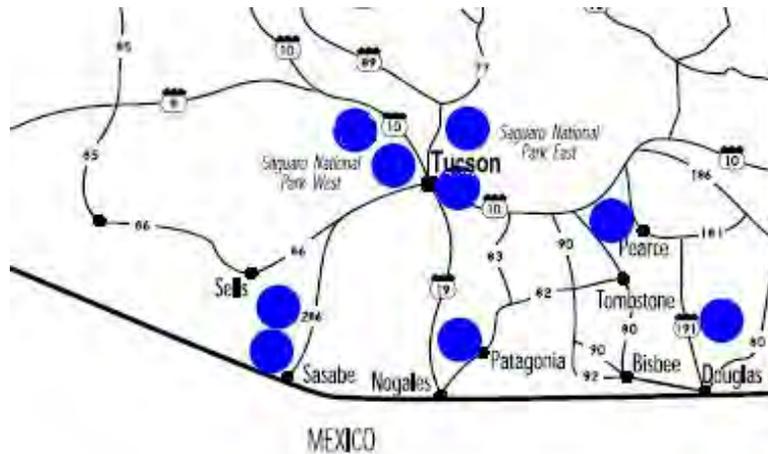
¹² This section of the report was originally produced in memorandum form in March 2006 and published in the Canoa Ranch Master Plan Background Report, April 2006. It has been modified for the purpose of integrating into this report format and includes information available at that time.

working ranches and guest ranches, it is a national and worldwide destination for visitors seeking to experience life in the ‘Old West.’ The Tucson area and Southern Arizona has numerous choices of ranching and cowboy related attractions for visitors to the area. Due to the interest in ranching related tourism and the wealth of ranches in the area, there has been considerable effort to develop this type of tourism. Due to a number of reasons, there have been a considerable number of ranches which have shifted their economic focus from livestock and agriculture to tourism. Following are descriptions of the governance and characteristics of ranch-related heritage education sites or historic sites including private sector models, government-operated sites, and non-profit operated sites.

Private Sector “Dude Ranches”

Dude ranches are a private sector model by which ranches have been used for the enjoyment of tourists in an economically viable way. They are typically operated by families or companies, for profit, and usually offer accommodations, guided horseback rides, and other leisure activities. Dude ranches are found throughout the Southwest and are popular with families. They serve many markets, including international tourists. The Arizona Dude Ranch Association (ADRA) has 13 members whose ranches and facilities are diverse in size, quality, and visitor activities/amenities. Nine of the dude ranches are found near Tucson or south of Tucson. Dude ranches primarily cater to overnight visitors; though some offer facilities for ‘day-riders.’ The for-profit status of most dude-ranches requires relatively high lodging rates — many with meals and rides inclusive. This contrasts to Canoa Ranch which has been primarily considered a potential resource for the general public. However, the already-established market for overnight accommodation and horse-riding at dude ranches, and the position this region holds in satisfying that market, suggests that such uses could be considered at Canoa Ranch as part of its program, or as an ‘alternative’ use. **Figure III-1** shows the general location of dude ranches that are members of the ADRA in the region, indicated by large blue dots.

Figure III-1
Southern Arizona Dude Ranch Locations



Source: Arizona Dude Ranch Association.

Federal Government Managed Ranch Attractions

The Federal government is the proprietor of several significant historic ranches that are preserved and interpreted for the public benefit. These ranches are managed under a number of different arrangements. Some are designated National Parks or National Monuments. Some ranches are operated by the Bureau of Land Management. One such facility is the Empire Ranch, located southeast of Tucson in Santa Cruz County. Descriptions of several federally managed historic ranches follow.

Empire Ranch – Located on a remote section of Highway 83 north of Sonoita, the Empire Ranch is early in the process of developing into an historical education center around its ranching history. Access is fairly inconvenient; a long, bumpy gravel road leads from the highway to the main site. The Empire Ranch House is a 22-room adobe and wood frame building dating to 1870. From a visual perspective, its historic ranch house and corrals are similar in scale and quality to that of Canoa Ranch. **Figure III-2** shows an image of the Main House at the Empire Ranch site.

Figure III-2
Main House at Empire Ranch



The ranch is operated by the Bureau of Land Management and is part of the 42,000-acre Las Cienegas National Conservation Area. The Empire Ranch House was designated an Official Project of the White House *Save America's Treasures* initiative in 1999, and was awarded a Millennium Grant for preservation work. Successfully raising \$95,000 in matching funds for the grant was a major Foundation achievement in 1999-2000. Other funding sources for preservation have come from member support, partnership grants and cost-share grants from BLM, as well as grants from private foundations. Over the next five years, once stabilization is assured, a Master Plan jointly prepared by the Foundation and the BLM envisions development of the *Empire Ranch Western Heritage Site and Education Center*, with interdependent programs for:

- ◆ Restoration of the ranch house as a historic house museum;
- ◆ Establishment of a self-guided Heritage Trail linking the historic buildings, natural landscape and ecology of the ranch; and
- ◆ Development of educational programs for all ages, especially programs for children to augment classroom learning about the natural and cultural history of the region.

The Empire Ranch, as a tourist attraction, is relatively early in the development process. Currently, it is unknown if the site would charge an admission price, or what it might be. When the preservation work

has progressed, there will be more attention paid to the programmatic planning elements. There has already been some planning and physical construction of a trail system around the ranch property.

It will certainly be several years before the historic structures at Empire Ranch are developed into a full-time public site with interpretation or programming. However, when it is completed, it is likely the site will add to Southern Arizona's status as a center for historic ranches. It is not likely to 'compete' with Canoa Ranch for visitors, as its location is more remote. Instead, there will most likely be opportunities for cross-promotion or programming that will increase interest among visitors and residents of the region in historic ranches. This concept would be similar to a collection of wineries creating interest in an entire region, rather than competing with each other for visitors.

Chiricahua National Monument/ Faraway Ranch - Located northwest of Douglas, Arizona the 12,000-acre National Monument is popular for hikers and bird-watchers. Of historic interest is the Faraway Ranch, a pioneer homestead and later a working cattle and guest ranch. It is a significant example of human transformation of the western frontier from wilderness to the present settlement. Faraway Ranch offers glimpses into the lives of Swedish immigrants Neil and Emma Erickson and their children. The house is furnished historically, but also traces the development of technology during the first half of the twentieth century. The Chiricahua National Monument drew 58,200 visitors in 2005, though not all of these visitors necessarily went to the Faraway Ranch buildings.

Grant Kohrs Nat. Historic Site – Located 50 miles from Helena, Montana this National Historic Site was established by Canadian fur trader John Grant, and expanded by cattle baron Conrad Kohrs. Grant-Kohrs Ranch National Historic Site commemorates the Western cattle industry from its 1850s inception through recent times. The park was enacted in 1972, and embraces 1,500-acres and 90 structures. The site is maintained today as a working ranch. Periodic events include house tours, wagon rides, blacksmithing, children's crafts and activities, and refreshments. The National Historic Site drew 17,500 visitors in 2005.

State Park Ranches in Arizona

A number of state parks in Arizona, and throughout the U.S., have origins as ranches. Most are family ranches (and farmsteads) that have been ceded to - or acquired by - the state for use as public parks, which make use of both their open space and historic qualities for the visitors benefit. Donated or

acquired ranches have been converted into state parks in many places across the West. Following is a discussion of state parks in Arizona that have formerly been ranches.

Dead Horse Ranch State Park – This 423-acre park was once a cattle ranch, acquired by the Arizona State Parks in 1973. The Park features group camping amenities, trails for hiking, biking, equestrian use, and horse corrals available for overnight use with advance arrangements. It is adjacent to the Verde River Greenway Natural Area, and the Coconino National Forest. There are not any historic structures in the Park. There were approximately 99,000 visitors to Dead Horse Ranch State Park in 2004.

Oracle State Park Center for Environmental Education – Ranging from 3,500 to 4,500 feet in elevation, the nearly 4,000-acre park consists of oak grassland, riparian woodland, and mesquite scrub habitats which contain a diversity of wildlife and plant species. Once home to 1,100 head of cattle, the ranch was donated to the Defenders of Wildlife in 1976, who later transferred the property to the State Parks Board. Today the park provides environmental education programming, tours of a historic ranch house, and 15 miles of hiking trails. It is located approximately 45-minutes north of Tucson in the Santa Catalina Mountains. There were approximately 8,300 visitors to Oracle State Park in 2004. The town of Oracle, nearby, is also home to the Acadia Ranch Museum, a historic site that is open for several hours on Saturdays or by appointment.

San Raphael Ranch State Park (in planning phase) – This property features a historic pre-territorial ranch house with surround-house porches, barns, and windmills. The present land base of the ranch includes over 20,000 acres. The historic ranch house was built in 1900 by cattle rancher Colin Cameron. Near the house is the barn, corrals and blacksmith shop with an assortment of tools associated with ranch work. While the Nature Conservancy has purchased conservation easement for most of the property, Arizona State Parks has purchased 3,550 acres of land on the lower section of the Ranch. The property will protect the habitat for the many rare and unique native plants and animals. The Park is not yet open to the public, but plans are under way for nature walks, an historic house tour, and other activities to be offered to the public on the portion of the property owned by Arizona State Parks.

Local Government Ranches

Cities and counties can also be owners and/or operators of historic ranches; for example Pima County's own *Roy P. Drachman-Agua Caliente Regional Park*. This 101-acre Pima County park surrounds a perennial warm spring flowing into three large ponds. Interpretive signs explaining the geology and history of the warm spring and the natural and human history of the site are installed throughout the park. Several historic ranch buildings on the site have been preserved and restored. It is located on the far east-side of Tucson. It was opened by the County in 1985 and the historic Ranch House and Rose Cottage were restored in 2004. There is no admission fee to the Park, and no known visitor count.

Non-profit Ranches

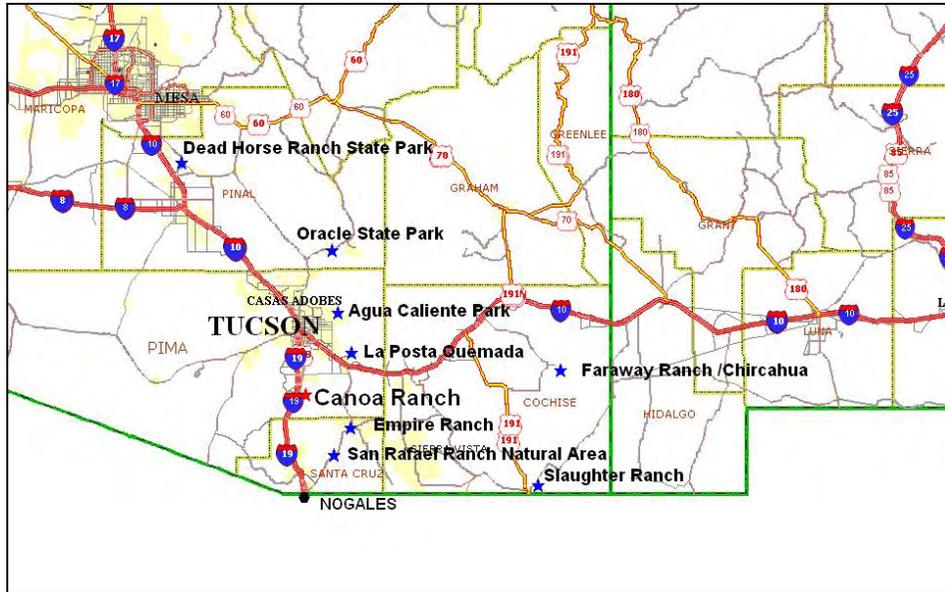
There are quite a few historic ranches or heritage education sites operated by non-profit organizations; one of the most common management forms. Several examples in Arizona include the following:

La Posta Quemada – This working ranch is located 25-miles southwest of Tucson and is part of Colossal Cave Mountain Park. The ranch portion of the site features a museum, research library, a gift shop, and open-air café serving Mexican food. The Ranch Headquarters House on La Posta Quemada Ranch was built in 1967 (the original adobe Ranch house burned to the ground in 1965). Today it houses a museum with two focuses: the human history and the natural history of the caves and the Cienega region. Colossal Cave Mountain Park is owned by Pima County. Pima County holds an administration agreement with a charitable corporation, the Pima County Parklands Foundation. The Foundation, in turn, holds a management contract with private operators, who oversee the day-to-day management of the Park.

Slaughter Ranch – Located in Douglas, Arizona, Slaughter Ranch is now the Johnson Historical Museum of the Southwest. It is an official National Historic Landmark. An old adobe ranch house has been meticulously restored along with the ice house, wash house, granary, commissary, and car shed to give the feeling of what ranch life was at the turn of the century. This non-profit historical attraction draws approximately 4,000 annually.

The location of these ranches is shown on **Figure III-3**.

Figure III-3
Map of Selected Ranch Related Attractions in Southern Arizona



Source: ConsultEcon, Inc.

PROFILED HERITAGE EDUCATION SITES

The ranch related heritage sites profiled in this report were chosen to highlight some of the different types of visitor experiences offered, and to demonstrate the different market and operating nuances of such facilities. The profiled locations include at least one or several of the following comparable characteristics:

- ◆ Substantial outdoor acreage;
- ◆ Living history and historic interpretation;
- ◆ Proximity to a major urban area;
- ◆ Emphasis on ranching or agricultural history and education;
- ◆ Inclusion of historic ‘ranch house’ or structures;
- ◆ Prior ownership by a prominent, or historically significant family;
- ◆ Multiple perspectives (ethnicity, culture, historical era, etc) interpreted; and
- ◆ Exceptional visitor experience.

Following are the names and brief descriptions of five heritage education sites profiled to provide insights into market and operating characteristics of such places facilities.

- ◆ **George Ranch Historical Park – Houston, TX** – A living-history museum based on ranching and historical structures, near Houston, Texas. The museum drew 91,000 visitors in 2005.
- ◆ **MacGregor Ranch – Estes Park, CO** – a working ranch with historic structures and exhibits. Approximately 7,000 visitors visit the 1,200-acre ranch; a majority are school groups.
- ◆ **New Mexico Farm and Ranch Heritage Museum – Las Cruces, NM** – A large newly built museum with 24,000 sf of exhibition space spread over 47 acres of land. It draws approximately 45,000 annually.
- ◆ **El Rancho de Las Golondrinas – Santa Fe, NM** – A living history museum with historic structures and costumed docents, interpreting Spanish colonial life in New Mexico. Close to 50,000 attended in 2005.
- ◆ **Spring Mountain Ranch State Park –Las Vegas, NV** – State Park near Las Vegas that features historic structures, hiking trails, and occasional living history days. It draws approximately 200,000 visitors annually.

Data in **Tables III-1** through **Table III-4** provide descriptions of the comparable museum facilities, as well as their attendance and operating trends.

As shown in **Table III-1**, most of the profiled sites are large in size, ranging from 47 to 1,200 acres; with an average of 489 acres. Four out of five sites have historic structures, many of which are registered historic buildings. The newly built New Mexico Farm and Ranch Heritage Museum does not feature historic buildings. All but the Spring Mountain Ranch State Park maintain live domestic animals on-site such as cattle, horses, and goats. Indeed, historic structures and live animals are two of the major attractions of such facilities.

Table III-1
Comparable Museum Size Summary

	Total Area (acres)	Historic Structures	Live Domestic Animals	Governance
MacGregor Ranch	1,200	Yes	Yes	non-profit
Spring Mountain Ranch State Park	520	Yes	No	state park
George Ranch Historical Park	480	Yes	Yes	non-profit
Rancho de las Golondrianas	200	Yes	Yes	non-profit
NM Farm and Ranch Heritage Museum	47	No	Yes	state operated
Average	489			

Source: Facilities profiled and ConsultEcon, Inc.

As shown in **Table III-2**, admission prices are generally moderate to low compared to many family ‘attractions,’ with most being \$5.00 or lower. Attendance is also generally moderate; several of the sites are open seasonally, thus limiting annual attendance. The ratio of attendance to metropolitan statistical area (MSA) population is a useful benchmark for examining market penetration rates. Large cities tend to have much lower ratios than lesser populated areas. This indicates that market size is not always proportionally related to attendance.

Table III-2
Comparable Museum Market Summary

	Admission Price	Attendance	MSA/County Pop. Size	Ratio of attendance to MSA pop.
George Ranch Historical Park ^{1/}	\$9.00	91,000	5,300,000	0.02
MacGregor Ranch ^{2/}	\$3.00	8,000	270,400	0.03
NM Farm and Ranch Heritage Museum ^{3/}	\$3.00	45,000	186,500	0.24
Rancho de las Golondrianas ^{4/}	\$5.00	49,000	139,900	0.35
Spring Mountain Ranch State Park ^{5/ 6/}	\$5.00	200,000	1,667,000	0.12
<i>Average</i>	<i>\$5.00</i>	<i>78,600</i>	<i>1,512,760</i>	<i>0.15</i>

1/ Houston, TX Metro Area

2/ Ft. Collins-Loveland, CO Metro Area

3/ Las Cruces, NM Metro Area

4/ Santa Fe, NM Metro Area

5/ Las Vegas, NV Metro Area

6/ \$5.00 per car, not per person

Data in **Table III-3** show the number of children who visit the profiled sites as part of school groups. For many educational attractions, school groups can be a major target audience. Among the comparables, they comprise between 22 percent and 63 percent of site attendance, not including the State Park. These numbers reflect school groups only, but many children visit as part of family outings as well. School children can be expected to be an important visitor segment for Canoa Ranch, especially if programs are designed for field trip visits.

Table III-3
Comparable School Groups Attendance

	School Children Served	Percent of Attendance
George Ranch Historical Park	20,000	22%
MacGregor Ranch	5,000	63%
NM Farm and Ranch Heritage Museum	8,000	18%
Rancho de las Golondrianas	12,000	24%
Spring Mountain Ranch State Park	2,000	1%

Source: Facilities profiled and ConsultEcon, Inc.

Data in **Table III-4** summarizes operating budget characteristics for the profiled heritage education sites. Budgets range from \$475,000 to almost \$2 million, with an average of \$1.06 million. Staff-sizes vary from 6 to 35 full-time equivalents (FTEs). Several benchmarking calculations allow comparison between the operating programs. The budget per visitor ratio simply shows the ratio of costs to visitors; a lower figure may indicate more efficient operations or less cost intensive visitor experience. The ratio of visitors-per-FTE is another efficiency benchmark. Typically, high ratios indicate lower cost operations as personnel are usually the most expensive operating costs. The proportion of earned revenue in the budget is presented ranging between 5 percent and 75 percent. A goal of many visitor attractions is to be financially self-sufficient, but it is very typical for educational or cultural facilities to rely on gifts, grants, and other contributions to fund a portion of operations. As is evident, several of the profiled sites are heavily supported by unearned revenues. The ability to generate earned revenues is dependent on a number of important factors including marketing, retail and/or food service, site and facility rentals, and admission pricing.

Table III-4
Comparable Museum Budget Summary

	Operating Budget	Budget Per Visitor	Full-Time Equivalent Employees	Visitors per FTEs	Earned Rev as a Percent of Total
George Ranch Historical Park ^{1/}	\$3,000,000	\$32.97	35	2,600	75%
MacGregor Ranch	\$475,000	\$59.38	6	1,333	8%
NM Farm and Ranch Heritage Museum	\$1,960,000	\$43.56	27.5	1,636	5%
Rancho de las Golondrianas	\$622,000	\$12.69	14	3,500	55%
Silver Spring Mountain State Park	\$757,000	\$3.79	7.5	26,667	14%
<i>Average</i>	<i>\$1,362,800</i>	<i>\$30.48</i>	<i>18</i>	<i>7,147</i>	<i>31%</i>

^{1/} Approximately \$1.5 million in site maintenance, utilities, and other costs are contributed by the George Foundation, a larger non-profit entity. Combined with the Historical Ranch budget, the total budget is about \$3 million.

Source: Facilities profiled and ConsultEcon, Inc.

Tables III-5 through **III-9** provide more in depth information about the individual heritage education sites profiled. Discussion of the general market and operating characteristics follows.

Table III-5
George Ranch Historical Park

Facility Name and Location	George Ranch Historical Park. Richmond, TX
Date Opened to Public	Visitor Center opened in 1999, making it a full-time attraction.
Description of Facility and Collections	<p>The George Ranch Historical Park presents Texas's "big" stories, from cattle and cotton to oil, from the Texas revolution to World War II. The Ranch's history follows family lines and interprets its history from the time it was settled in 1824 as part of Austin's Colony through four generations of the descendants who have managed the land. Today, the George Ranch is a 23,000-acre working ranch (480-acres are dedicated to the Historical Park). The park places utmost emphasis on depicting authentic locations, historic homes, costumed presenters which tell a story of that reflects Texas's history through a number of historical periods. The 1890's Davis Mansion museum presents indoor décor illustrating the wealth created by industry in Victorian Texas. The cattle industry is reflected in the outdoor longhorn pens and an exhibit that guides guests through the process of moving cattle to market and a working chuck wagon. The farming business is reflected in the sharecropper's farm. There is an authentic blacksmiths shop, pioneer cabin, and railroad car exhibit. While the Park is self-guided, there are costumed interpreters stationed at the exhibit sites that demonstrate and discuss their daily routines. Live animals can be found on the site; additionally the park offers opportunities for bird watching and alligator viewing. The park is developed around a nearly-mile long loop and there is a tractor-drawn wagon that circles every 20 or 30 minutes. A visitor center/gift shop/café is the entry point for the historical park. There is a gift-shop and café for visitors.</p> <p>This attraction is a good example of the living history model — interpreters are a strong part of the visitor program, signage and 'self-guiding' are not emphasized.</p>
Admission	<p>\$9.00 adult \$8.00 senior (62+) \$5.00 child (5 to 15); children 4 and younger and members of the Fort Bend Museum Association are free.</p> <p>Admission prices are on the higher end of the heritage education sites profiled.</p>
Hours of Operation	9:00 a.m. to 5:00 p.m. daily.
Market Size	Houston metro area: 5.3 million. Due to size of the City, the facility's location, and marketing challenges, the market penetration rate is very low.
Attendance and Attendance Trends	Visitation can fall between 68,000 and 95,000 — it was around 91,000 in 2005. 2005 was a very strong year for site rental visitors.
Visitor Characteristics	<p><u>Typical Annual Attendance Breakdown</u> 20,000 to 25,000 students 15,000 to 25,000 general admission 25,000 to 45,000 site rental visitors</p> <p>Approximately 35-40% of visitors reside in the Houston metro area; about 10% come from other parts of Texas; 50% out of state — many foreigners (25%). The Park is not helped by the fact that Houston is a poor draw for tourists. Most of foreign visitors are living in Houston or visiting for the energy industry.</p>
Membership price/number	Membership is to the Fort Bend County Museum Association. Membership sales are rather low at about 400.
Governance and Operations	Non-profit — part of the larger George Foundation and the Fort Bend County Museum Association — two different organizations.

**Table III-5 (cont.)
George Ranch Historical Park**

<p>Sources of Funding/Budgets</p>	<p>Expenses Budget was approximately \$1.5 million in 2005. Site maintenance, utilities, auto etc. is done by the land owner/George Foundation. These services are estimated \$1.5 million, which if included would push operating budget to around \$3.0 million.</p> <p>Revenue \$300-\$400k - Trustees contribute annual donation. \$400-\$500k - attendance revenue. \$350-\$550k - site rental. \$80-\$100k in retail sales. \$50-\$60k (net) from café.</p> <p>75%-80% of revenue is earned; the organization is aiming for 100%. Lots of site rentals in 2005. Grant money is shrinking.</p> <p>*Site rentals - \$600k gross, \$200k net; \$400k expenditure \$700-\$750k on personnel.</p>
<p>Marketing</p>	<p>Marketing expenses include \$50k in personnel cost, \$75,000 in advertising. Print ads, site rental ads, niche publications, <i>Texas Highways</i>, partnerships etc; not much radio/TV. Marketing has not been all that effective.</p>
<p>Number of Employees</p>	<p>George Ranch employs 20 professional staff, 15-25 seasonal staff. There are 6-8 interpreters on a slow day, 10-12 on a normal day, and 16 on busy days. Approx. 35 FTE</p>
<p>Gift Shop</p>	<p>There is a gift shop generates approximately \$80-\$100k in retail sales. Approximately \$1.25 per-capita — not very strong.</p>
<p>Educational Programming</p>	<p>20k-25k students from 26 counties participate in programs. Admission cost for them is \$5.00. School programs hurt by rising fuel costs, school budget cuts, security issues, and testing.</p>
<p>Commentary</p>	<ul style="list-style-type: none"> ◆ Corporate events, special events, weddings and site rentals are a major strength. An estimated 50 events annually. ◆ Cash subsidy and paid site maintenance helps offset expenses. ◆ Good school group attendance. ◆ Houston tourism —and site location — is not beneficial. ◆ Trail loop could use more interpretive signage, directional signs, and more information. ◆ Live interpreters are costly, but make for a more unique experience. ◆ More static exhibits or signage could be helpful. ◆ Size and scale of historic structures similar to Canoa Ranch.

Source: facility profiled, Guidestar.com, and ConsultEcon, Inc.

**Table III-6
MacGregor Ranch**

Facility Name and Location	MacGregor Ranch. Estes Park, Colorado.
Date Opened to Public	1973
Description of Facility and Collections	 <p>The 1,200-acre MacGregor Ranch is the last remaining working cattle ranch in Estes Park and one of the few sites operating as both a working ranch (110 head) and youth education center in the northern Colorado area. The 1896 house museum has been in operation since 1973. The MacGregor Ranch Historic District is home to 43 buildings. Twenty-eight of the buildings are listed on The National Register of Historic Places. The ranch buildings, house museum and family artifacts tell a rich story of Colorado homesteading history and ranching lifestyles of the late 19th century. Visitors view family clothing and handcrafts, household furnishings, original oil paintings, rock and mineral collections, personal diaries, books and early historic photographs. Guided and self guided tours are offered of the museum, milkhouse, smokehouse, blacksmith shop and horse-drawn machinery exhibits. Historic agricultural equipment and methods continue to be part of the interpretive story. There are periodic wagon rides, agricultural activities, and interactive presentations at a nature center. There are also interpretive nature trails (3 miles), overnight camping programs (space for 100), and outdoor education sites.</p>
Admission	General admission is \$3.00 for adults. Admissions and programs for youth under the age of 18 are free.
Hours of Operation	The museum is open to the public June through August. Tuesday through Friday 10:00 a.m. to 4:00 p.m.
Market Size	The region surrounding the Ranch is very rural. It is located in Larimer County (pop. 270,400) part of the Ft. Collins-Loveland Metro Area.
Attendance and Attendance Trends	Total attendance has recently ranged from 8,000-10,000 annually, but was closer to 7,000 in 2005.
Visitor Characteristics	Visitors to the museum include nearly 3,000-5,000 school children each year and over 3,000-5,000 summer tourists and general visitors. Non-student visitors are from Colorado as well as tourists from elsewhere. Educational groups range from kindergarten through high school students. Scout groups take overnight camping trips to the ranch.
Membership price/number	Historically, there has not been a membership program, but there are plans to create one.
Governance and Operations	The Muriel L. MacGregor Charitable Trust, a private, non-profit operating foundation, funds and manages all Ranch activities, the museum and all educational programs. The MacGregor Trust relies heavily on donations, grants and investments to operate the historic Ranch.
Revenue	More than 20 years ago, NPS bought a conservation easement from MacGregor Ranch for \$4 million. This was put into an endowment, which has nearly doubled. The dividends from this endowment provide approximately \$440,000 annually in revenue. The remaining revenue, a very small share of total, comes from admissions, beef sales, and other minor sources
Budgets	Total operating budget is approximately \$475,000. It is a working cattle ranch so excluding cattle operations (cattle feed, vet expenses, fencing etc), the budget would be approximately \$225,000. The personnel costs for 6 employees are approximately \$190,000.

**Table III-6 (cont.)
MacGregor Ranch**

Number of Employees	There are 6 full-time employees including two ranch hands.
Gift Shop	There is not a gift shop.
Educational Programming	Youth education activities are offered year-round by appointment only. 3,000 to 5,000 students are served annually. Each summer, the MacGregor Ranch hosts a history based day camp for children having just completed the 3rd and 4th grades. This camp is a 'hands-on' experience offering educational activities in areas such as homesteading, ranching and historic agriculture and local and regional history. It is held at the original homestead house on the Ranch.
Commentary	<ul style="list-style-type: none"> ◆ Only comparable that is a working ranch (110 head). ◆ Major emphasis on programming and education. ◆ Many historic buildings. ◆ Almost entirely funded from a trust; unearned revenue. ◆ Looking to increase earned revenue. ◆ Location is not highly visible. ◆ Operational scale is intentionally small, but has been sustainable over long term.

Source: Facility profiled, Guidestar.com, and ConsultEcon, Inc.

**Table III-7
New Mexico Farm and Ranch Heritage Museum**

Facility Name and Location	New Mexico Farm and Ranch Heritage Museum. Santa Fe, NM
Date Opened to Public	1998
Description of Facility and Collections	<p>The New Mexico Farm and Ranch Heritage Museum is a 47-acre site that is intended to present ‘real stories about real people.’ The Museum brings to life long history of farming and ranching in New Mexico. A large main building contains more than 24,000 square feet of exhibit space, along with a restaurant, gift shop and 150-seat indoor theater for special productions, presentations, and lectures. An outdoor amphitheater seats 250 people and is used for plays and outdoor programs. Visitors to the Museum can watch a cow being milked, stroll along corrals filled with livestock, enjoy several gardens or drop by the blacksmith shop or another venue to watch one of the demonstrations. Cooking classes are offered throughout the year. Live animals on-site include burros, sheep, goats, horses, and cattle. There is also a crop demonstration plot, a pond, an irrigation ditch, and stalls for milking cows. The permanent exhibit ‘Generations’ uses biographies of 33 people to tell the story of agriculture in the State. It also features photos, artifacts, and a full-sized reconstruction of a “Mogollon House.” Another major exhibit is “tools and traditions.”</p> <p>The total facility size is 75,000 square feet. When first opened, the Museum was in a rural, undeveloped area. Now suburban development has encroached all around the Museum. The Museum, while very large in size, is not finished. The master plan includes a special events pavilion, a picnic area, a ‘beef barn’ and a vineyard. Construction is expected to occur in 2006/2007.</p>
Admission	<p>\$3.00 adult \$2.00 senior (60 and over) \$1.00 child ages 6 to 17</p> <p>The Museum is currently considering an admission price increase of \$1.00-\$2.00</p>
Hours of Operation	Open year-round. Monday - Saturday 9:00 a.m.-5:00 p.m. Sunday, noon-5:00 p.m.
Market Size	Las Cruces metro area: 140,000. The site is located less than 50 miles from El Paso, which has a metro population of close to 1 million. Juarez, Mexico across the border has over 1 million residents.
Attendance and Attendance Trends	Visitation has hit a plateau in the range of 42,000 to 45,000 after starting in the 30,000s. Location is not considered an asset, it located off of major roads and thus misses out on pass through traffic.
Visitor Characteristics	School groups visit typically in the months of March through June, and in Oct. - Dec. Late August and September are very slow months, as well as January and February. Tourism is not as strong in Las Cruces as it is in other NM cities such as Santa Fe or Albuquerque. About 50% of visitation is from outside Las Cruces. Of that, about 50% is from outside a distance of 100 miles; i.e. about 25% of visitation is from tourists from beyond the local region.
Visitor Characteristics (cont.)	Like Canoa Ranch, the NMFHRM is accessible to the Mexican visitor market. While the Museum is marketed in El Paso, and occasionally in Juarez, Mexican visitors do not comprise a significant portion of attendance — less than 1%. Reportedly, the Mexican visitor market has not been drawn to museum visitation. However, the festival of San Ysidro held at the Museum does draw close to 2,000 visitors, most of whom are Mexican or Mexican American. Exhibits are in English and Spanish.

Table III-7 (cont.)
New Mexico Farm and Ranch Heritage Museum

Membership price/number	The non-profit foundation operates a membership program. Family memberships cost \$60. There are approximately 200 members. Total dues are approximately \$17,600.
Governance and Operations	The New Mexico Farm and Ranch Heritage Museum is a state facility under the New Mexico Office of Cultural Affairs, and state funded. A foundation which supports the Museum is a non-profit organization.
Sources of Funding/Budgets	The total budget is approximately \$1.96 million. Approximately \$1.32 million is spent on personnel costs (67%). Funding for the Museum come primarily from State Government. Less than \$100,000 is earned through admissions.
Number of Employees	26 full-time and 3 part-time employees, as well as a volunteer roster of over 100 people. 27.5 FTEs.
Gift Shop/Restaurant	There is a gift shop which is reported to perform 'ok.' The 140-seat Purple Sage Restaurant offers Southwestern Cuisine and a view of the Organ Mountains. Lately, the restaurant has been a liability, having established a bad reputation as too expensive and mediocre. It is only open during the lunch hour.
Educational Programming	Approximately 8,000 school children are served through programs. They come from as far as El Paso, TX and the western part of NM.
Marketing	The advertising budget is approximately \$60,000. Most of the advertising budget is used to pay for ads outside of the local market — primarily print ads in newspapers and travel magazines, AAA, and visitor guides. The Museum maintains 3 billboards on major highways and the State provides a free sign. They take advantage of free publicity when available.
Keys to Visitation and Operating Strategy	<ul style="list-style-type: none"> ◆ Feedback generally indicates visitors enjoy the experience. ◆ Location is a problem; poor visibility. ◆ Site is extensive, but has a quality of being unfinished. ◆ Management issues with restaurant. ◆ Poor performance on earned revenue. ◆ Festivals are popular. ◆ State management may stunt funding and development.

Source: facility profiled, Guidestar.com, and ConsultEcon, Inc.

Table III-8
El Rancho de las Golondrinas

Facility Name and Location	El Rancho de las Golondrinas. Santa Fe, NM
Date Opened to Public	1972
Description of Facility and Collections	 <p>El Ranch de la Golondrianas is a living history museum located on 200 acres in a rural farming valley 16 miles south of Santa Fe. It is dedicated to the heritage and culture of Spanish Colonial New Mexico. Original colonial buildings on the site date from the early 18th century and 19th century. In addition, historic buildings from other parts of northern New Mexico have been reconstructed at Las Golondrinas. Docents and interpreters clothed in the styles of the times show how life was lived in early New Mexico in a buildings such as a hacienda, a village store, a schoolhouse, and several chapels and kitchens. There's also a working molasses mill, wheelwright and blacksmith shops, shearing and weaving rooms, a threshing ground, a winery and vineyard, and four water mills, as well as dozens of farm animals. Special festivals and theme weekends offer visitors an in-depth look into the celebrations, music, dance and many other aspects of life in the period when this part of the United States was ruled by Spain and Mexico. The Spring Festival (the first full weekend of June) and the Harvest Festival (the first full weekend of Oct) are the year's highlights at Las Golondrinas. On these festival Sundays, the museum opens with a procession and Mass dedicated to San Ysidro, patron saint of farmers. Volunteers in authentic costumes demonstrate shearing, spinning, weaving, embroidery, wood carving, grain milling, blacksmithing, tinsmithing, soap making, and other activities. Visitors have the opportunity to experience Spanish folk dancing, music, theater, and food. The site was once the last stopping place on the 1,000-mile El Camino Real from Mexico City to Santa Fe.</p>
Admission	<p>\$5.00 adult</p> <p>\$4.00 senior (62+), teens (ages 13-18), military personnel</p> <p>\$2.00 child (ages 5-12)</p>
Hours of Operation	Open 10:00 a.m. to 4:00 p.m. Wednesday to Sunday, June through September.
Market Size	Santa Fe MSA pop: 140,000
Attendance and Attendance Trends	Attendance has typically ranged between 40,000 and 53,000 during the last 10 years. 2005 attendance was approximately 49,000, it was 45,000 in 2000. Attendance has been stable but not really growing. The site is reportedly difficult to find, making it a hindrance for unplanned visitors. About 1/3 of visitors are from outside New Mexico. Most in-state visitors are from within an hours drive.
Visitor Characteristics	School groups comprise about 12,000 visitors; nearly a quarter of visitation. Weddings and special events visitors comprised about 4,500 — close to 9% of visitation. Most of the attendance occurs on weekends when there is programming. A large wine festival in the summer draws about 5,000.
Membership price/number	Family memberships - i.e. Amigos del Museum - cost \$50. There are 240 amigos.
Governance and Operations	Non-profit
Revenue	Unearned revenue (primarily private donations) comprises 45% of total revenue, and earned revenue comprises 55%. Major sources of earned revenue are admissions (10%), interest on holdings (18%), rental income (14%), retail (5%), and film location fees (4%). The organization benefits from a generous endowment from which it earns financial benefits.

**Table III-8 (cont.)
El Rancho de las Golondrinas**

Expenses	The total operating budget is approximately \$1.1 million. Personnel costs comprise 58% of the budget. Other major expenses; grounds maintenance (6.5%), special events (6.9%), marketing (6.6%), insurance (6.3%).
Number of Employees	There are 8 full-time, 12 part-time employees; or 14 FTEs. Up to 400 volunteers. Docents are extremely helpful and valuable as they often perform the educational and interpretation for programming.
Marketing	The advertising and promotion budget is approximately \$71,000. Advertising is local as well as in regional travel guides and travel publications. The special events are well-promoted.
Gift Shop	The gift shop performs well; crafts are a popular with customers. The gift shop was recently expanded to 1,000 SF. Revenue - \$121,740. Approximately \$2.50 per capita.
Educational Programming	12,000 school children visit annually. Weekends are very program oriented.
Commentary	<ul style="list-style-type: none"> ◆ Excellent programming and high attendance for special festivals. ◆ Facility rentals for special events, movie shoots etc. ◆ Generous endowment; 45% unearned revenue. ◆ Seasonal operations keep attendance lower. ◆ Strong school group visitation. ◆ Heavy reliance on docents for interpretation. ◆ Difficult to find from roadway.

Source: facility profiled, Guidestar.com, and ConsultEcon, Inc.

Table III-9
Spring Mountain Ranch State Park

Facility Name and Location	Spring Mountain Ranch State Park. Eight miles from Las Vegas, NV.
Date Opened to Public	1975
Description of Facility and Collections	 <p>Spring Mountain Ranch is located within the Red Rock Canyon National Conservation Area, beneath the colorful cliffs of the magnificent Wilson Range. This 520-acre state park was once a combination working ranch and luxurious retreat by a string of owners who have given the area a long and colorful history, including millionaire Howard Hughes. For 30 years the Park has hosted a Super Summer Theatre - a theatrical organization that performs nightly during the summer in an outdoor theater. Semi-annual living history events at the Park include costumed role playing, demonstrations and re-enactments of historic events. Each spring and fall a series of living history programs are presented depicting the lives of early settlers such as Old Bill Williams, Jim Wilson, Olive Lake and other prominent Las Vegas pioneers. Programs are presented in the first person as seen through the eyes of the character, or are narrated descriptions of events in the lives of early pioneers. Demonstrations of pioneering skills are also presented, and visitors are encouraged to participate. In addition to the living history aspects of the Park, there are two hiking trails, nature interpretive walks, and picnic tables. For many the state park is a cool respite from the nearby urban sprawl of Las Vegas. The State Park model is one that is barebones compared to living history museums or other 'attractions' whose interest high visitation and earned revenue.</p>
Admission	\$5.00 per car. This would be \$2.50 per person assuming an average of 2 persons per car.
Hours of Operation	10:00 a.m. - 4:00 p.m. Open daily. <i>Guided tours</i> throughout the historic area are given on weekdays at 12:00 p.m., 1:00 p.m. & 2:00 p.m. and weekends at 12 p.m., 1 p.m., 2:00 p.m. and 3:00 p.m.
Market Size	Las Vegas metro MSA: 1,677,200
Attendance and Attendance Trends	Attendance is approximately 200,000 per year, and growing at a rate of 1-2% annually — in part due to Las Vegas's booming population. Visitation to the summer theater events comprises about 40,000 visits.
Visitor Characteristics	The high season is March through October. Only about 2,000 students visit as part of school groups.
Governance and Operations	The Park is operated by the State
Sources of Funding/Budgets	The operating expenses are paid out of the State's general fund. The total operating budget is estimated at \$757,000, of which personnel costs comprise 60%. Some park expenses are hidden, as they are provided by the State. Earned revenue from admissions and gift sales is approximately \$108,000, which is paid into the State's general fund. An agreement allows the 20% of admission revenue to be kept in the park for investment. Earned revenue is equivalent to about 14% of the budget
Number of Employees	There are 6 full-time, and 3 seasonal employees. FT positions include a park supervisor, 2 park rangers, 1 interpreter, and 2 maintenance specialists. There are approximately 100 docents, who are valuable to the interpretation.
Gift Shop	There is a small gift shop (approx: 200 SF), operated by the Nevada State Park Cooperative Association, which generates approximately \$6,600 in sales.

**Table III-9
Spring Mountain Ranch State Park**

Educational Programming	School programming is not a major function of the State Park, but the twice annual living history weekends do draw strong visitation for families with children. During these events costumed interpreters demonstrate various aspects of life on the ranch and in the Old West, during historical periods.
Commentary	<ul style="list-style-type: none"> ◆ Close to major metro area. ◆ Theatrical performances are a major draw. ◆ Attendance spikes when it gets media/PR. ◆ 2-3 living history events annually. ◆ A simpler, more basic operation, comparatively. ◆ State funded; little incentive for earned revenue. ◆ State administrative structure/support

Source: facility profiled, Guidestar.com, and ConsultEcon, Inc.

SUMMARY OF CHARACTERISTICS OF PROFILED RANCH RELATED ATTRACTIONS

Following is a summary of characteristics of profiled ranch related heritage education sites, relevant trends, and lessons learned from research into such attractions.

- ◆ **Mission and Programs** – The ranch related attractions profiled have unique missions and programs. Education, preservation, and programming about heritage is a primary mission of these sites. Several, such as George Ranch Historical Park and El Ranch de Las Golondrinas are living history oriented — regularly featuring costumed interpreters demonstrating life and industry as it was in historic periods. Agriculture and cattle ranching is a primary interpretive theme as well. Another common mission is to simply preserve historic structures and teach the general public about them. Additionally, preservation of open-space is a common goal — the sites range in size from 47 to 1,200 acres.
- ◆ **Governance** – Heritage education sites can potentially be operated by a number of types of organizations including local or State government, non-profit organizations, or in some cases such as dude ranches, by private companies. The profiled attractions are typically non-profit or government operated. While non-profit organizations don’t pay income taxes on revenue, they often raise a substantial portion of their revenue from unearned sources (gifts, grants etc) to carry out their mission. Examples of government operated facilities include the state-run New Mexico Farm and Ranch Heritage Museum. Government operated facilities, as well as non-profit organizations have unique sets of challenges, many of which are related to consistent funding for programs and operations. Often the facilities that are linked to County, State, or even Federal government have access to resources that are not usually available to stand alone non-profits. For example, a state or county run site may be able to borrow special equipment at no extra cost, or it might have access to technical expertise in the administrative offices. It is important that the governance established reflect the goals of the facility, its needs, and its viability.

- ◆ **Historic Sites and Interpretation** – Due to the unique history of the site, the corrals and the house found on the site, and the indigenous history on the site, Canoa Ranch will certainly be a historic site with opportunities for interpretation of a number of historic and cultural themes. Four of the profiled ranch related attractions have historic structures on site, which serve as a central point of interest. The living history concept is one that has been used extensively at historic sites (real or re-created). This generally implies programs re-enacting life (cooking, farming, craft making etc) as it was during the historic period being interpreted.

While one museum director called living history a ‘dying industry’ it still remains one of the best formats for teaching the general public (especially children) about past lifestyles. Nationwide, living history attractions have experienced stagnant attendance and often high operating costs. Such attractions generally require a large personnel staff, which is usually the most costly budget expense. The high cost of operating living history sites results in high operating expenses, and therefore results in admission fees that are often uncompetitive with other local attractions, thus a deterrent to visitation. The George Ranch Historical Park, whose adult admission fee is \$9.00, has the highest operating cost and the highest admission fee. Some sites have maintained living history on a special event basis (war reenactments, cultural festivities, holiday programs, weekend programs etc) to maintain visitor interest but without the day-to-day costs personnel costs of living history. Increasingly, the benefits of drawing the visitor into active participation (rather than passive ‘watching’) have become evident.

- ◆ **Tourist and Resident Market** – The visitor markets available to the profiled attractions are similar in that most are located in or in relatively close proximity to a metro-market. As Canoa Ranch is 37 miles from Tucson, most of these attractions are within 50 miles of cities. Most of these attractions benefit from both tourist and resident markets. However, due to the educational orientation (especially for school-children) of these attractions, they tend to draw more from local residents. Therefore, the need for new programming to draw repeat visitors is very important. Good visibility is needed for significant tourist visitation. The New Mexico Farm and Ranch Heritage Museum, like Canoa, is geographically located to benefit from potential Mexican visitors. While there has been some impact on yearly festivals and special events, they have generally not been able to draw significant attendance from the Mexican visitor market.
- ◆ **Attendance** – Annual attendance at the profiled ranch related attractions ranges from 7,000 to 200,000 visitors. A wide range was chosen to demonstrate the different type of attractions and how they are dependent on a number of factors including:
 - Available visitor (Tourist) market and resident market population
 - Location and accessibility
 - Site quality and influence of adjacent land uses
 - Programs offered
 - Size and quality of exhibitory
 - Price/value relationships
 - Marketing
 - Local competition for leisure time and dollars

- ◆ **Price** – Adult admissions prices for the five profiled attractions range from \$9.00 per person to \$3.00. Some state parks charge per vehicle rather than per person. The average adult admission price among the profiled attractions is \$5.00. Generally, compared to many ‘attractions’ these profiled facilities are modestly priced. Admission prices should be set to be affordable for families living in the region, and should be competitive with other local attractions, while at the same time being high enough to help support the budget through earned revenue.
- ◆ **Operations and Budget** – The size of an operating budget is dependent on a number of factors including facility size and number of visitors, sources of funding, and the mission of the organization. Operating budgets vary from almost \$3 million at the George Ranch Historical Park to \$500,000 at the MacGregor Ranch. More complex operations might include extensive programming and marketing, as well as facility rentals and catering. Some facilities operate on a more minimalist approach, in particular some state and county parks. More paired-down operations, such as that sometimes found in state and county parks, may include minimal staffing and maintenance costs. Often operations such as state or local parks are supported by larger administrations that provide value to the park or attraction in terms of expertise, business planning, maintenance, equipment use, and other services that may not be immediately apparent in the operating budget of the particular entity. These support structures and shared costs contrast to the non-profit model in which an organization often must support itself entirely both in terms of operating revenue as well as other types of support (operating expertise, political support, maintenance costs, bookkeeping etc).
- ◆ **Personnel** – Among the profiled sites, the number of full-time equivalent employees (FTEs) ranges from 6 to 35. Personnel costs often make up the majority of budget expenses. Living history attractions require larger staff sizes, as do other programming-heavy attractions, and thus are more expensive to operate than the smaller, less ‘attraction’ oriented sites. Some of the more minimalist operations are historic sites or parks where the emphasis is on self-guided tours, especially outdoor touring. Also, organizations such as MacGregor Ranch intentionally serve a small market as their budget allows, thus keeping staff-size small. The type of attraction and organization envisioned has much to do with the site’s personnel profile. The importance of volunteers at the facilities profiled must be stressed. If properly organized, docents can replace personnel at certain positions, thus saving salary expenses, which could result in a more economically viable operation.

Section IV

ECONOMIC CONSIDERATIONS FOR CANOA RANCH ALTERNATIVES

This section provides an overview description of the three Cano Ranch alternatives as they relate to the visitor market and operating costs.¹³

The Three Options

Following is a brief description of the three options as they relate to each other in terms of project costs, operations, attendance, and experience offered.

Option 1: Open Space / Historic Ranch

Option 1 is described as ‘open space / historic ranch.’ The primary purpose of the Canoa Ranch site under this option is to preserve and restore the ranch house and associated structures to its 1950 state; preserve open space; provide some programming and interpretation about ranching, as well as cultural interpretation. Site access would be limited to the ranch headquarters areas; possibly with limited trails near the headquarters which would interpret points of interest with signage. This model is the most basic model envisioned of the three options.

There are numerous examples of such historic sites with substantial acreage, in which interpretation and site development are limited. These include National Historic Parks such as Tumacacori; State Parks such as Oracle State Park, County Parks such as Agua Caliente Regional Park and many non-profit sites (such as MacGregor Ranch in Estes Park, Colorado). While these sites typically do not enjoy exceptionally high attendance levels, they are well regarded for valuable site interpretation, sense of preservation and respect for the site, and the venue for occasional special events.

Attendance patterns: It is expected that Option 1, as a historic ranch site, would draw reasonably well from the resident and visitor markets. However, as the site is more limited and does not offer changing interpretative exhibits, or extensive site access, there will be limited repeat visits among both markets. A particular strength would be an authentic experience of an historic site, such as found at Tumacacori NHP, rather than an ‘attraction’ experience.

¹³ This section of the report was originally produced in memorandum form in June 2006. It has been modified for the purpose of integrating into this report format and includes information available at that time.

Option 2: Heritage / Cultural Park

Option 2 is described as ‘Heritage / Cultural Park.’ The Heritage / Cultural Park would accomplish many of the same functions as Option 1, but would increase its focus to interpret a broader spectrum of historic eras on the site and peoples that have used the site. There would be a much stronger emphasis on educational programs teaching visitors about the cultural and historical ‘layers’ within the site, the role of water, and environmental interpretation. The site would be developed to include more extensive trails for hiking, bird watching, equestrian use, and interpretive markers. Planned programs and activities might include star gazing parties, horse back riding, and wildlife viewing. The site would be improved with a limited trail system, interpreted archeological sites, and restoration of riparian uses and water features. Basic camping might be offered.

This model is more capital intensive for site development and would require greater operating expenditures. It would require a larger staff size to manage educational programming, site and land-use caretaking, and administrative functions for a more ‘institutional’ establishment. While Option 2 would be more intensively developed, and function more closely along the spectrum to an ‘attraction’, it would still be relatively un-commercial, being firmly grounded in cultural and environmental goals. The site would serve local residents, but also offer enough that it could draw some out-of-town visitors with an interest in ranching, archeological sites, and/or historic cultures and ways of life.

Spring Mountain Ranch State Park, in Nevada, is relatively comparable to the description of Option 2. Being a State Park with a historic ranch house, structures, and indoor exhibits, it is more minimally developed than an attraction, but at the same time offers interpretation that is beyond that of a stand alone historic site or a State Park with a simple goal of open space. It relies heavily on the help of docents, as well as features special events and living history days.

Attendance patterns: The expanded interpretive scope, additional trails and site access, and program offerings described in Option 2 would further the ability of the project to draw visitors. Local residents would have more incentive for repeat visits given the development of additional trails for hiking, bird watching, and equestrian use. Educational programs about stargazing, archeology, and other recreational activities would enhance the profile of the attraction. These programs tend to be locally serving at similar attractions. The expanded profile of the site would also make it more attractive to visitors.

Option 3: Regional Heritage Attraction

Of the three options, the ‘Regional Heritage Attraction’ represents the most intensive development and operation. It would accomplish many of the same goals as Option 1 and 2, but would significantly increase the trail network, would entail construction of a new orientation/interpretive center, and would place a much greater emphasis on tourism development. This attraction would likely feature living history on an occasional or regular basis. Furthermore, it would possibly include a restaurant and gift shop, conference facilities, and could serve as the headquarters for the Santa Cruz Valley National Heritage Area. The concentration of activity and its prominence as a major node on the Santa Cruz Valley National Heritage Area, as well as the Anza National Historic Trail, would make the site much more of a prominent destination for tourists and pass-through drivers.

The site would be developed to make use of a much larger portion of the site, with extensive trails, and remote sites for interpretation or preservation. Environmental restoration would be even more extensive than in Option 2, and interpretation could teach visitors more about the restoration process and environmental stewardship. There would be greater use of demonstration sites for farming and/or ranching and more education about the multiple cultures that have influenced and inhabited the site.

Option 3 would have a greater ability to draw tourists — and area residents — resulting in higher attendance and increase tourism impacts to the area. The focus on heritage tourism, special events, facility rentals, and living history would create a larger critical mass of activity making it a more attractive destination for families.

There are numerous attractions across the U.S. which seek to interpret and/or re-create historic sites or villages. These can be relatively expensive operations, but also result in strong attendance levels. Among the comparable projects previously profiled, the most similar attraction might be George Ranch Historical Park, in Texas. This living history site charges a relatively high admission of \$9.00 for adults, draws over 90,000, and has an operating budget of approximately \$3 million.

Attendance patterns: Option 3 would provide many of the same site features as Option 2, but the addition of a new construction orientation center (possibly Santa Cruz Valley official visitor center), heritage tourism, increased special events, a restaurant and conference space, would significantly increase the site as a tourist destination. A higher proportion of attendance would come from the tourist market. Within the resident market, there would also be increased opportunity for repeat visitation —

unless the site was found to be too tourist oriented, in which case there would be a negative impact on visitation by local residents.

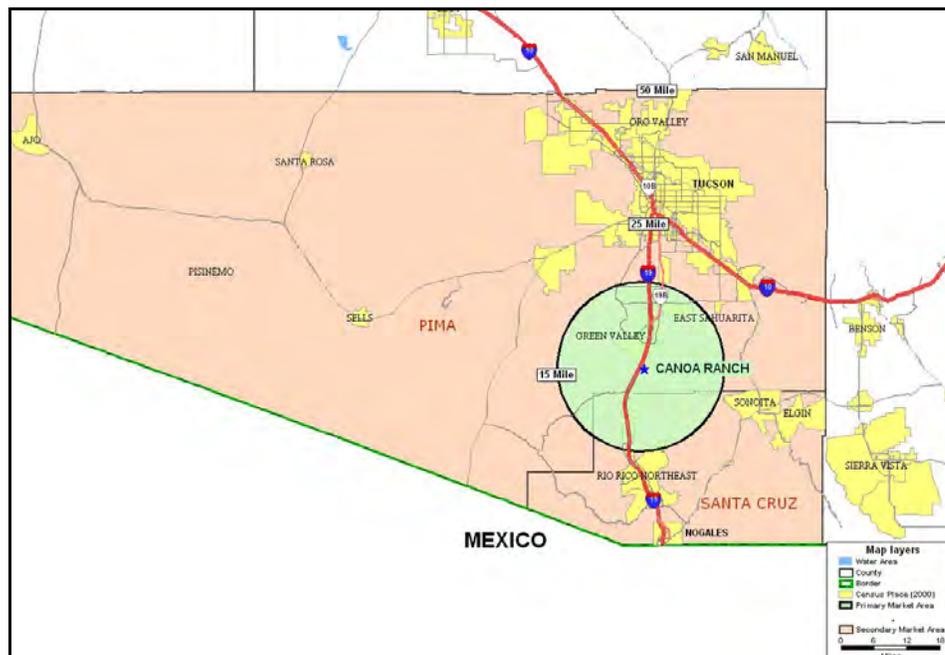
RESIDENT MARKET AREA DEFINITION AND POPULATION

The overall Resident Market Area for the Canoa Ranch project is defined as Pima County and Santa Cruz County. The Resident Market Area is considered a visitor base and is the population that would be within appropriate distance to visit Canoa Ranch as part of a day-trip.

Within the overall Resident Market Area, the Primary Market Area is defined the population with a 15-mile radius of Canoa Ranch. This market lives closest to the site, would have the most knowledge of the project, and would be more likely to have repeat visitation. The Secondary Market Area is defined as the remaining portion of Pima and Santa Cruz Counties. Visitors to Canoa Ranch who do not live in either County are considered tourists.

Figure IV-1 represents the defined Resident Market Area.

**Figure IV-1
Resident Market Area
Canoa Ranch**



Source: ConsultEcon, Inc.

Data in **Table VI-1** show the projected population of the Resident Market Area for 2011. The Primary Market Area is projected to have approximately 48,800 residents. The Secondary Market Area will have an estimated 1,701,700 resident. This market will comprise a large segment of the annual attendance.

Table VI-1
Resident Market Area Population
Canoa Ranch

<i>Resident Markets</i>	2011 Population
Primary Market Area	48,795
Secondary Market Area	1,071,664
Total	1,120,459

Source: Claritas.

TOURIST MARKET SUMMARY

Tourists are expected to be an important market segment for the Canoa Ranch project. According to the Arizona Tourism Statistical Report (2004), an estimated 14.4 percent of Arizona leisure trips were taken in the “Tucson and Southern” area of the State (approximately 4,003,000 trips). Overnight leisure travel in Arizona is strongest in the winter months, especially in Southern Arizona.

According to TIA, in a report presented by Nichols Tourism Group, Tucson drew an estimated 3.5 million visitors in 2002. Of these, about 72 percent are leisure travelers. The impact of day-trip tourism (not counted in these estimates) should also be considered.

Canoa Ranch is located approximately 37 miles from downtown Tucson. As most visitors to Tucson have access to an automobile, it is close enough to warrant a day-trip or a half day-trip by a visitor to Tucson. At its location, Canoa Ranch would compliment other attractions along I-19, creating more critical mass in the region as a destination for historic sites.

PRELIMINARY ATTENDANCE PROJECTIONS

Preliminary attendance estimates for the three proposed Canoa Ranch options are provided in **Table VI-2** through **Table VI-4**. These are informed by the experience of comparable projects, attendance patterns at local attractions, and market sizes.

Table VI-2
Canoa Ranch Attendance Estimates
Option 1: Open Space/Historic Ranch

	Estimated 2011 Market Population	Market Penetration		Visitation Range		
		Low	High	Low Range Attendance	Mid Range Attendance	High Range Attendance
<i>Resident Markets</i>						
Primary Market Area	48,795	10.0%	20.0%	4,880	7,319	9,759
Secondary Market Area	1,071,664	1.0%	3.0%	10,717	21,433	32,150
Subtotal	1,120,459			15,596	28,753	41,909
Average Penetration Rates for Resident Market		1.39%	3.74%			
Visitor Market as a Percent to Total Attendance		30.0%	50.0%			
Subtotal				4,679	12,817	20,954
Total Attendance Range				20,300		62,900
Mid Range Attendance ^{1/}					41,600	

1/ Rounded to nearest 100. Attendance based on modest admission price.

Source: ConsultEcon, Inc.

Table VI-3
Canoa Ranch Attendance Estimates
Option 2: Heritage Cultural Park

	Estimated 2011 Market Population	Market Penetration		Visitation Range		
		Low	High	Low Range Attendance	Mid Range Attendance	High Range Attendance
<i>Resident Markets</i>						
Primary Market Area	48,795	20.0%	35.0%	9,759	13,419	17,078
Secondary Market Area	1,071,664	2.0%	4.0%	21,433	32,150	42,867
Subtotal	1,120,459			31,192	45,569	59,945
Average Penetration Rates for Resident Market		2.78%	5.35%			
Visitor Market as a Percent to Total Attendance		25.0%	45.0%			
Subtotal				7,798	17,387	26,975
Total Attendance Range				39,000		86,900
Mid Range Attendance ^{1/}					63,000	

1/ Rounded to nearest 100. Attendance based on modest admission price.

Source: ConsultEcon, Inc.

Table VI-4
Canoa Ranch Attendance Estimates
Option 3: Regional Heritage Attraction

	Estimated 2011 Market Population	Market Penetration		Visitation Range		
		Low	High	Low Range Attendance	Mid Range Attendance	High Range Attendance
<i>Resident Markets</i>						
Primary Market Area	48,795	25.0%	40.0%	12,199	15,858	19,518
Secondary Market Area	1,071,664	5.0%	7.0%	53,583	64,300	75,016
Subtotal	1,120,459			65,782	80,158	94,534
Average Penetration Rates for Resident Market		5.87%	8.44%			
Visitor Market as a Percent to Total Attendance		45.0%	65.0%			
Subtotal				29,602	45,525	61,447
Total Attendance Range				95,400		156,000
Mid Range Attendance ^{1/}					125,700	

1/ Rounded to nearest 100. Attendance based on modest a admission price.

Source: ConsultEcon, Inc.

Attendance Comparison

Data in **Table VI-5** provide an attendance comparison of the three options. Attendance estimates range from 41,600 in Option 1 to 125,700 in Option 3. Estimates have been calculated using varying ‘market penetration’ rates for the Resident Market Area, as well as variable rates for the share that tourists will comprise of total attendance.

**Table VI-5
Canoa Ranch Alternatives Comparison
Estimated Attendance**

	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>
Primary Market Area	7,319	13,419	15,858
Secondary Market Area	21,433	32,150	64,300
Resident Market Subtotal	28,753	45,569	80,158
Visitor Market as a Percent to Total Attendance	30%-50%	25%-45%	45%-65%
Visitor Market Subtotal	12,817	17,387	45,525
Total Mid Range Attendance Estimate	41,600	63,000	125,700

Source: ConsultEcon, Inc.

ESTIMATED OPERATING COSTS FOR CANOA RANCH OPTIONS

Annual operating expenses have been estimated using preliminary assumptions about the facility staff requirements, facility size, and operations among the three options. As would be expected, Option 1 has the lowest estimated operating costs, and Option 3 has the highest. A range for each option has been assumed as there are still a number operating details that have not yet been determined. Estimated operating costs in year 1 of operation are as follows:

Option 1: Annual operating costs are estimated to range between \$450,000 and \$650,000, with a mid-range of \$550,000.

Option 2: Annual operating costs are estimated to range between \$800,000 and \$1,000,000, with a mid-range of \$900,000.

Option 3: Annual operating costs are estimated to range between \$1,300,000 and \$1,500,000, with a mid-range of \$1,400,000.

These estimates are informed by a number of benchmarks. These include the operating budgets of comparable facilities, other local attractions such as Tubac Presidio and Tumacacori NHP, and analysis of funding for Pima County Parks. As the Canoa Ranch development plan is refined, the estimate of operating costs will be fine-tuned to reflect realistic operations.

Section V

VISITATION POTENTIAL AND ATTENDANCE PATTERNS

Following is an assessment of the attendance potential of Canoa Ranch as conceived in the final Master Plan. It is based on the development and interpretive program articulated by the planning firm Poster Frost and by the interpretive museum design firm Ralph Appelbaum Associates. This attendance potential analysis is based on an orientation center and Heritage Area as previously described and a high quality marketing and operating program.

Attraction Success Factors

Planning, creating, and operating an area serving attraction, such as Canoa Ranch, are substantial challenges. Audiences today are exposed to extremely high-tech, high-quality media at work or school and on television on a daily basis. Due to high audience standards, those in the entertainment and educational attraction industry have adopted the same high quality techniques to attract visitors. As the expectations by audiences of leisure time products and educational experiences are very high, a successful attraction must meet audience expectations of value, provided both in terms of money and time spent. To achieve its goals for interpretive and economic success, an attraction such as the proposed Canoa Ranch should fulfill the following criteria.

- ◆ **Exhibit Quality and Audience Appeal** – The interpretive elements should have a high degree of interest and/or relevance to the audience. Audience expectations of content and presentation have risen dramatically.
- ◆ **Good Location** – The accessibility and visibility of the location is critical to its market success. Facilities in outstanding locations, from an accessibility and visibility perspective, naturally have the greatest market opportunity.
- ◆ **Critical Mass of Attraction Elements** – There must be sufficient attraction content to appeal to a diverse audience with a degree of subject interests, ages, and educational levels. There must be a variety and quantity of experiences for the visitor to feel they have visited a special place.
- ◆ **Length of Stay/Attraction Content** – The attraction must have sufficient quality and quantity of content to warrant a special trip, and to possibly forego alternative activities. Typically, this implies that more than one hour is spent experiencing the attraction, with a target length of stay of perhaps one and a half to two hours. When combined with a meal or snack, shopping for souvenirs, taking a walk and/or relaxing in a green space, the experience must be the focal point of a half-day or full day recreational experience. Most importantly, it must be an entertaining experience.
- ◆ **Repeatability** – For most ranch attractions of the scale being analyzed, the resident market is the focus audience, and a repeat visitation pattern is necessary for success. To bring an audience

back, the attraction must have exhibits, program, and site qualities that justify repeatable experiences. Changing and interactive exhibits, consistently new and innovative programming, and special/annual events are successful ways for projects of this type to encourage repeat visitation.

- ◆ **Serves Visitors as well as Residents** – Larger education attractions clearly focus on visitor as well as resident markets. Smaller scale projects, while focusing on the resident market, can enhance their audience by also attracting from the travel market. Planning for and marketing to both groups ensures both maximum and year-round visitation. Further, successful local marketing is an essential approach to attracting the visitor market, as many tourists are visiting friends and relatives, and many locals advise out-of-towners on the best local attractions.
- ◆ **Marketing and Programs** – Successful projects allocate resources to creatively reach their resident and tourist markets. The marketing must not only describe the quality of the attraction, but also create excitement among potential visitors to travel to the attraction. Marketing in channels that reach enthusiasts is an important success strategy. Ongoing programming is important in attracting first time visitors and repeat visitors.
- ◆ **Sound Financial Base** – An appropriate project scale for the potential audience is important so that revenues can support both operations and the physical infrastructure of the facility. Entrance fees must be set to maximize revenues while maintaining optimum visitation levels given the markets to be served. Operations and marketing must sustain the audience size and the physical infrastructure and provide a quality visitor experience. Operations must be scaled to the particular attributes of the facility, including staffing, seasonality, and other factors. Meeting these requirements will help to create a sound financial base.

The Canoa Ranch has the potential to become a successful project. Following is a discussion of factors underlying the estimate of visitation to the project.

- ◆ **Exhibit Quality and Audience Appeal** – Canoa Ranch as proposed at 47,725± square feet of building space and 4,800 acres of land would be of sufficient size and scope to become a regional serving facility. The outdoor lake, nature trails, and picnic area as proposed will help to create a desirable destination. While the exhibits program for the Heritage Area is in the early stage of planning, an emphasis on ranching and ecological exhibits featuring local themes is proposed. This would provide an enjoyable, educational, and repeatable visitor experience.
- ◆ **Location, Site and Accessibility** – A successful visitor attraction must be highly accessible both locally and regionally. Canoa Ranch is located in Green Valley, which is approximately 30 miles from Tucson, AZ, the largest center of population in the area. Therefore, outreach to Tucson residents will be important for generating visitation. The site is adjacent to Interstate 19 and near a highway interchange, so it has excellent accessibility that will require modest investments in way finding signage along the interstate and immediately off of it.
- ◆ **Available Markets** – Canoa Ranch will draw largely from resident markets. The projected 2011 population of the Primary Resident Market Area¹⁴ is 48,795. The Secondary Resident Market

¹⁴ Defined as the resident population within a 15-mile distance of Canoa Ranch.

Area¹⁵ is projected to have a population of 1,071,664 in 2011. The total Resident Market Area population is projected to be 1,120,429.

Arizona is a major tourism destination. Tucson and the surrounding area have an active tourism economy that can become a second major source of Canoa Ranch visitation. There is an opportunity to tap into the Mexican tourist market that is focused on Tucson and the southern Arizona counties. The Arizona Office of Tourism indicates that there were over 3.75 million overnight leisure trips to Tucson and Southern Arizona in 2005.

- ◆ **Facility Pricing** – The attraction’s ticket prices are assumed to be in keeping with the breadth and quality of the visitor experience, and the time a visitor would spend at Canoa Ranch. The ticket price should be competitive with other comparable attractions in the region, and should take into account income levels of the resident population. Like Colossal Cave Mountain Park, it is recommended that Canoa Ranch have a two-tiered fee structure: visitors pay for parking at the site and for tickets to the Heritage Area. A day-use parking fee of \$5.00 per car and an annual parking pass costing \$25.00 are assumed. The Heritage Area is assumed to have an adult ticket price of \$7.50 with discounts to seniors, children, and groups.
- ◆ **Competitive Context** – There are several complimentary heritage attractions on the I-19 corridor, including San Xavier Del Bac, Tubac Presidio State Park, and Tumacácori National Historical Park. The area also offers a number of cultural and entertainment attractions, including Madera Canyon Recreation Area, the Smithsonian Astrophysical Observatory, and the Titan Missile Museum. In the Tucson area, there are several attractions that focus on historic ranches, including Empire Ranch (which is located to the east of Canoa Ranch but not easily accessible), La Posta Quemada, and Agua Caliente Regional Park. It will be important for Canoa Ranch to differentiate itself from the visitor experience offered at these ranch attractions that creates a destination worth the commitment of a day trip.
- ◆ **Marketing and Programs** – The design and operating plan for Canoa Ranch assumes an ongoing marketing effort aimed at prime audiences, which is largely the defined resident market area. With the tourism audiences, there are identifiable marketing channels that can be used to build awareness of Canoa Ranch. These include hotel and information center “pamphlet racks”; printed literature sponsored by the Chamber of Commerce and other organizations; booths and street presence at the area festivals and events; local newspapers and radio spots among others. Attractions of the scale proposed often have only moderate amounts of resources available for marketing and programming efforts. Therefore, skillful use of the marketing budget and an emphasis on non-cash expense marketing efforts will be necessary for success in the marketing effort. Canoa Ranch should be tied into local, regional, and statewide marketing efforts, as well as cooperative marketing and promotion within the emergent Santa Cruz Valley Heritage Area and the rest of the Pima County park system.
- ◆ **Operating Hours** – Given the seasonality of visitation to attractions in Tucson, it is recommended that Canoa Ranch have extended hours from January through April, opening at 8:00 a.m. and closing at 6:00 p.m. Non-peak periods should have shorter hours, perhaps 8:00 or 9:00 a.m. to 4:00 or 5:00 p.m. In addition, special events and facility rentals could occur on selected evenings when the ranch is not open to the public.

¹⁵ Defined as the resident population of Pima and Santa Cruz Counties minus the resident population in the Primary Resident Market Area.

- ◆ **Days Open** – It is recommended that Canoa Ranch operate year-round and is open seven days a week. Closing days for major holidays would depend on the local market and operating experience.

Attendance Potential

Canoa Ranch has substantial attendance potential from resident and visitor markets. A repeat attendance pattern locally can be developed, and the “critical mass” of attraction elements can be created to attract visitors from beyond the local area and to attract tourists from the existing tourist market. The estimate of attendance potential at the Canoa Ranch has been prepared through a “gravity model” analytical approach. That is, the propensity to visit Canoa Ranch is strongest among people who reside the closest, or who are visiting areas closest to the facility. In addition, attendance prospects who are staying overnight in the area are more likely to visit than those people who are simply passing through the area en route to other locations.

Data in **Table V-1** provide a summary of the derivation of the attendance estimate at the Canoa Ranch, based on the data and analyses contained in this report, and the proposed program. These visitors include those people visiting the orientation center and lake only — the park attendance — and those purchasing tickets to the Heritage Area, which is estimated to be 60% of overall park attendance.

The average market penetration rate for the combined Primary and Secondary Resident Markets is estimated at 3.74 percent to 7.48 percent. This reflects a large region and the expected lower capture rates further from the site, but still within easy day-trip range. The attendance analysis suggests a good repeat visitation pattern and strong school group use. In addition to people on day trips from the resident market area, there will be visitors staying overnight in the area in commercial accommodations or with friends and relatives.

**Table V-1
Park Attendance Parameters - Stable Year
Canoa Ranch**

	Estimated 2011 Market Population	Market Penetration		Visitation Range			% of Total Mid Range Attendance
		Low	High	Low Range Attendance	Mid Range Attendance	High Range Attendance	
<i>Resident Markets</i>							
Primary Market Area	48,795	20.0%	40.0%	9,759	14,639	19,518	14.9%
Secondary Market Area	1,071,664	3.0%	6.0%	32,150	48,225	64,300	49.0%
Subtotal	1,120,459			41,909	62,863	83,818	63.8%
Average Penetration Rates for Resident Market		3.74%	7.48%				
		Visitor Market as a Percent of Resident Market Attendance					
<i>Visitor Market</i>		50.0%	60.0%	20,954	35,623	50,291	36.2%
Total Attendance Range ^{1/}				62,900		134,100	
Mid Range Park Attendance ^{1/}					98,500		100.0%
Percentage of Park Attendance Visiting Heritage Area					60%		
Mid Range Heritage Area Attendance ^{1/}					59,100		

^{1/} Rounded to nearest 100.
Source: ConsultEcon, Inc.

An attendance potential range has been established for total stabilized attendance. Stabilized attendance levels are typically achieved in the third or fourth year after opening. Attendance potential at Canoa Ranch in a stable year (year 4) is estimated at 62,900 to 134,100, with a mid-range “best estimate” of 98,500 for a total park attendance. The estimated mid-range attendance of the Heritage Area is 59,100.

While the majority of the visitation will come from the resident market area, Canoa Ranch will be able to attract additional visitors from travelers to the area who may be visiting friends or relatives or visiting the area on touring and heritage trips.

The range in the estimate of attendance is based on several factors:

- ◆ How well the concepts proposed for the project are translated into the visitor experience. Since specific exhibit planning has yet to occur, there is still substantial variability in the type, quantity, impact, and focus of exhibits.
- ◆ Ticket pricing policies.

- ◆ The extent of special events and exhibits. This evaluation has included moderate to high volumes of such special events.
- ◆ Quality of operation and attention to visitors will affect attendance levels.
- ◆ The amount and quality of marketing employed (including pre-opening marketing).
- ◆ The changes in the economic environment in Tucson, Arizona, and the U.S. generally.
- ◆ The variation in market acceptance of the project that may occur.

Ten-Year Attendance Patterns

During the first few years after opening, the project would be expected to achieve higher attendance based on local excitement about the facility. This would be balanced by the need to grow awareness in the Secondary Market Area of the project, and to get the project included on more school field trip itineraries. Awareness in the tourist markets would also grow. Based on these factors, an attendance of fifteen percent above stabilized attendance for Canoa Ranch would be anticipated during the first year of full operation. Attendance would then be expected to decline to a stabilized attendance level in the third year. Overall, attendance at the Heritage Area is estimated to remain 60% of overall park attendance (although attendance to the Heritage Area may be higher in initial years. Data in **Table V-2** provide estimated ten-year attendance potential.

Attendance Seasonality

An important factor in facility planning is seasonality of visitation. Data in **Table V-3** provides a summary of a stabilized year attendance by month. This estimated attendance pattern is an average of attendance patterns at the Arizona-Sonora Desert Museum, the Pima Air and Space Museum, the Flandreau Science Center, and Tucson Airport activity in 2004. For the Canoa Ranch mid-range attendance scenario, March is the month with the highest attendance of 12,805 attendees.

**Table V-2
Early Year Attendance Factors And Attendance Growth Pattern
Canoa Ranch**

	Stable Year									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Percentage Difference From Stabilized Attendance										
Percent of Stabilized Park Attendance	115%	110%	105%	100%	100%	101%	101%	102%	102%	103%
Percent of Stabilized Heritage Area Attendance	120%	115%	110%	100%	100%	101%	101%	102%	102%	103%
Projected Stabilized Annual Attendance										
Annual Park Attendance ^{1/}	113,300	108,400	103,400	98,500	98,500	99,500	99,500	100,500	100,500	101,500
Annual Heritage Area Attendance ^{1/}	70,900	68,000	65,000	59,100	59,100	59,700	59,700	60,300	60,300	60,900

^{1/} Rounded to nearest 100.
Source: ConsultEcon, Inc.

Table V-3
Monthly Park Attendance Distribution
Canoa Ranch

	Low Attendance Scenario		Mid-range Attendance Scenario		High Attendance Scenario	
	Projected Seasonality	Total Attendance	Projected Seasonality	Total Attendance	Projected Seasonality	Total Attendance
January	9%	5,661	9%	8,865	9%	12,069
February	10%	6,290	10%	9,850	10%	13,410
March	13%	8,177	13%	12,805	13%	17,433
April	11%	6,919	11%	10,835	11%	14,751
May	8%	5,032	8%	7,880	8%	10,728
June	7%	4,403	7%	6,895	7%	9,387
July	6%	3,774	6%	5,910	6%	8,046
August	6%	3,774	6%	5,910	6%	8,046
September	6%	3,774	6%	5,910	6%	8,046
October	8%	5,032	8%	7,880	8%	10,728
November	8%	5,032	8%	7,880	8%	10,728
December	8%	5,032	8%	7,880	8%	10,728
Total	100%	62,900	100%	98,500	100%	134,100

Source: ConsultEcon, Inc.

Peak Attendance and Parking Analysis

The information provided by data in **Table V-4** uses the estimated stabilized attendance to prepare estimates of Canoa Ranch attendance days during the peak season and parking requirements for the facility. Given this context, a facility attendance and parking analysis has been prepared.

This analysis uses the estimate of the attendance during a peak month (the peak month would be estimated to occur in March); a strong week during that period; and a peak day in that week (20 percent of weekly attendance, probably a Saturday); to arrive at an appropriate “design day” attendance level for Canoa Ranch. A factor of peak in-facility population of 25 percent to 40 percent of that day’s total attendance can be anticipated given an average length of stay of 1.0 to 2.0 hours. These factors provide an estimate of the “in-house” population that is useful in further project planning. At peak periods, the facility would have 179 to 287 visitors in-house.

Based on the estimated peak-period attendance, an assumption of 2.75 passengers per car during the peak period, and 99 percent auto usage, 68 to 108 parking spaces are estimated to be required during the design day periods, not including employees or volunteers.

**Table V-4
Peak On-Site Population and Parking Requirements
Canoa Ranch**

	Mid-Range Attendance In-House		
Annual Park Attendance	98,500		
Peak Month at 13% of Annual Attendance	12,805		
High Week (28%) of peak period	3,585		
Peak day (20%) in high week	717		
		Mid Range Requirement	High Range Requirement
Average Length of Stay		1 hour	2 hours
Percent of In-House Attendance at Peak		25%	40%
Peak in-house population		179	287
Visitor Peak Period Parking Demand ^{1/}		68	108

^{1/} Based on 99 percent auto usage during peak daytime periods (bus usage is higher during the shoulder seasons from groups). 2.75 persons per vehicle. Plus 5% turnover requirement.

Source: ConsultEcon, Inc.

Canoa Ranch Attendance Potential Summary

This attendance analysis includes overall park attendance to Canoa Ranch and attendance to the Heritage Area. The stabilized park attendance potential range at the Canoa Ranch is 62,900 to 134,100, with a mid-range of 98,500. The estimated stabilized mid-range attendance at the Heritage Area is 59,100, or 60 percent of overall park attendance. The attendance analysis assumes that the project will be aggressively marketed, competently operated, and will receive full community support in the public and private sectors.

Section VI

OPERATING PROFILE OF CANOA RANCH

This section describes the operating parameters and analyzes the economic potential for Canoa Ranch. The assumptions made are based on the market potential identified for the project, the planned project size, and additional research on operating factors that would be associated with a facility of the profile being considered.

The purpose of this report is to assess feasibility and provide information for the development and planning process. As project planning moves forward (including physical and interpretive programs) the project timing, operations, and financial projections would need to be refined.

OPERATING AND REVENUE ASSUMPTIONS

Canoa Ranch would operate under the norms for ranch attractions nationally, adjusted for local conditions. Canoa Ranch will be operated by the Pima County Natural Resources, Parks, and Recreation Department. Within this department, it will fall under the purview of the Natural Resource Park division. While the county will manage most areas of the park, in particular the orientation/visitor center and lake area, the Heritage Area, and conservation areas with limited public access, it may contract with concessionaires to operate certain activities within the park. For the purposes of this analysis, the activities within the park that are operated by concessionaires will provide additional revenue to support park operations without affecting the park's (county) expense profile. Therefore, the expenses incurred by concessionaires are not included in this analysis, and revenues from concessionaire operated activities are expressed as "net" revenues to the county.

In addition, a not-for-profit support group may have an important role in coordinating park volunteers, developing educational programs, and raising supportive funds. (During the planning of Canoa Ranch, several participants expressed interest in creating a 501(c)3 support group.) Regardless of this group's current and future capacity to raise funds, Pima County will have to provide operating support in order to maintain the park operation. As is the case in every ranch attraction profiled in this report and virtually every park across the country, Canoa Ranch will need ongoing operational support from local government and possibly a support organization.

Other important operating assumptions include:

- ◆ **Admission Fee Structure** – Canoa Ranch will have a two-tiered admission fee structure similar to the one in place at Colossal Cave Mountain Park. The first fee is a parking fee collected at the entrance to Canoa Ranch, which is assessed on a per car basis rather than a per person basis. In order to accommodate local residents that may want to visit more often, an annual parking pass is assumed that will enable cars to visit Canoa Ranch an unlimited number of times during the year. The second (and optional) fee is a ticket to the Heritage Area section of the park.
- ◆ **Daily and Annual Parking Pass Prices** – The daily parking pass price used in this analysis is \$5.00 and the annual parking pass is \$25.00. These prices are based on similar attractions in the region and comparable ranch attractions.
- ◆ **Heritage Area Ticket Prices** – Based on the market research conducted for this report, the location of the project, and the planned program, the benchmark adult admission price is \$7.50 for the Heritage Area in current prices. Children, seniors, and adult and school groups would have reduced ticket prices. Based on the different ticket prices and audience mix, the achieved per capita ticket revenue for a stable year in current dollars is estimated at \$6.04. Ticket prices are assumed to increase at a rate of 5.06 percent every other year, which reflects a compounded rate based on 2.5 percent inflation estimate.
- ◆ **Heritage Area Attendance** – Heritage Area attendance is based on the analysis presented in Section V. The Heritage Area attendance under the mid-range attendance scenario is used as the stable year benchmark attendance of 59,100 attendees. As with many new attractions, there will be an early “surge” in attendance, followed by slow growth after stabilized attendance is reached in year 4.
- ◆ **Retail** – A gift shop with appropriate and varied merchandise can be an important part of the visitor experience, as well as an important revenue source. This element is assumed to perform at industry norms for moderately scaled educational attractions, and to generate \$2.00 per visitor in retail sales. The cost of goods sold is estimated to be 52 percent of retail sales.
- ◆ **Food Vending** – The Canoa Ranch program includes small vending areas in or adjacent to the orientation center and in the Heritage Area. There are currently no food service offerings near the site and the restaurant planned on the site may, at times, be closed or unsuitable for snacks, so there is a need for basic refreshments. Therefore, vending should be available as a convenience to Canoa Ranch visitors, volunteers, and staff. Vending in these areas could consist of cold drinks and perhaps coffee vending, and an assortment of snacks and sweets. Limited seating should be available, with the possibility of covered outdoor seating to supplement indoor areas.

Based on these factors, in-house vending sales are estimated at \$1.00 per attendee. This could be operated by Canoa Ranch or through a subcontractor. For analytical purposes, and given the modest scale of the food service, this analysis estimates the proceeds to Canoa Ranch by assuming that a 20 percent of gross sales fee from a sub-contracted operator. This vending operating profile is typical in the industry.

- ◆ **Facility Rentals** – Many visitor attractions make their facilities available for special events and facility rentals. These might include receptions, meetings, and events. There are several outdoors spaces with barbeque pits that can accommodate rentals, and current plans call for a

commercial kitchen in the conference center building as well as a service kitchen in the Heritage Area. Canoa Ranch will have an opportunity to gain revenues from this source. The terms for rental and the extent of rentals vary considerably among institutions. This analysis has assumed that the facility can attract 100 events annually with average net revenues of \$750 per event. At 100 people per event, facility rentals will account for an estimated 10,000 visitors to the park/Heritage Area.

- ◆ **Inflation Assumption** – The financial pro forma analysis uses the 2006 value of the dollar for the first year of the projection, with following years at an assumed 2.5 percent inflation rate. The actual year of opening is uncertain, but will have experienced some level of inflation from current price levels. Thus, the actual revenues and the expenses would reflect the inflation to that time compared to this analysis. This approach is used for several reasons. As noted, projecting inflation adds another level of uncertainty. A current dollar estimate for the first year allows the reader to compare the projections to the information regarding comparable projects, and the reader’s own experience.

Data in **Table VI-1** summarize the assumptions underlying the financial analysis for Canoa Ranch.

Table VI-1
Pro Forma Operating Assumptions in Current Dollars
Canoa Ranch

<i>General</i>	
Mid-Range Park Attendance	98,500
Mid-Range Heritage Area Attendance	59,100
Percent of Park Visitors Attending Heritage Area	60%
Day-Use Parking Pass Price	\$5.00
Annual Parking Pass Price	\$25.00
Heritage Area Adult Ticket Price	\$7.50
Per Capita Ticket Revenue	\$6.04
Ticket Price Increase % every other year	5.06%
Inflation	2.5%
Annual Attendance Growth After Stabilized Year	1.0%
<i>Retail and Vending Machines</i>	
Per Capita Gross Retail Sales	\$2.00
Cost of Goods Sold as a % of Retail and Vending Sales	52%
Per Capita Gross Vending Sales	\$1.00
Contracted Gross Vending Sales Fee	20%
<i>Facility Rentals and Receptions</i>	
Facility Rentals Per Year	100
Average Attendance per Event	100
Target Attendance in Stable Year	10,000
Average Net Revenue per Rental	\$750
Note: Facility rentals assume attendees pay ticket and parking fees.	
<i>Annual Parking Passes</i>	
Percent of Resident Market Visitors Using Annual Parking Passes	25%
Average Party Size Per Vehicle Parked	2.75
Estimated Number Annual Party Visits per Parking Pass	8

Source: ConsultEcon, Inc.

OPERATING REVENUE

Canoa Ranch will derive revenue from earned revenue and non-earned revenue. As with most parks, Canoa Ranch will have to supplement earned revenue from non-earned sources because earned revenue will not support all of the operational expenses. Since the park will be owned and operated by Pima County, it is assumed that in lieu of other funds from other sources, the county will provide an annual contribution to support park operations, either from general funds or from a fund set up specifically for Canoa Ranch. This analysis assumes a “breakeven” operation: the amount of non-earned revenue required is the difference between the revenue earned and the total operating expense. The non-earned revenues cited in this report should be considered a minimum as additional non-earned revenues will enhance park operations, potentially leading to a better visitor experience.

Earned Revenue

A variety of diverse activities will enable Canoa Ranch to earn operating revenues. The major sources of earned revenue will come from ticket and parking fees. A retail store, vending machines, and event rentals will provide additional revenue opportunities. Other revenue will be derived from activities operated by concessionaires, including a restaurant and conference center, four bunkhouses with self-service kitchens, a campground, and docent-led hiking excursions and horse trail rides.

Heritage Area Ticket Revenue

Data in **Table VI-2** show the attendance mix and ticket pricing for different categories of visitors to the Heritage Area. The adult ticket price is assumed to be \$7.50. Discounts are offered to different types of visitors. Based on the different ticket prices and audience mix, the achieved per capita ticket revenue for a stable year in current dollars is estimated at \$6.04.

Data in **Table VI-3** present an analysis of audience mix, attendance, and per capita ticket revenue over a ten year period. This table reflects an early year surge in attendance and slow growth after a stable year of attendance. Note also that the percentages of school and adult group attendees increase in early years as community awareness of the attraction expands.

Table VI-2
Heritage Area Admissions Analysis - Stable Year
Canoa Ranch

Heritage Ticket Type	% to Park Attendance ^{1/}	% to Heritage Attendance	Heritage Attendance By Ticket Type	Achieved Ticket Price	Achieved Per Cap on Heritage Area	Achieved Per Cap % to Heritage Area
Adult	22.2%	37.0%	21,867	\$7.50	\$2.78	46.0%
Seniors	18.0%	30.0%	17,730	6.50	1.95	32.3%
Children	6.6%	11.0%	6,501	5.50	0.61	10.0%
Adult Group	1.8%	3.0%	1,773	5.50	0.17	2.7%
Student Group	7.2%	12.0%	7,092	4.50	0.54	8.9%
Free/Complimentary	4.2%	7.0%	4,137	0.00	0.00	0.0%
Total	60.0%	100.0%	59,100		\$6.04	100.0%

^{1/} Assumed to be in ratio with distribution of overall Park attendance
Source: ConsultEcon, Inc.

Table VI-3
Ten-Year Heritage Area Attendance Assumptions - Stable Year
Canoa Ranch

% to Total Attendance	Stable Year									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Adult	38.5%	38.0%	37.5%	37%	37%	37%	37%	37%	37%	37%
Seniors	31.5%	31.0%	30.5%	30%	30%	30%	30%	30%	30%	30%
Children (4-12)	12.5%	12.0%	11.5%	11%	11%	11%	11%	11%	11%	11%
Adult Group	1.5%	2.0%	2.5%	3%	3%	3%	3%	3%	3%	3%
School Group	9.0%	10.0%	11.0%	12%	12%	12%	12%	12%	12%	12%
Complimentary	7.0%	7.0%	7.0%	7%	7%	7%	7%	7%	7%	7%
Total	100.0%									
Attendance By Type										
Adult	27,297	25,840	24,375	21,867	21,867	22,089	22,089	22,311	22,311	22,533
Seniors	22,334	21,080	19,825	17,730	17,730	17,910	17,910	18,090	18,090	18,270
Children (4-12)	8,863	8,160	7,475	6,501	6,501	6,567	6,567	6,633	6,633	6,699
Adult Group	1,064	1,360	1,625	1,773	1,773	1,791	1,791	1,809	1,809	1,827
School Group	6,381	6,800	7,150	7,092	7,092	7,164	7,164	7,236	7,236	7,308
Complimentary	4,963	4,760	4,550	4,137	4,137	4,179	4,179	4,221	4,221	4,263
Total	70,900	68,000	65,000	59,100	59,100	59,700	59,700	60,300	60,300	60,900
Percentage of Adult Ticket Price										
Adult	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Seniors	87%	87%	87%	87%	87%	87%	87%	87%	87%	87%
Children (4-12)	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%
Adult Group	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%
School Group	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Complimentary	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Achieved Per Capita Ticket Revenue										
Adult	\$2.89	\$2.85	\$2.95	\$2.92	\$3.06	\$3.06	\$3.22	\$3.22	\$3.38	\$3.38
Seniors	\$2.05	\$2.02	\$2.08	\$2.05	\$2.15	\$2.15	\$2.26	\$2.26	\$2.38	\$2.38
Children (4-12)	\$0.69	\$0.66	\$0.66	\$0.64	\$0.67	\$0.67	\$0.70	\$0.70	\$0.74	\$0.74
Adult Group	\$0.08	\$0.11	\$0.14	\$0.17	\$0.18	\$0.18	\$0.19	\$0.19	\$0.20	\$0.20
School Group	\$0.41	\$0.45	\$0.52	\$0.57	\$0.60	\$0.60	\$0.63	\$0.63	\$0.66	\$0.66
Complimentary	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Per Capita	\$6.11	\$6.09	\$6.37	\$6.34	\$6.66	\$6.66	\$7.00	\$7.00	\$7.35	\$7.35

Source: ConsultEcon, Inc.

Parking Pass Revenue

Revenue from parking will be derived from the sale of day use parking passes and annual parking passes. Since people entering Canoa Ranch will be charged on a per-car rather than a per-person basis to park a car, the park attendance estimate must be converted into a car estimate that calculates the visitation by people with and without annual parking passes.

Data in **Table VI-4** show the estimated number of day use and annual parking passes that will be sold based on the number of cars parked at Canoa Ranch on an annual basis. In a stable year (year 4) of park attendance, an estimated 634 annual parking passes will be sold. There are several assumptions that inform this analysis. First, 25% of the overall park visitation from the Resident Market Area population will come from people purchasing annual passes. Second, households with an annual pass will visit Canoa Ranch an average of eight times per year. Third, each car will contain an average of 2.75 people.

Ten-Year Ticket Parking Pass and Heritage Area Prices

Data in **Table VI-5** present the prices day use and annual parking passes and Heritage Area prices over a ten year period. This analysis assumes that prices increase 5.06 percent every other year, which is the compounded rate of inflation.

Table VI-4
10-year Parking Analysis
Canoa Ranch

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Stable Year										
Estimate of the Number of Annual Parking Passes										
Park Attendance From Resident Market	72,309	69,182	65,991	62,863	62,863	63,502	63,502	64,140	64,140	64,778
School Group Heritage Area Attendance	6,381	6,800	7,150	7,092	7,092	7,164	7,164	7,236	7,236	7,308
Park Attendance From Resident Market less School Groups	65,928	62,382	58,841	55,771	55,771	56,338	56,338	56,904	56,904	57,470
Resident Market Individual Attendees Parking with Passes ^{1/}	16,482	15,595	14,710	13,943	13,943	14,084	14,084	14,226	14,226	14,368
Cars Parked due to Annual Parking Passes ^{2/}	5,993	5,671	5,349	5,070	5,070	5,122	5,122	5,173	5,173	5,225
Number of Annual Parking Passes ^{3/}	749	709	669	634	634	640	640	647	647	653
Estimate of the Number of Cars Parked due to Day Use Pass										
Total Park Attendance	113,300	108,400	103,400	98,500	98,500	99,500	99,500	100,500	100,500	101,500
Adult Group Heritage Area Attendance	1,064	1,360	1,625	1,773	1,773	1,791	1,791	1,809	1,809	1,827
School Group Heritage Area Attendance	6,381	6,800	7,150	7,092	7,092	7,164	7,164	7,236	7,236	7,308
Annual Parking Pass Attendees	16,482	15,595	14,710	13,943	13,943	14,084	14,084	14,226	14,226	14,368
Park Attendance less School Groups, Adult Groups, and Annual Parking Pass Attendees	89,374	84,645	79,915	75,692	75,692	76,461	76,461	77,229	77,229	77,997
Cars Parked due to Day Use Pass ^{2/}	32,499	30,780	29,060	27,524	27,524	27,804	27,804	28,083	28,083	28,363
Total Cars Parked due to Day Use and Annual Parking Passes	38,493	36,451	34,409	32,595	32,595	32,925	32,925	33,256	33,256	33,587

^{1/} It is assumed that 25% of resident market visits will be through the use of a parking pass.

^{2/} It is assumed that 2.75 people will be in each car.

^{3/} It is assumed that cars with annual parking passes will visit the park 8 times per year.

Source: ConsultEcon, Inc.

Table VI-5
Parking Pass and Heritage Area Ticket Price Assumptions
Canoa Ranch

Pricing Schedule	Ticket Price Assumptions By Year										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Day-Use Parking Pass	\$5.00	\$5.00	\$5.25	\$5.25	\$5.52	\$5.52	\$5.80	\$5.80	\$5.80	\$6.09	\$6.09
Annual Parking Pass	\$25.00	\$25.00	\$26.27	\$26.27	\$27.60	\$27.60	\$28.99	\$28.99	\$28.99	\$30.46	\$30.46
Heritage Area											
Adult, Full Price	\$7.50	\$7.50	\$7.88	\$7.88	\$8.28	\$8.28	\$8.70	\$8.70	\$8.70	\$9.14	\$9.14
Seniors	\$6.50	\$6.50	\$6.83	\$6.83	\$7.17	\$7.17	\$7.54	\$7.54	\$7.54	\$7.92	\$7.92
Children (4-12)	\$5.50	\$5.50	\$5.78	\$5.78	\$6.07	\$6.07	\$6.38	\$6.38	\$6.38	\$6.70	\$6.70
Adult Group	\$5.50	\$5.50	\$5.78	\$5.78	\$6.07	\$6.07	\$6.38	\$6.38	\$6.38	\$6.70	\$6.70
School Group	\$4.50	\$4.50	\$4.73	\$4.73	\$4.97	\$4.97	\$5.22	\$5.22	\$5.22	\$5.48	\$5.48
Complimentary ^{1/}	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

^{1/} Includes children 3 and under, reception and program attendees, and complimentary tickets.
All estimates are in current dollars.
Source: ConsultEcon, Inc.

Other Revenue from Concessionaires

The park amenities (lake, trails, orientation center, gift shop, and vending) and the Heritage Area are the primary and defining uses at Canoa Ranch. In order to generate additional revenue, there are several other proposed uses in the master plan, including: docent-led hiking and trail rides, a special event campground, an equestrian center (expanded from the existing horse cutting operation on site), a restaurant and conference center, and rustic bunkhouses with self-service kitchen facilities. For the purposes of this analysis, all of the above activities are assumed to generate additional revenue to support Canoa Ranch, but would not incur additional costs. For most, if not all, of them, Pima County would bid out these other activities to concessionaires that would manage the operations and maintain the facilities. Any additional operating expenses are presumed to be covered by individual contractors or within the park's operating expenses.

Data in **Table VI-6** present assumptions and estimates for activities at Canoa Ranch that fall under the category of other revenue. For the purposes of this analysis, all of these other revenue sources are assumed to be built and open concurrent with the ranch's opening. However, to mitigate the risk involved in speculative building, ranch management should secure management and operating contracts before constructing the facilities. Overall, other revenue sources generate \$237,930 in a stable year in current dollars.

Table VI-6
Other Revenue from Concessionaires
Assumptions and Estimates for a Stable Year in Current Dollars
Canoa Ranch

Park Attendance	98,500
Heritage Area Attendance	59,100
<i>Docent-Led Activities</i>	
Number of People Taking a Hike	5,000
Net Revenue from Hike	\$5.00
Number of People Taking a Trail Ride	2,500
Net Revenue from Trail Ride	\$5.00
Subtotal for Docent-Led Activities	\$37,500
Subtotal for Equestrian Center and Events ^{1/}	\$25,000
<i>Group Campground</i>	
Number of Campsites	20
Number of Days Open per Year	360
Number of Campsite-Nights	7,200
Occupancy Rate	40%
Number of Campsite Rentals	2,880
Net Revenue for Campsite Rental	\$5.00
Subtotal for Campground	\$14,400
<i>Bunkhouses ^{2/}</i>	
Number of Rooms	16
Number of Days Open per Year	360
Number of Room-Nights	5,760
Occupancy Rate	66%
Number of Rooms-Nights per Year	3,802
Net Revenue per Room Rented	\$15.00
Subtotal for Bunkhouse	\$57,024
<i>Restaurant</i>	
Gross Revenue per Park Attendee per Day ^{3/}	\$3.75
Total Gross Revenue	\$369,375
Park Share of Gross Revenue	15%
Subtotal for Restaurant	\$55,406
<i>Conference Center</i>	
Number of Rooms	3
Number of Available Rental Slots per Day	9
Number of Days Open per Year	360
Number of Rooms Available for Rental	3,240
Occupancy Rate ^{4/}	20%
Number of Rooms Rented per Year	648
Net Revenue per Room Rented	\$75.00
Subtotal for Conference Center	\$48,600
Total for Other Revenue	\$237,930

^{1/} Terms: 10% of gross revenue estimated at \$250,000

^{2/} Guests at bunkhouses account for only one park attendee regardless of how many days they spend on site.

^{3/} Includes destination restaurant patrons that may not be included in park attendance.

^{4/} Rate includes rental of multiple rooms combined in a recommended flexible layout as well as rentals such as all day meetings that occupy multiple slots.

Source: ConsultEcon, Inc.

Non-Earned Revenue

As with almost all not-for-profit museums and educational attractions nationwide, Canoa Ranch must supplement “earned” revenues with non-earned or contributed revenues. Nationwide, virtually all public sector and private not-for-profit visitor attractions receive a substantial share of revenues from non-earned sources. These revenues include endowment earnings, gifts, grants, fundraising events, corporate and public support, and in-kind donations. On average, the comparable ranching attractions, profiled in the Canoa Ranch Master Plan Background Report, received 59 percent of their operating budget from contributed sources; overall, the percentage of non-earned revenues to total budget ranged from 25 percent to 95 percent. In this analysis a percentage of contributed revenues of about 22 percent of total revenues are targeted to support the baseline operations profiled in this report. The report establishes a baseline amount or requirement of non-earned revenues to maintain basic operations. Higher levels of non-earned revenue would enhance operations and mission fulfillment.

The sources and amounts of non-earned revenues vary between institutions based on their individual circumstances. Following is a discussion of possible sources of non-earned revenues at Canoa Ranch. The best strategy is to tap a wide variety of sources of contributed revenues so that the revenue goals can be met or exceeded. Contributed revenue sources to support ongoing operations funding should be secured at the same time as capital funding prior to construction.

- ◆ **Public Subsidies and Contributions** – Since Canoa Ranch is to be managed by Pima County, the county will no doubt contribute unearned revenues to support operations as it does for all of its parks. Moreover, local and state governments may be inclined to contribute public dollars to the capital and/or operating budgets of this educational attraction. Such facilities are generally considered community assets that contribute to the quality of life for area residents while supporting the local economic base in terms of jobs and the importation of dollars into the local economy. On an ongoing basis, many educational and cultural attractions rely on an annual budget appropriation from state and/or local governmental sources. Sharing proceeds from local taxation districts is also a common source of annual funding. As well, local governments can assist operations through the provision of public works services such as trash hauling and site maintenance.
- ◆ **Not-for-Profit Support Group** – During the planning of Canoa Ranch, several participants expressed interest in creating a 501(c)3 support group. Many visitor attractions have affiliated support groups that raise funds, organize volunteers, and generally support operations.
- ◆ **Endowment** – A targeted campaign to create an endowment for Canoa Ranch should begin in the project’s early planning stages. Support from an endowment can substantially assist successful operations. Endowment contributions can be either general in nature, or specifically allocated to an exhibit, task, or position. For instance, the amount to endow a particular exhibit would be formulaically derived, and would carry with it formal signed recognition in the facility, as well as

recognition in facility publications and visitor guides. Other endowment could be raised on a more traditional philanthropic basis.

- ◆ **Corporate Sponsorships** – Corporations are increasingly viewing sponsorship of first rate cultural and educational institutions as a way to meet their charitable obligations, while gaining positive publicity and public recognition. In the case of Canoa Ranch, there are a number of corporations that have a strong local presence which would be good prospects to become ongoing and major donors and /or sponsors of the Ranch. The tying of specific exhibits or programs to their sponsors allows the sponsor to have on-site recognition. This approach has yielded significant results for many museums and educational attractions.
- ◆ **Gifts In-Kind** – Some of the inputs to the operation of Canoa Ranch lend themselves to support through gifts in-kind. For instance, utilities might make up almost 7 percent of operating costs at the facility. A 10 percent reduction in the unit cost of electricity could yield \$6,000 to \$10,000 in cost savings annually, with higher ratios yielding more savings. Other basic supplies and inputs might also be purchased under special arrangements, such as reduced profit margins or even as pure donations. These might range from paper products and printing to professional services.
- ◆ **Grants** – There are a wide-variety of grants available from government bodies and from foundations. Many museums and educational attractions receive substantial portions of their annual budgets from such sources. These will be especially useful in funding special educational programs, exhibit reinvestment, and other focused activities. The extent to which such sources of funds are tapped will be based on the ability for the institution to prepare and submit grant applications, and the persuasiveness and targeting of the individual requests.
- ◆ **Annual Events** – An annual event is often a way to meet multiple organizational objectives. These include membership development, community recognition, corporate support development, and fund development.
- ◆ **Annual Gifts** – A targeted development campaign should focus on regional individuals and foundations. This fundraising task may be undertaken by a Friends group that is affiliated with Canoa Ranch.

In summary, virtually all museums and educational attractions rely on non-earned sources of funds to supplement earned revenues. The amounts that can be gained from these sources will vary based on the individual circumstances of the institution, the support it receives in the community, and the personnel and resources that can be focused on attracting these sources of funds. In this analysis, roughly \$300,000 in contributed revenue is required for break-even operations in a stable year and could be funded in a variety of ways as discussed.

Revenue Summary

Data in **Table VI-7** show the estimated revenue potential of Canoa Ranch including a summary of the potential operating revenue for the stable year of operations in current dollars. Earned revenue potential in a stable year in current dollars is \$991,666 while non-earned revenue potential is \$272,215.

Table VI-7
10-Year Operating Revenue Potential
Canoa Ranch

	Stable Year in Current Dollars ^{1/}	Stable Year									
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Park Attendance	98,500	113,300	108,400	103,400	98,500	98,500	99,500	99,500	100,500	100,500	101,500
Total Heritage Area Attendance	59,100	67,980	65,040	62,040	59,100	59,100	59,700	59,700	60,300	60,300	60,900
Per Capita Ticket Revenue	\$5.89	\$6.11	\$6.09	\$6.37	\$6.34	\$6.66	\$6.66	\$7.00	\$7.00	\$7.35	\$7.35
Earned Revenue											
Day-Use Parking Sales	\$137,622	\$162,497	\$153,899	\$152,656	\$144,589	\$151,909	\$153,451	\$161,220	\$162,840	\$171,084	\$172,786
Annual Parking Pass Sales	\$15,844	\$18,730	\$17,722	\$17,562	\$16,646	\$17,489	\$17,667	\$18,561	\$18,747	\$19,697	\$19,893
Heritage Area Ticket Sales	\$347,969	\$415,358	\$395,768	\$394,995	\$374,725	\$393,695	\$397,692	\$417,825	\$422,025	\$443,390	\$447,801
Retail Sales Net of COGS	\$157,600	\$181,280	\$177,776	\$173,815	\$169,718	\$173,961	\$180,120	\$184,623	\$191,141	\$195,919	\$202,815
Vending Fees	\$19,700	\$22,660	\$22,222	\$21,727	\$21,215	\$21,745	\$22,515	\$23,078	\$23,893	\$24,490	\$25,352
Facility Rental	\$75,000	\$75,000	\$76,875	\$78,797	\$80,767	\$82,786	\$84,856	\$86,977	\$89,151	\$91,380	\$93,665
Other Revenue	\$237,930	\$237,930	\$243,879	\$249,975	\$256,225	\$262,630	\$269,196	\$275,926	\$282,824	\$289,895	\$297,142
Total Earned Revenue	\$991,666	\$1,113,455	\$1,088,141	\$1,089,528	\$1,063,885	\$1,104,216	\$1,125,497	\$1,168,210	\$1,190,621	\$1,235,854	\$1,259,454
Total Non-Earned Revenue	\$272,215	\$150,426	\$207,337	\$238,337	\$297,177	\$290,872	\$304,468	\$297,504	\$311,736	\$304,062	\$318,960
Total Revenue	\$1,263,881	\$1,263,881	\$1,295,478	\$1,327,865	\$1,361,061	\$1,395,088	\$1,429,965	\$1,465,714	\$1,502,357	\$1,539,916	\$1,578,414

^{1/} Stable Year Current Dollars analysis takes the Stable Year (Year 4) future dollar figures and adjusts them to current dollars.
Source: ConsultEcon, Inc.

OPERATING EXPENSES

Parks and educational attractions like Canoa Ranch are largely fixed cost operations. These fixed costs include insurance, utilities and exterior maintenance, most personnel, exhibit maintenance, basic marketing, facility maintenance, etc. There is some variability in expenses based on attendance levels such as visitor services, education programs, marketing, and so forth. The analysis of operating expenses is based on the size of the facility, the stated mission, and organizational goals, as well as the operating experience of other attractions of this scale. This operating profile assumes an efficiently run organization with a “bottom line” mentality.

Personnel

Data in **Table III-8** presents an illustrative staffing profile for Canoa Ranch based on facility size and projected attendance patterns, the current staffing profile, and the experience of comparable ranch attractions. The staffing profile includes a staff of 15 full-time, 9 part-time year-round and seasonal employees, for a total of 19.5 full-time equivalent positions. These include personnel to cover administration, operations, retail and ticket sales, marketing, special events, education, volunteer coordination, exhibits, and maintenance. A strong cadre of volunteer docents, who would have educational and interpretive duties as well as assisting with special projects and other important functions, will be vital to the successful operation of the facility. The wage and salary figures are for illustrative purposes only and in no way are meant to represent actual or recommended salaries by position or position type. However, as a whole, these estimates are representative of salary levels in the Pima County park system, and are illustrative of salary requirements for the facility as conceived.

In total, a payroll of \$545,250 is estimated. A 25 percent fringe rate was utilized based on a mix of full-time and part-time personnel. The total payroll for Canoa Ranch, based on this staffing profile, is estimated at \$681,000. Personnel salaries and wages as projected are approximately 51 percent of total expenses at the facility, which is typical in the industry.

Table VI-8
Illustrative Personnel Positions and Salaries
Canoa Ranch

Personnel Schedule	Annual Salaries (FTE)	Number of Full Time Positions	Number of Part Time Positions	Total Salary Budget
<i>Administration</i>				
Park Manager	\$41,500	1		\$41,500
Administrative Assistant/Bookkeeper	21,500	1		21,500
<i>Exhibits, Education and Interpretation</i>				
Director of Education and Interpretation	41,500	1		41,500
Educators/Interpreters	37,500	2	2	112,500
Interpreter/Volunteer Coordinator	37,500	1		37,500
Curator/Exhibit Coordinator	41,500	1		41,500
<i>Visitor Services</i>				
Program Coordinator (Marketing/Events)	37,500		1	18,750
<i>Operations</i>				
Concessions Supervisors	21,000	1		21,000
Concessions Worker	16,500	3		49,500
Trade Maintenance Supervisor	36,500	1		36,500
Trade Maintenance Technicians	25,000		2	25,000
Laborers/Custodians	18,000	3		54,000
Natural Resources Specialist	29,000		1	14,500
Intermittent Workers (Interns, Seasonal/Event Support)	20,000		3	30,000
Total Personnel		15	9	\$545,250
Taxes, Fringe & Benefits (@ 25% of salary) ^{1/}				\$136,313
Total Salaries & Benefits Budget				\$681,563
Total Full Time Equivalent Positions (FTE'S)		19.50		

^{1/} Based on the employee mix in this analysis, 25% is a blended rate of 30% taxes, fringe & benefits for full-time employees and 8% taxes, fringe & benefits for part-time employees.
NOTE: Part Time Employees at 50% FTE.
Source: ConsultEcon, Inc.

Data in **Table VI-9** provide a prototypical operating expense profile for the facility based on typical operating factors for moderately scaled visitor attractions, and the facility size in this analysis.

**Table VI-9
Illustrative Operating Expense - Detail by Type
Canoa Ranch**

Project Parameters			
Ranch Acres	4,800		
Building Square Footage (SF) ^{1/}	46,725		
Annual Attendance	98,500		
Employees (FTEs)	19.50		See Personnel Schedule
Detailed Budgetary Analysis	Annual Amount	Expense Factors	
Salaries (FTE,PTE)	\$545,250		See Personnel Schedule
Fringe & Benefits	\$136,313		See Personnel Schedule
Utilities	\$105,131	@	\$2.25 Per SF (buildings)
Professional Services	\$45,000		Budgeted
Administrative Supplies & Materials ^{2/}	\$39,000	@	\$2,000 Per FTE
Groundskeeping Supplies & Materials	\$24,000	@	\$5.00 Per Acre
Building Repairs & Maintenance	\$93,450	@	\$2.00 Per SF
Advertising	\$73,875	@	\$0.75 Per Attendee
Printing & Publications	\$49,250	@	\$0.50 Per Attendee
Telephone	\$11,700	@	\$600 per FTE
Postage and Shipping	\$5,850	@	\$300 per FTE
Equipment Rental / Lease	\$9,750	@	\$500 per FTE
Training / Travel	\$5,850	@	\$300 per FTE
Mileage / Motorpool	\$21,450	@	\$1,100 per FTE
Dues and Subscriptions	\$1,950	@	\$100 per FTE
Events	\$20,000		Budgeted
Cost of Programs	Not Calculated at This Time		
Exhibit Reinvestment	\$24,625	@	\$0.25 Per Attendee
Miscellaneous & Contingency	\$14,625	@	\$750 Per FTE
Subtotal Operating Expenses	\$1,227,069		
Capital Reserves	\$36,812		3% Of Total Op. Expenses
Total Operating Expenses	\$1,263,881		
Operating Expense Per SF	\$27.05		
Operating Expense Per Visitor	\$12.83		
Operating Expense Per Acre	\$263.31		

1/ All buildings on the site, except for stables and corrals related to existing non-heritage area equestrian center. Includes corrals and stables in Heritage Area.

2/ Generally includes office supplies and general business expenses, but also Includes workman's compensation insurance. County is self-insured for all other forms of insurance.

Source: ConsultEcon, Inc.

Other Operating Expenses

In addition to salaries and fringe benefits, expenditures are assigned for a number of categories, including marketing, insurance, utilities, and staff overhead costs. Following is a discussion of selected expense items.

- ◆ **Utilities** – Utility costs are estimated at \$2.25 per square foot for utilities. This estimate will vary depending on the systems installed in the buildings, and future energy costs.
- ◆ **Professional Fees, Outside Services** – Includes various outside services such as accounting, legal, consulting, as well as services contracted with other Pima County agencies (i.e., Cultural Resources).
- ◆ **Administrative Supplies & Materials** – Includes maintenance, janitorial and operating supplies, office supplies and materials, and general business and miscellaneous expenses for the buildings.
- ◆ **Groundskeeping Supplies & Materials** – Includes maintenance, janitorial and operating supplies, and miscellaneous expenses for the ranch grounds.
- ◆ **Building Repairs & Maintenance** – Expenses related to maintaining building systems, and general building functions. Also includes both maintenance and repairs, and a reserve for capital replacement of equipment such as cash registers, computers, etc.
- ◆ **Advertising** – Includes advertising; printing and publications design, production and distribution expenses for advertising; and other printed matter as well as in-house produced promotional materials. Canoa Ranch should participate in co-op marketing to the extent possible.
- ◆ **Printing & Publications** – Includes printing costs for brochures, visitor guides, office stationary and letterhead, press release packages, educational kits, and a newsletter.
- ◆ **Exhibit Reinvestment** – Costs associated with maintaining and updating exhibits.
- ◆ **Miscellaneous & Contingency** – Other small expenditure items not covered in prior categories.

A moderate capital repairs fund is included for small-scale capital repairs and improvements at 3 percent of operating expenses. It should be noted that this budget does not include funds for major capital repairs (which would not be anticipated for some time), nor does it include funds for exhibit renewal. These major capital items would be paid for through outside gift and grant funds, and/or through retained earnings. The expenses were developed to reflect the program and the experience of comparable visitor attractions.

Economies of Scale and Possible Shared Operations with Pima County

Management and operating cost sharing and efficiencies are possible between Canoa Ranch and Pima County Natural Resources, Parks and Recreation and other county departments. These are not directly included in this analysis, but create opportunities for economies of scale by sharing operating,

marketing, and other functions. Specifically, benefits could occur in: exhibit development and maintenance, purchasing, operations, marketing, and personnel. Cost reductions could also be realized by relying on the central administration in Tucson for marketing, development, financial reporting, exhibits, and purchasing expenses.

Operating Expense Performance

Data in **Table VI-10** translates the operating expense analyses to a ten-year operating expense profile. The baseline operating expense is estimated at \$1,263,881 in current dollars, not including the cost of goods sold for retail and vending sales. Based on the analysis in this report, this translates into an operating expense of approximately \$27 per square foot and approximately \$13 per visitor for the proposed program. Operating costs of ranch attractions vary based on their size, the efficiency of their systems, seasonal operation, and the relative “cost of living” in the area. The expense profile of Canoa Ranch is very efficient in this operating profile and the operating budget per visitor is significantly below the average of \$30 per visitor for the five comparable ranch attractions.

Operating Scenario

This analysis is of a moderately scaled ranch attraction operating in the market study’s mid-range attendance scenario. A preliminary financial pro forma summary for Canoa Ranch is presented in **Table VII-11**. Stable year (year 4) earned revenue potential at Canoa Ranch is estimated at \$1,063,885. The stable year (year 4) operating expense is estimated at \$1,361,061. This creates a need for contributed revenues of \$297,177, or approximately 22 percent of total revenues. This is a profile that is typical among visitor attractions of this scale. Therefore, securing on-going contributed revenue streams is critical to future success.

Table VI-10
Projected Operating Expenses
Canoa Ranch

Operating Expenses	Stable Year									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Personnel Salaries (FTE,PTE)	\$545,250	\$558,881	\$572,853	\$587,175	\$601,854	\$616,900	\$632,323	\$648,131	\$664,334	\$680,943
Taxes, Fringe & Benefits	136,313	\$139,720	\$143,213	\$146,794	\$150,463	\$154,225	\$158,081	\$162,033	\$166,084	\$170,236
Advertising, Printing & Publications	123,125	\$126,203	\$129,358	\$132,592	\$135,907	\$139,305	\$142,787	\$146,357	\$150,016	\$153,766
Other Operating Expenses	422,381	\$432,941	\$443,764	\$454,858	\$466,230	\$477,886	\$489,833	\$502,079	\$514,631	\$527,496
Total Operating Expenses	\$1,227,069	\$1,257,745	\$1,289,189	\$1,321,419	\$1,354,454	\$1,388,316	\$1,423,024	\$1,458,599	\$1,495,064	\$1,532,441
Capital Reserves ^{1/}	\$36,812	\$37,732	\$38,676	\$39,643	\$40,634	\$41,649	\$42,691	\$43,758	\$44,852	\$45,973
Total Operating Costs	\$1,263,881	\$1,295,478	\$1,327,865	\$1,361,061	\$1,395,088	\$1,429,965	\$1,465,714	\$1,502,357	\$1,539,916	\$1,578,414

^{1/} Capital Reserves include funds for changing exhibits, equipment replacements and minor capital for building improvements.
Source: ConsultEcon, Inc.

Table VI-11
Net Income Summary
Canoa Ranch

	Stable Year									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Earned Revenue	\$1,113,455	\$1,088,141	\$1,089,528	\$1,063,885	\$1,104,216	\$1,125,497	\$1,168,210	\$1,190,621	\$1,235,854	\$1,259,454
Non-Earned Revenue	\$150,426	\$207,337	\$238,337	\$297,177	\$290,872	\$304,468	\$297,504	\$311,736	\$304,062	\$318,960
Total Revenue	\$1,263,881	\$1,295,478	\$1,327,865	\$1,361,061	\$1,395,088	\$1,429,965	\$1,465,714	\$1,502,357	\$1,539,916	\$1,578,414
Expense	\$1,263,881	\$1,295,478	\$1,327,865	\$1,361,061	\$1,395,088	\$1,429,965	\$1,465,714	\$1,502,357	\$1,539,916	\$1,578,414
Net Operating Income	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

1/ Revenue and expense in current dollars
Source: ConsultEcon, Inc.

SUMMARY

Canoa Ranch is assumed to operate as a park in the Pima County park system. Operating revenues of Canoa Ranch will be derived mainly from parking passes and ticket sales, but substantial additional earned revenue can be derived from other sources such as gift shop sales, facility rentals, a restaurant, and bunkhouse rentals. Canoa Ranch has the potential for current dollar project earned revenues of approximately \$1.1 million in a stable year of operation based on this plan. Outside support and contributions are expected to be necessary to the financial viability of Canoa Ranch. There is a need for additional contributed revenues estimated at approximately 22 percent of operating costs.

The Canoa Ranch operating profile has stable year expenses of approximately \$1.3 million. These operating costs are in line with industry standards. These operating revenue and expense analyses are based on achieving break-even operations. Comparisons of operating benchmark data from the comparable ranch attractions to the operating plan for indicate the reasonableness of the Canoa Ranch operating plan.

Based on the analysis in this report, Canoa Ranch has the potential to cover its operating costs with strong operations targets and to provide substantial community benefits.