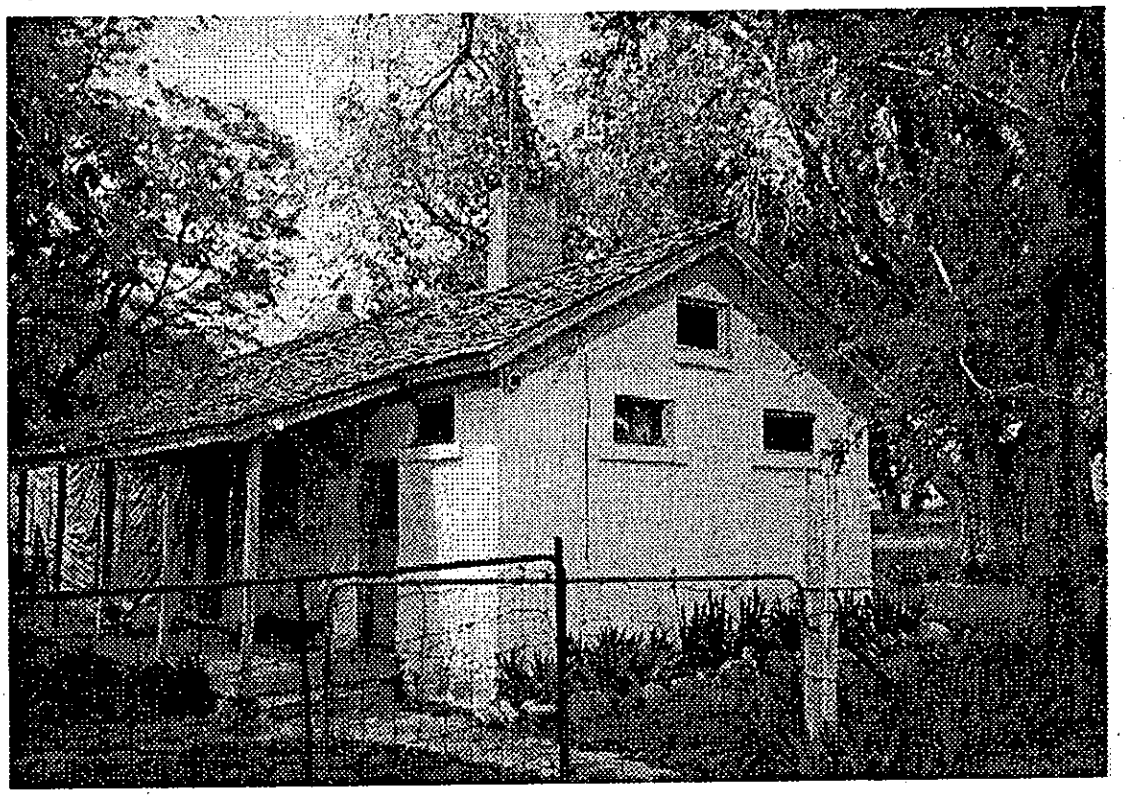
Antelope Island Fielding Garr Ranch Interpretive and Site Plan



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STATE OF UTAH
NATURAL RESOURCES
Division of Parks & Recreation

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Planning Process

Interest in visiting the Garr ranch was great when the site opened to the public for the first time in 1993. The ranch site had changed little since its purchase by the state and visitors saw it virtually as it was when the ranching operations ended in 1981. Even though access to the site was limited that first year, interest and associated impact of the site was such that managers realized that in order to continue offering public activities at the site, careful and planned access must be developed by gathering accurate data and producing a sound plan. A History, Studies, and Interpretation committee of the Friends of Antelope Island group was formed and augmented with preservation architects, architectural historians an the State Archaeologist. The group split into two subcommittees, an interpretive committee and a site planning committee each working on their separate issues and then coming together to present their joint recommendations.

The park staff worked to collect as much data about the site as they could. All reports, publications (published and unpublished) were assembled. Interns from the University of Utah History department conducted archival research and photographs and family histories were solicited from families of those who had lived and worked at the ranch throughout the years. Visitor surveys were conducted and revealed that visitors wanted the site kept just as they saw it. They did not want extensive restoration or obtrusive visitor services. They valued authenticity. Utah State Historic Preservation Office architects and historians conducted in-depth building surveys and building condition reports. History students from Utah State University conducted oral history interviews with 23 people who had lived and worked on the ranch. In addition, archaeologists from the Utah Division of State History spent two sessions each in the summers of 1995 and 1996 working with volunteers from the Utah Statewide Archaeology Society mapping and excavating the site.

Site Description

Best known perhaps for its herd of nearly 700 bison, breath-taking vistas of the Great Salt Lake and Wasatch Mountain Range, or its challenging bike trails, Antelope Island State Park is also the scene for one of Utah's oldest agricultural settlements--the Fielding Garr Ranch site. Located on the island's southeastern shore it contains some of

the oldest extant Anglo structures in Utah. The ranch is a regionally significant site that is historically complex. The Garr Ranch, in its 130 year occupation, is significant in part because of its establishment as the headquarters for the Mormon Church's tithing herd (their main source of funding the emigration of Mormons to the great basin through what was called the Perpetual Emigration Company), its pioneering role in the preservation of the North American Bison and its association as the home ranch of Utah's largest livestock company from 1887-1972. The extant structures, material culture and cultural landscape coupled with the layers of historical significance reveal changes throughout time of ranching in the Rocky Mountain West.

Natural History

Antelope Island is the largest island in the Great Salt Lake located adjacent to Salt Lake City, Utah. The park is comprised of 28,000 acres of range and marshlands with a wide variety of recreational opportunities. The island is ecologically significant with a unique array of wildlife. Its abundant large mammal population juxtaposed with one of the largest concentrations of shorebirds and water fowl in the hemisphere is highly unique.

Wallace Stegner called the Garr Ranch site "the only oasis on Great Salt Lake." The stand of cottonwood trees, freshwater springs and associated wetlands, the interface of freshwater with salt water make the site important for wildlife as well as human history. Densities of nesting marsh birds are high and bird songs may be the dominant element of the site in early summer. The site has several nesting raptors and is a winter use area for bald eagles. The site is further noted as one of the premier migrant warbler traps in Utah. Many of the same qualities that have made the site important for human habitation attract wildlife a well.

The Garr spring provides water for associated wetlands and was the fresh water source that made human habitation possible.

Human History

Native American use of the area around the Great Salt Lake dates back to over 10,000 years. While archaeologists have discovered prehistoric artifacts on Antelope Island, a clear picture of early inhabitation is just emerging as archaeological studies are begun. (For a complete description of this research see Appendix A: Archaeology of Antelope Island). Fremont culture pottery shards and projectile points were discovered at the Garr Ranch.

In October of 1845, John C. Fremont and his party, which included Kit Carson, visited Antelope Island on his second expedition to the Great Salt Lake. Several antelope were shot and Fremont wrote "in grateful supply of the meat they furnish, I give their name to the island."

In 1848 the first of several Mormon pioneer explorations of Antelope Island occurred. They found a mountain man identified only as Daddy Stump living on the island. In the fall of 1848, Fielding Garr began construction of the ranch complex.

Garr was a Mormon convert to the Church of Jesus Christ of Latter-day Saints who emigrated to Utah from Nauvoo, Illinois in 1847. While en route to Utah, he was put in charge of the LDS Church's cattle and brought them, along with his own herd, west. Once in Utah, he recognized the potential of Antelope Island as a good place to keep the herds and in 1848 began setting up a ranch headquarters. He built an adobe home for he and his family and later added an adobe bunkhouse, stone spring house and adobe blacksmith shop. In 1849, the church's leader, Brigham Young, asked Garr to manage the Mormon Church's cattle herd, which he then kept on the island until 1871. The herd constituted the bulk of the church's Perpetual Emigration Company, which functioned as the emigration agency for the church in its program for peopling and settling the Great Basin. The company's funds were used to finance the emigration of church followers to Utah. Once established in their new home, the newcomers reimbursed the company for their passage. These payments were often in the form of livestock that were kept and managed by Fielding Garr on Antelope Island.

The Perpetual Emigration Company was dissolved in 1887 by the Edmunds-Tucker Act, but during its thirty-eight year history it aided either directly or indirectly the emigration of over 100,000 persons. The structures at the ranch continue standing from the first decade of Mormon settlement, and are the only remaining structures directly associated with the important Perpetual Emigration Fund.

In 1849-1850 Captain Howard Stansbury of the U.S. Army surveyed Great Salt Lake using the Fielding Garr Ranch as an important supply point for the expedition. In 1854 Brigham Young constructed a boat, the *Timely Gull* in response to rising lake levels. The vessel was primarily utilized to transport people and livestock between Antelope Island and the mainland. In 1858 the *Timely Gull* crashed and was beached on Antelope Island.

Fielding Garr died in 1855 and was succeeded by Bryant Stringham as LDS Church herdsman. Stringham added to the ranch house and began to build the reputation of the LDS Church's Antelope Island horse herd. In 1869 a noteworthy roundup of horses was held at the ranch that involved Brigham Young, Lot Smith, other church dignitaries and members of the media.

The Mormon Church gave up their interest on the island ranch in the mid 1870s and several independent ranchers took over grazing animals there until 1884 when the Island Improvement company was formed by John Dooly and took ownership of the property. The company raised cattle, sheep and horses on the island until 1972 with sheep being their primary ranching commodity. The company ranch hands built stables, a sheep shearing barn, grain silo, corrals, pump house, and water reservoir at the ranch headquarters.

In 1893 John Dooly purchased 12 bison from William Glassman and started the island bison herd. In 1915 John Dooly Jr. took over the Island Improvement Company (IIC) and stocked the island with sheep. In the 1920s the silo and shearing barn were

constructed and additional corrals were constructed to handle what was to become one of the largest sheep operations in Utah.

The Anschutz Corporation purchased the island in 1972 and managed ranching operations there until the State of Utah bought the land for a state park in 1981. In 1983 Great Salt Lake flooded access and the park was closed until July of 1993 when a Davis county funded causeway was completed.

Implications for Site Interpretation

Beyond its sheer beauty as a spring-fed, lush oasis on an otherwise xeric landscape, the most striking characteristic of the Garr Ranch is the obvious evidence that this site was used continually for a very long period of time. The visitor is instantly challenged by the variety of structures, a wide range of building materials from various time periods, derelict machinery of different types and huge trees obviously arranged and planted by the hands of humans. It has grown and changed over time and the handiwork of each succeeding generation, from Mormon pioneers to Reagan-era cowboys is there for all to see.

The completion of the transcontinental railroad in 1869 ended the region's isolation, and Utah became increasingly integrated into the national fabric. Regional, national, and international markets, coupled with range conditions dictated changes in the kinds of livestock that were raised, and improvements in technology changed the nature of ranch work and ranch life. Throughout the entire site, these opposing elements of change and constancy are manifest.

While its early association with the LDS Church is unique, there is much about the Garr Ranch that is representative of western ranch life and ranch work. Its stories of response to economic, technological, and environmental change mirror much that was happening throughout the Mountain West. Its isolation sometimes made life difficult, especially for women and families. In its methods of livestock production, the domestic economy of its women and children, and the societal relationships of its inhabitants there was much that was typical about this site.

Since the park reopened in 1993, the Garr Ranch has been opened to the public on a limited basis. Currently the site is open thirteen weekends per year. Visitation at the site fluctuates between 30,000-40,000 visitors annually. The island as a whole receives over 320,000 visitors each year.

In 1997 the Utah State Legislature appropriated 3.6 million dollars to pave the eleven mile dirt road that leads from the island's north end recreation hub to the Garr Ranch site. The Legislature further funded $175,000 to fund a ranch manager position and an operating budget for the site. The identification of Antelope Island as the fastest growing tourist attraction in Utah was in part responsible for the increased investment in the park. Also, the fast growth in the population along the Wasatch front in Utah makes easily accessible open space all the more attractive and valuable. When the paving project is completed, plans are to open the site on a daily basis. Current projects are that the site will receive 200,000 visitors annually. Given the island's proximity to the major

metropolitan area in the state, the recreational and wildlife viewing opportunities en route, and the historical significance of the site itself, the Fielding Garr Ranch should become one of the most visited cultural sites in Utah. To date, no funding has been provided for site planning or preservation. In the ensuing years, the greatest challenge for managers of the site will be balancing site preservation with increasing visitation and access.

Fielding Garr Ranch Mission Statement

The Fielding Garr Ranch is a time capsule that remains very much the same as it was when occupation ended in 1981. The flavor of the site must be preserved and development should be spare. Interpretation should concentrate on the changes in ranching over the 130 years of occupation of the site, the natural environment and its affect on human activity, and Native American use of the site.

Interpretation

The Garr Ranch site is a regionally significant site that is historically complex. Most historic sites are significant because they are associated with an important event, an important person, or they are representative of an important movement or way of life. The Garr Ranch, in its 130 year history, is all three. It is significant as the secure repository of the LDS Church's primary source of wealth (cattle) in early Utah. It is also significant for it's pioneering role in the preservation of the North American Bison and it's association with Brigham Young. Further, because at one time it was the home ranch of Utah's largest livestock company, it can be considered representative of the large-scale ranching business that flourished from the late nineteenth-century into the mid twentieth-century. The extant structures, material culture and cultural landscape, coupled with the layers of historical significance, point toward a theme emphasizing the site's change through time.

This overarching theme allows interpretation of the site without alterations to the historic structures. The obvious interspersing of pioneer building elements with newer developments spanning more than a century is a dramatic visual representation of this theme. Basic interpretation of this site should consist of self-guided tours dealing on the broad level with the significant themes. This should be augmented with personal programs and full-blown special events that focus on particular aspects of the ranch's story.

Interpretive Goals

- Provide self-guided experiences that involve the main themes to facilitate self-discovery opportunities.
- Create a tiered system of experiences, ie., slow weekdays with self-discovery to special events with a festive atmosphere.
- Utilize a variety of interpretive methods to highlight specific topics.
- Paint a picture of everyday ranch life and how it changed through time.
- Utilize original objects, photographs, journal excerpts, oral histories to connect the people with the place.
- Be historically accurate.
- Provide the sense of authenticity - remoteness, ranch feeling.

Interpretive Flow

Initial Interpretive Feature

Interpretation starts at the edge of the parking lot with a unique feature that implies change through time and the main themes. It is meant to funnel visitors from the parking lot into the site in a way that makes it clear they are entering a unique place while at the same time being subtly exposed to the site's main themes. It should be designed to compliment the landscape, reading as the topography reads not as an intrusion. It should set the tone for the experience marking the transition and hinting at the main themes and experiences awaiting visitors. It should act as interpretive conveyance beginning to form the experience as visitors pass through. At the end of the feature, visitors will be able to pick up a publication to guide their visit to the site.

Publication

The planning team recommends an eight page publication, similar to the park brochure, as the primary method to interpret the site. Pages will be color coded for the various recommended loops. The team opted for a publication over interpretive signs to minimize visual impacts. The publication will maximize self-discovery and allow us to communicate a large amount of information in a cost-effective manner. The publication could be updated in reprintings to take advantage of new information that becomes available. One page of the publication could be for advertising to pay for the cost of the brochure.

The Hub

The team recommends entering the ranch site from the west, in part to maximize interpretive elements. This is the historic entry to the site and the visual landscape is dramatic. The view to the east is of the lake and Wasatch Range, reinforcing the concepts of isolation and island ranching. The view to the south is of the pristine island and with the Oquirrah Range in the distance. After leaving the initial interpretive feature, visitors will enter the hub of the site. Here the visitors are in the heart of the site and can choose to take any of the three walking tours, visit the orientation area or the concession building.

Orientation Area

The team recommends rebuilding the rock lean-to on the shearing barn. This building will then function as an on-site visitor center. Exhibits will be installed and this building will allow ADA access to the site. If space permits, administrative office space and storage for maintenance equipment will be provided in this structure as well.

Interpretive Methods

Interpretive Walking Tours (See site map)

Loop I: Ranch Life

This loop will be framed by the ranch house, bunk house and spring house. The Ranch Life Loop explores everyday life ways of the ranch inhabitants, ranch hands, and ranch families. The loop will highlight how life changed through time for the inhabitants. A key component of this loop will be the structural changes in the buildings and furnishings of the buildings. Change, everyday life, social history, women's and children's roles, isolation, the oasis, construction methods, and significance to Mormon history will all be important themes interpreted in this loop.

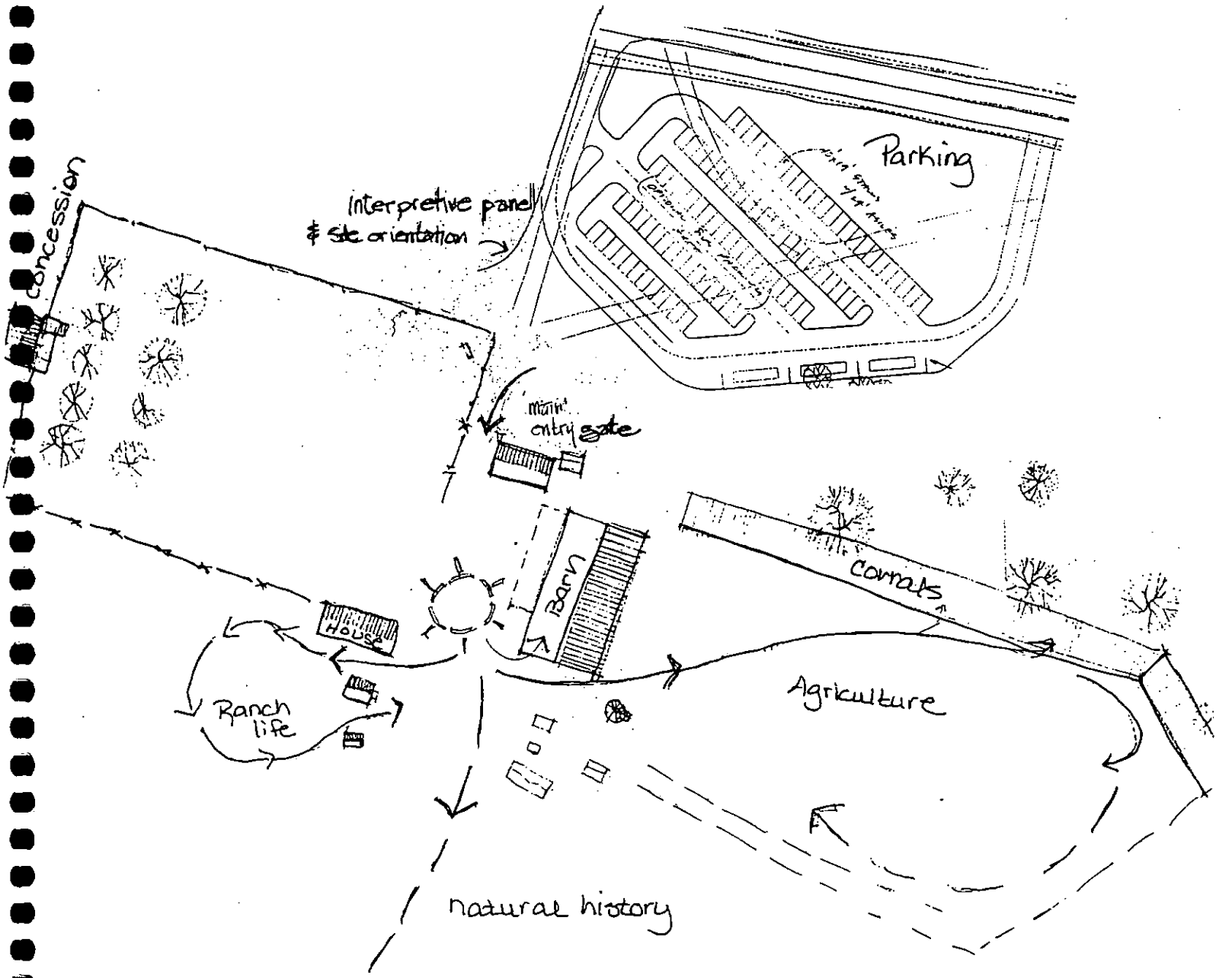
Loop II: Ranch Economy

This loop will tour the blacksmith shop, shearing shed and corrals. This loop will explore the changes in the business, work and development of western ranching. This could be dramatically illustrated from 1848 corrals to an 1880 blacksmith sop to a 1920s shearing barn. The early mechanization of agriculture is dramatically represented by the shearing barn. The team recommends restoring the shearing barn to working order complete with motor powered, belt driven shears. This structure could be the highlight of a visit to the site. In addition, the themes of the sheep industry, roundup, and the transportation of cattle could be explored on this loop.

Loop III: Natural/Native American/Agricultural Loop

This loop will visit the marshes and lake shore, archaeological sites and abandoned farm equipment along the way. Natural elements of this loop will focus on the dynamic interface of freshwater with salt water which brings the majority of birds to Great Salt Lake. Bison utilize this area and this loop will be ideal to discuss the ranch's role in the preservation of bison as well as generally the interface between the human history and the natural history of the island. This area, and the associated archaeological sites, lends itself to interpretation of the prehistoric inhabitation of the island. The views of the lake, Wasatch Front and Salt Lake City are spectacular. The sloop will be longer in length and allow the visitor to escape the "hubbub" of the ranch and reflect on the isolation of the site. Benches could be installed to encourage quiet contemplation.

Several pieces of old machinery are currently situated in the path of this intended loop. Other machinery is abandoned elsewhere on the island and should be transported to the site. Others such as old Packard cars (which used to be there) cold be obtained and situated along the trail. The team recommends children be encouraged to climb behind the wheel for a "hands-on" experience. The camp of the Stansbury expedition is located at an unknown site in the vicinity of the trail. This fact, when coupled with the proximity of the lake will lend itself to interpreting the Stansbury and Fremont explorations.



Garr Ranch Site Plan

Personal Interpretation

The team recommends supplementing the non-personal methods previously discussed with personal methods as well. The volunteer program currently in place will form the backbone of this method and park staff will assist as available. Methods will include talks, demonstrations, guided tours, info duty and living history programs. Personal methods will allow deeper exploration of specific themes, events, personages and ranching skills than non-personal methods. Personal interpretation should include guided tours, interpretive talks on various themes and historically based performances including theatrical presentations.

Special Events

The team recognizes the important role special events add to the interpretive package. Special events can be celebrator in nature and create a festive atmosphere designed to make history fun. Special events help maintain interest in the site and encourages repeat visitation. Special events should include animal husbandry demonstrations, historically based performances, craft demonstrations, guest lectures and readings. Staff should take special care to insure these events are consistent with the themes identified and prioritized by the team. Special events can explore secondary themes not covered in the daily interpretive mix.

Themes, Goals and Objectives for Interpretation

Themes

The team developed a list of 16 themes and prioritized them. They generally fall under the categories of Indians/Prehistory, Explorers, LDS Ranching, Ranching, and Mountain Men. As the mission statement declares, all themes are to be interpreted through the lens of change over time. (See Appendix B for the ranking and complete description of themes.)

Goals

I. The visitor will be ale to demonstrate an understanding of how geography and climatic conditions have influenced human occupation of the Garr Ranch site.

II The visitor will be able to demonstrate an understanding of how Native American and Anglo ranch life was affected by changing patterns in Utah and American history.

III. The visitor will demonstrate an understanding of how people associated with the ranch have affected the history and lore of the site.

IV. The visitor sill learn to experience the site with a minimal impact on the resources.

V. The visitor will learn to experience the site safely.

Objectives

I.a. The lush Garr spring area is an oasis that has been a magnate for human activity over thousands of years.
b. The island offered a secure range where pioneer Mormons could protect their cattle herds from Indians and stock thieves.
c. Raising and falling lake levels influenced ranch life and ranching practices.

II.a. Cattle were of vital importance to pioneer Utahns. They were an important source of wealth that had to be protected.
b. During the pioneer era, the island ranch was managed according to the economic and social principles of the LDS Church.
c. With the close of the pioneer period and Indian removal, the island ranch was of minimal importance to the LDS Church. When its ownership rights became questionable, it abandoned the property.
d. After going into private ownership, ranch practices and ranch life were driven by market forces and technological changes.
e. In the 1980s, a rowing urban population along the Wasatch Front made the island more valuable as a recreation site than a grazing area.

III.a. Many men, women, and children have lived and worked on the ranch, each adding their own bit to the history and lore of the island.
b. Fielding Garr first recognized the island's grazing potential and established the ranch.
c. Brigham Young directed the establishment of the LDS Church's island ranching operations, made recreational visits to the ranch, and spearheaded a change into horse ranching.
d. John Dooly, the driving force behind the Island Improvement Company, acquired the ranch later in the 19th century. In addition to building up the ranching operation, Dooly was responsible for establishing the island's bison herd in the 1890s.

IV.a. Visitors should stay on trails and walkways.
b. Visitors should not harass animals, birds, or livestock.
c. Visitors should not collect souvenirs. Rocks, plants, and artifacts should be left in place for others to enjoy.
d. Visitors should keep the site clean. Litter should be disposed of appropriately.
e. Visitors should obey rules on camping, picnicking, and pets.

V. a. Except as posted, visitors should not climb on buildings, fences, and equipment.

b. Children should be kept under close supervision at all times.
c. The bison are wild and unpredictable. Visitors must always be alert and maintain their distance.

Concession Services

The planning team recognizes the value of providing concession services at the site. However, a prudent approach and proper planning must be exercised to insure concession facilities do not detract or overly commercialize the experience.

Several concession opportunities are immediately available at the site. A horse concession providing wagon rides and horse rentals and a food concession. Great care should be exercised in establishing the facilities and perameters of activities for any concessions. Facilities should be in keeping with the historical scene, and easily removable. Activities should facilitate the visitor's experience and be interpretively appropriate and safe. If horses are kept in a portion of the corrals, stringent perameters for use, intrusion, and visitor access must be maintained and be in keeping with the premise of this site plan. Original historic material must not be sacrificed or altered for concession activities. Every effort should be made to involve the horse concessionaires in interpretive planning and include them as a way to enhance the interpretive methods. Interpretive training should be provided to the wranglers, and they should be encouraged to utilize their facilities in a manner that enhances the interpretive goals and messages. Concession activities in the corral must also not interfere with the activities intended for the agricultural interpretive tour loop.

The existing food and souvenir concession is recommended to be moved to the south end of the lawn area. This should provide adequate separation of non-historic concession services from the site. As soon as it is economically feasible, the concessionaire will be required to construct a permanent, yet easily dismantled facility. Careful review of the architectural plans will be required before approval is granted. One architectural option is to utilize white cinder block to blend in with the existing structures.

Site Planning

Overall Desired Goals and Experiences:

The team identified the following overarching site planning goals:

- The site's preservation, development and interpretation will enhance, not alter its current authentic sense of isolation and pure ranch life flavor..
- All preservation, development and interpretation will be as minimal as possible and in keeping with the tone of a working, isolated ranch scene.
- The buildings and the site will be as accessible as possible without compromising integrity of the historic fabric or the scene.
- Interpretation will generally be a self-guided approach emphasizing the major themes augmented by special events and programs which will illuminate the secondary and tertiary themes.
- The visitor experience will be a fun, non-formal one providing a variety of experiences that conveys a sense of ongoing history and the changes through time in ranch life and will also preserve the site.
- All elements will ensure minimal impact on overall park operations.

<u>Site Development Goals</u>

- Buildings should be stabilized, preserved and upgraded for public access, but with as little change as possible.
- The site should be developed to facilitate a self-guided interpretation program with adequate spaces for alternative programming.
- Visitor services should be developed which further preserve the site and its sense of authenticity and that are low maintenance. This includes parking lot orientation area, trails, restrooms, and concession area.

All site development must preserve:

- The important views
  - "oasis" scene from on top of hill overlooking the site
  - View through the ranch road (center) across the lake and the mountains

emphasizes island life.
•View to the South across the lake to downtown SLC and the mountains
•View from the lawn to the island spine, bison and other wildlife.

•The important natural features
- spring
- marshes
- ranch area trees

• Historic structures
• Archaeological sites
• Authenticity - the feeling of remoteness, isolation, quiet spaces, as if ranch family and workers just left.

All site development will be based on the site's mission statement, their interpretive value and ability to efficiently and effectively serve the visitor and the preservation of the site.

Carrying Capacity

The planning team feels strongly that the number of visitors on the site will determine the degree to which the authentic experience, and thus the principles of this plan, can be maintained. It is also apparent that site preservation and numbers of visitors are directly related. The team suggests that a carrying capacity be established for the site and a management strategy developed which will enforce whatever limits are developed.

Site Development Plan

Parking: Paved 75 car unit located SE of water storage and west of blacksmith shop. Cut into the contour of the hill. Unpaved parking will be maintained on the west side of the road to accommodate overflow parking, and buses, motor homes, and other large size vehicles that can congest traffic in the paved parking lot and introduce noise and air pollution at the ranch site. Access from the parking will guide visitors directly into the interpretive entrance feature.

Restrooms: Subterranean - either into the hill on the west side of the parking lot.

Entrance: Visitors will be funneled from the parking lot into the ranch through the interpretive entrance feature. They will be subtly made aware of the site's main themes - agriculture, daily ranch life and natural resources. They will then enter the site through an original gate on the traditionally used road into the site.

•Orientation feature-The feature will be welcoming and obvious, thus drawing people to it; provide a general orientation to the park's themes; be graphic, durable, fit into the landscape.

Circulation: Once inside the ranch gate, located adjacent to the blacksmith shop, visitors will be subtly directed using a natural looking hardened path and appropriately placed derelict farm machinery to the rebuilt barn lean-to. In the lean-to they will be presented with an orientation to the site's three main interpretive loops,

- Family and everyday life loop, which highlights the ranch house, bunk house, spring house and ranch yard. The everyday domestic life story will be told using an interpretive guide, special programs, and living history.
- Natural resources loop that includes a trail beginning near the current garden and running through the marsh, alongside the lake and then returning to the starting point through the once field/now grassland littered with derelict agricultural equipment. Using signs and the guide, the loop will describe through time the interplay between the natural environment and the people.
- Agricultural/ranching economy loop highlighting the shearing barn, blacksmith shop, silo, corrals and stables. Through the guide, signs and living history this loop will explore the story of the mechanization of agriculture and general agricultural history of the site.

Special Event Spaces: Spaces for group presentations will exist in the ranch yard in front of the ranch house, in the corral area, and in the shearing barn.

Pathways: All pathways within the site gate will be developed using a material replicating compacted site dirt. Pathways outside of the site's gate may be concrete or asphalt. A hardened pathway through the ranch yard will be developed to preserve the lawn. The natural resource trail should be made ADA accessible at least in part.

Hub: The roadway area that will be defined by the bard lean-to, the blacksmith shop, the ranch gate, the lawn fence, and the current garden is considered the site's hub. Minimal development and only visitor orientation should exist in this area. The view through this area as visitors enter the site is one of the most critical to maintain.

Concessions: A concession building of concrete block will be placed on the south end of the fenced picnic area.

<u>Other site issues</u>

- Any barriers or signs, etc. should be made to fit into the scene ie., look like ranch

equipment, etc. things organic to the site.

• Any new developments-buildings-should be made to look modern and yet should fit into the landscape.

• All visual intrusions from the ranch gate west should be behind a line formed west from the south side of the blacksmith shop. All visual intrusions should stay north of that line.

The lawned picnic area will remain as it is. It serves a valuable site protection and visitor service function.

Historic Preservation

See attached building preservation plan in appendix C. In addition, the rock lean-to known to have existed alongside the shearing barn until the early 1980's will be rebuilt. It will be used as a site storage facility, as well as, the main orientation center for visitors. Its rustic rock wall exterior will hide modern exhibits and orientation materials.

Electricity

Electricity is currently available only through the use of a generator at the site. Electricity generated by solar cells is possible, but its use should be limited to needs in the orientation center and restroom. Any cell placement should adhere to the overall site and interpretive goals articulated in this plan.

Historic Object Collections

Appropriate climatic conditions for housing and exhibiting rare or one-of-a-king artifacts does not exist on this site. Therefore, only those types of objects that are not rare or one-of-a-kind, that may be used in demonstrations or otherwise handled or sat on by visitors will be collected. Reproductions, modern equivalents and older objects of nominal value will comprise the bulk of the collection. The only exception will be objects recovered by archaeologists or donated to the park, which are originally from the site and can be utilized in exhibits at the park's visitor center. All such artifacts will be curated by the curator of collections at This Is The Place State Park (as long as that person is a state employee), or the next closest state park collections curator, or other appointed individual. The park will not actively collect original artifacts beyond what is reasonably expected to be exhibited. The donors of all other original artifacts should be encouraged to donate the material to another appropriate state park curation facility, or the Utah Division of State History. Antelope Island State Park will not operate a curation facility.

Furnishings

All buildings will be furnished with usable, expendable objects which best reflect the interpretive story of each building. Furnishing the site with objects from the ranches

20th century history allows the greatest flexibility and ease in reflecting the changes in life at the site throughout time. The team has lovingly termed their intended furnishing plan as the "DI approach". Utilizing objects purchase at thrift stores, as well as, old equipment scattered throughout the park a sense of the sparseness of live and the adaptive reuse and recycling of materials will be conveyed to visitors. It will also allow for a more hands-on visitor experience.

The opportunity for interpreting the widest range of time periods exist in the ranch life loop and furnishings there could easily encompass all periods and should remain the most flexible. All furnishings must be based on an interpretive plan for each building, as well as, on the site-wide interpretive plan.

The interpretive plans for each building will be ongoing and based on historical research.

Management Issues

- As noted, the grassy picnic area serves a valuable function and should be maintained.

- All repairs should be handled as outlined in the restoration guide and in a manner consistent with the site's history. Reusing materials, repairing by hand, rough cut and unfinished are not only acceptable they are encouraged.

- Large group use ie., family reunions, boy scout outings, LDS ward parties, etc. should be scheduled sparingly and is generally discouraged. The sense of authenticity at the site is greatly impacted, as is the site itself, by this type of use.

  Once the paved road is finished this type of activity should be limited and camping eliminated. The impact to the visitor experience and the site becomes great and access from designated camp areas greatly increased.

- Use of the barn as a group use facility is discouraged. It may be used as a staging area for hosting groups for the purpose of experiencing the site, but not as a facility to be rented out to groups unattended by park staff. This type of use would create carrying capacity issues, intrude with general public use of the site, be difficult to manage, and is not in keeping with the premise outlined in this site plan.

- Overall maintenance should be such that visitor safety is ensured, but should enhance the authentic qualities outlined in this plan. Therefore, a highly manicured, well-kept, appearance is not appropriate. Ongoing maintenance work in progress should be viewed as interpretation . All maintenance issues - trash cans, etc. should reflect the mission statement.

- Livestock - The committee recommends a portion of the corrals be utilized to keep the horses of the concessionaire. This will provide similar benefits as keeping other domestic livestock at the site. Horses will provide other sensory elements to the experience beyond that of the interpretive methods. Other livestock may be included on a limited basis for short-term, special program related events.

Priorities/Immediate - 1997 Season

- Work must begin immediately on stabilizing the buildings - highest priority for renovation funds is the barn, rebuilding lean-to, stabilizing barn.
- Gather all old machinery and place closer to the ranch - except those pieces needed for the natural resource trail.
- Gather the bits from the shearing mechanism and put them in the barn.
- Clean out barn and organize equipment and parts such that construction on the barn could begin.
- Get crew and park staff to perform those maintenance, building stabilization items on Don's list and as outlined by Jim F. and Karen K summer 1996.
- Develop interpretive plans for each structure which reflect the overall plan.
- Develop furnishing plans for each structure
- Gather available adobe from Don Hartley's sources.
- Develop architectural plans for a concession building.
- Oversee the corral area clean-up and fix up as per directed.
- Develop a landscape plan utilizing native plants and address the needs of the old trees - pruning and planning for their death.

APPENDIX A:ARCHAEOLOGY OF ANTELOPE ISLAND

Archaeology of Antelope Island

Kevin T. Jones, Antiquities Section, 300 Rio Grande, Salt Lake City, UT 84101

Prehistoric Archaeology

Antelope Island, with its numerous springs, wetlands, and good wildlife habitat, was likely an attractive location for prehistoric occupation. Except for periods when lake levels were high, access from the mainland is relatively easy. People have been in the region for over 10,000 years, and in the western deserts of Utah, all areas with ample fresh water, and especially wetlands, have evidence of prehistoric use. The eastern shore of the Great Salt Lake with its abundant freshwater marshes was heavily used during Fremont (ca. AD 1 - AD 1300) and Late Prehistoric (ca. AD 1300 - AD 1600) times (Simms et. al 1991). With high site densities along the eastern shore of the lake, and productive marsh habitats and abundant springs on the island, we can expect to find evidence of substantial prehistoric use of the island as well.

Prior to 1995 very little was known about the archaeology of Antelope Island. The Island had been visited only once by archaeologists, who surveyed a limited area and recorded two archaeological sites (Madsen 1982). One of the sites (42 DV 25) was recorded as a scatter of lithic debris, including ground stone, in the disturbed garden area between the ranch house and corrals at the Fielding Garr Ranch. The second site, 42 DV 26, is located near Blackburn springs and was recorded as having a deep, thick midden (up to 2m thick), fire cracked rock, numerous ground stone implements, and a variety of lithic debris. These sites were revisited in 1995 by a crew from the Antiquities Section. The site in the garden (42 DV 25) was in essentially unchanged condition, but the site at Blackburn Spring (42 DV 26) appears to have disturbed by earth-moving activity related to constructing a pond below the spring. Only scant evidence of the site was found.

In 1996 field school crews from the University of Utah under the direction of Duncan

Metcalfe recorded six open prehistoric and three historic sites. The thickness of the grasses and other ground cover makes it difficult to find sites on the island, and it appears that colluviation has buried sites that might otherwise be visible on the surface. For these reasons, most of the sites that were discovered were visible because some disturbance of the ground had brought artifacts to the surface. The crews from the University also conducted limited test excavations of three of the prehistoric sites. They encountered active and mixed deposits, with cultural material extending to over one meter in depth in some locations. Artifacts recovered included Desert Side-Notched, Gypsum, and Humboldt points. Gypsum and Humboldt projectile points date from the Archaic period, and may be as much as 6,000 years old. Desert Side-Notched points date to the Late Prehistoric period (< 600 years old).

Historic Archaeology

Frary Homestead

This is the spot where George Frary and his family homesteaded in 1896, and where Alice Frary is buried. Examination of the site and limited test excavations were conducted by the Antiquities Section and volunteers. The site lies on a sloping, open field overrun with sunflowers. A sparkling stream flows over watercress in a steep-sloped gully. The view to the north and east over Great Salt Lake toward the Wasatch mountains is spectacular and the rugged backbone ridge of the Island to the east of the homesite gives a feeling of mass and strength. We actually know very about the details of life while the Frarys lived in their Island home, and that lack of information is what keeps our interest high. The site today consists of the stone foundations of two surface structures, three dugouts, a root cellar(?), and several other anomalous features.

We began work at the site by systematically surveying the area, marking artifacts and features on the surface. A survey of the area with metal detectors was also conducted. We were able to identify between 6 and 9 structures, but were unable to directly correlate them with the map and description in the Syracuse history booklet. One of the dugouts, for

example, is identified in the history as the barn, but its small size and location nearly in the creek make this identification doubtful.

Test excavations were conducted in three places-- two in the area of what we think may be the main house foundation and one in a slight depression in the area where we think the corrals might have been. In the area in and around the foundation we were able to confirm that a house was indeed there, primarily on the basis of the kind and distribution of artifacts.

From the area immediately outside the house we found nails and broken glass. Inside the foundation we found broken glass and ceramics, small bits of metal, buttons, knitting and sewing needles, and a garter clasp-- household things. In corral area we found a pit filled with old cans, bits of glass, and eggshells-- items that probably post-date the occupation of the homestead.

Fielding Garr Ranch

Archaeological testing at the Fielding Garr Ranch was conducted by crews from the State Antiquities Section (1995-96) and the Utah Museum of Natural History (1996) with the help of volunteers, mostly from the Utah Statewide Archaeological Society. The ranch, a National Register site, was first occupied in 1848, and the ranch house, an interesting architectural amalgam, was continuously occupied from 1848 until 1981, when the island was purchased by the state. Testing in 1995 near the southeastern corner of the ranch house yielded a large number of historic artifacts dating from the late 1800s into the 1920s from an abandoned and filled root cellar.

Testing in 1996 resulted in new information pertaining to leisure activities at the ranch. One unit yielded mixed prehistoric and historic materials down to a depth of 110 cm, where the water table was reached. That unit contained one sherd of Great Salt Lake Gray ceramics (related to the Fremont culture, between 500 and 1,500 years ago), a Desert Side-Notched arrowpoint (less than 600 years old), and numerous historic artifacts. Most interesting was the distribution of artifacts near the bottom of the unit. In the center of the meter square was a

champagne bottle, next to it a beef bone, and on either side of the bottle, embedded in the mud were two upright cowboy boots. One test unit south of the ranch house, placed at the edge of a slight depression, encountered a .75 m diameter, ca. 1 m deep cone-shaped refuse pit that contained seven liquor bottles, a corked medicine bottle of some kind (still containing a red liquid) and a condom. The bottles appear to date to the World War II era. Leisure activities at the ranch, which was once owned by the LDS church, seemed, at least in more recent times, to have included some fairly wild activities.

Planning

Additional fieldwork will continue on the island in 1997, both in historic and prehistoric contexts. This work will provide more information and artifacts related to the recent and remote past of the island, and provide opportunities for development of interpretive themes and materials. Continued development of the island as a tourist destination will increase pressure on archaeological and historic sites. Detailed planning is necessary to help to minimize the effects of the development by identifying sites and developing comprehensive plans for the management and study of the interesting and poorly-known use of this beautiful and enchanting island. All areas slated for development, including the road, must be inventoried for archaeological sites, and appropriate steps taken to insure that the cultural resources are taken into account. Test excavations should be conducted in advance of any ground-disturbing activities at the ranch to be certain that buried deposits are not disturbed. The Frary homestead is a very interesting and fragile site. The foundations and dugouts will not be able to withstand unsupervised visitation. A detailed protection plan needs to be drawn up that includes limiting access to certain areas of the site and perhaps stabilization of the structures.

References Cited

Madsen, D.B

1982 An archaeological survey of Antelope Island. Manuscript of file, Antiquities Section, Division of State History.

Simms, S.R., C.J. Loveland, and M.E. Stuart

1991 Prehistoric human skeletal remains and the prehistory of the Great Salt Lake wetlands. Utah State University, Department of Anthropology.

A comment on the interpretive themes. We came up with them and ranked them, but looking at them now they are a rag-tag mishmash of shreds and patches with no integration or organizational theme. Some are general, some specific. Perhaps we could order them in a hierarchy, from general to specific, so that, as we proceed, development of each specific theme will be done so that it supports the overall and subthemes above it. I think our number one, overriding theme should be Site as Oasis/Changes through time. It is an oasis, and things did change through time. Each of the other themes fits under this grand theme. One suggested organizational scheme could be as follows

Site as Oasis/Changes Through Time

Indians/Prehistory	Explorers	LDS, ranch	Mountain men	Ranching
5b	4a	5a,b	5a,c,d	2a,b
5d	5a	7a	8b	4b,c
7b	8b	8b		5a,b,c,d
9		12		6
10		13		7b
11		16		8a,b
13				9
15b				11a,b
				12
				13
				14
				15a

APPENDIX B: INTERPRETIVE THEME RANKING

Rankings for Interpretive Themes for the Fielding Garr Ranch

#1	Changes through time.	(37 pts.)
#2	Site is typical of development of western ranching: Pre-mechanization, early mechanization, modern ranching.	(36 pts.)
#3	Site as an oasis on Great Salt Lake.	(35 pts.)
#4	Explorers - Fremont & Stansbury. Early mechanization of agriculture. Social history - women's & childrens' roles.	(34 pts.)
#5	Significance as a regional historic site. Construction methods (structures). Isolation. Everyday life (differences & similarities through time).	(33 pts.)
#6	Sheep industry (1920's-30's).	(31 pts.)
#7	Significance to Mormon history. Economy of site.	(30 pts.)
#8	Restoration of bison herds. People involved (Brigham Young, Fielding Garr, etc.)	(29 pts.)
#9	Environment (lake level, ecological changes).	(28 pts.)
#10	Differences in evolutionary and chronological changes.	(27 pts.)
#11	Interaction with mainland. Transportation of cattle. Native American use of site.	(26 pts.)
#12	Round-up (horses, cattle, sheep, bison).	(25 pts.)
#13	Site planning (organization & growth).	(24 pts.)
#14	Pre-mechanized agriculture.	(23 pts.)
#15	Irrigation. Birds.	(19 pts.)
#16	Polygamy - island wives.	(17 pts.)

#1: Changes through time

Beyond its sheer beauty as a desert oasis, the most striking characteristic of the Garr Ranch is the obvious evidence that this site was used continually for a very long period of time. The visitor is instantly challenged by the variety of structures, a wide range of building materials from varying time periods, derelict machinery of different eras, and huge trees obviously arranged and planted by the hand of man. It is clear that this place was settled long ago, and that it as seen many changes over its working life. Nowhere is this more apparent than the venerable ranch house with its pioneer adobe facade and its 1950's concrete block exterior. This house is a metaphor for the site itself. It has grown and changed over time, and the handyman work of each succeeding generation, from pioneers to Reagan era cowboys, is there for all to see.

Grass and water were the constants that kept the site as a ranch headquarters for almost a century and a half, but the changes that occurred during the period were driven by many factors. Mormon ranchers were originally attracted to Antelope Island because its geography offered a secure range for their precious cattle. The lush Garr spring area was clearly the best location on the island for ranch headquarters. Climate also played a role as the waters of the Great Salt Lake rose and fell, covering and uncovering the land bridge to the mainland.

The completion of the transcontinental railroad in 1869 ended the region's isolation, and Utah became increasingly integrated into the national fabric. Regional, national, and international markets, coupled with range conditions, dictated changes in the kinds of livestock that were raised, and improvements in technology changed the nature of ranch work and ranch life. Throughout the entire site, these opposing elements of change and constance are manifest.

#2: Site is typical of development of western ranching.

Ranching started at the Fielding Garr Ranch in 1848. With the addition of the tithing herd in 1849 the operation blossomed into one of the largest ranching operations in Utah. From 1848 to 1981 the site was continually occupied and utilized for ranching on a large scale. From the pre-mechanized early days with only horses to move livestock, to the advent of machinery, to the recent past the Fielding Garr Ranch served as a ranch headquarters. The forces and technological advances that affected western ranching are manifest at this site.

Many sub-themes can be connected to the larger one of western ranching. Early days involved transporting cattle by sailboat and later motorized boat and in the 1980's Anschutz was dropping hay out of helicopters during heavy snow years. This theme takes advantage of the uniqueness of the site. No where else in Utah is there a site with a similar length of occupation interpreting the evolution of western ranching.

#3: Site as oasis on Great Salt Lake.

Even from a great distance, it is plain to see that the Garr Ranch site is a lush oasis on an otherwise hostile desert island. Its dependable spring of water has made it a haven for wildlife and a magnet for human activity. Native peoples, ranchers, and now recreationalists have continually used this site over thousands of years. The shaded lawns, fresh water, and bird song reinforce this concept to visitors on several levels.

#4: Explorers - Fremont & Stansbury.

Both John C. Fremont and Howard Stansbury visited Antelope Island in their explorations of the Great Salt Lake. Fremont is credited for naming the island and for making the first accurate maps of the region. Stansbury's expedition came later and explored in greater detail. He entrusted the expedition's livestock to the care of Fielding Garr, and one of their most important campsites was just north of Garr Spring.

#4: Early mechanization of agriculture.

An interesting element of the site are structures and equipment involving the early mechanization of agriculture. The most dramatic example is the shearing shed. Constructed in the 1920's, the shearing shed utilized motor powered, belt driven shears. This method of shearing replaced hand shears which had been the only method until mechanization.

The impacts of mechanization had other dramatic impacts for the island ranch. Instead of riding a horse you could drive to Salt Lake City. Instead of a sailboat you could have a motor boat. Instead of plowing with horses you could have a tractor. This time period and it's affects on ranching are not interpreted elsewhere in Utah.

#4: Social history - Women's & childrens' roles.

This theme will examine the roles and lives of the women and children who lived at the Fielding Garr Ranch. The oral history research has yielded valuable information for this theme. School age children were sent to the mainland away from their families when school was in session. Hard work and a close association with animals seem to typify children's activities at the ranch. Often only one woman, the wife of the foreman, lived at the ranch, surrounded by nearly a dozen men whom she prepared all meals for. Personal stories of women hitching up a wagon to take lunch to the men on the range are available. This theme will ideally touch the lives of the majority of park visitors - women and children.

#5: Significance as a regional historic site.

Many elements of the ranch are significant to this region of the west. The importance of the site to the Mormon pioneers, the largest ranching operation in Utah, the ranch's association with Great Salt Lake all are of special significance to this region.

#5: Construction methods.

Construction methods of the structures utilized skills and materials uncommon today. The adobe masonry is of great interest. The lean-to and some of the corrals are constructed of native stone - the oldest rocks in Utah. The corrals are particularly interesting with a blend of native stone, adobe walls, cement foundations and sheet metal roofs.

#5: Isolation.

Who has not wondered what life is like on an island. The phrase "so near, yet so far" is applicable with the ranch and it's relationship to Salt Lake City. This concept changed through time as lake levels rose and fell and mechanized travel became available.

#5: Everyday life.

While its early association with the LDS Church is unique, there is much about the Garr Ranch that is representative of ranch life and ranch work. Its stories of response to economic and social forces is indicative of what was happening throughout the Mountain West. Its isolation sometimes made life difficult, especially for women and families and this trait was common throughout the western ranching industry. In its methods of livestock production, the domestic economy of its women and children, and the social relationships of its inhabitants, there was much that was typical about this site. How people worked and entertained themselves and how this changed through time will be explored in this theme. Stories will differ between the ranch family and the hired hands.

#6: Sheep industry.

Sheep were the primary stock on the island from 1870's - 1880's and 1920's - 30's. Sheep ranching differs significantly from cattle ranching. Demonstrations and special events involving sheep could help interpret this theme. During the 1920's - 30's one of the largest sheep operations in Utah utilized the island. The herd was summered east of the Wasatch and in the fall were driven through downtown Salt Lake City to winter range in Skull Valley. In the spring of the year the herd was driven to the island where they would lamb and the wool sheared. Here the herd was kept until it was time to drive them back to the summer range.

#7: Significance to Mormon history.

Cattle were extremely important to Utah's Mormon pioneers. They provided meat, milk, leather and were used to pull wagons and farm implements. Short on hard money, the LDS Church's cattle herd was its primary source of wealth during the first decade of settlement. Cattle were portable; they could be trailed to California and traded for gold.

Safeguarding the herd was of great importance and Antelope Island provided a secure range beyond the grasp of Indians and bandits. A blockhouse was constructed at the southern end of the island for added protection. Some people jokingly referred to the place as "the vault," and currency, redeemable in the church's Antelope Island cattle, finance the "Move South" during the Utah War of 1857-58.

The Tithing Herd was based on the island and the Perpetual Emigration Fund (PEF) was financed from the sale of excess stock from the Tithing Herd. The PEF was responsible for financing the move to Utah for many Mormon pioneers. These important elements of early Mormon history were largely managed from the Fielding Garr Ranch.

#7: Economy of site.

This theme will explore how the ranch functioned economically. Was food procured from the mainland or produced on site? What did inhabitants eat - livestock or wild game? How did the economy change through time? The archeological survey and oral histories have provided information for this theme.

#8: Restoration of bison herds.

For reasons both practical and whimsical, ranch owner John Dooly introduced a small herd of North American Bison to the island in the 1890's. Dooly hoped that bison hunting and

bison products would provide another source of revenue while preserving the species. The reality was that they were difficult to handle and a commercial failure. Subsequent efforts to make the animals a financial success proved fruitless, but fortunately they were never eliminated. Dooly's efforts on behalf of the species marked a pioneering attempt at bison preservation in the region, and the Antelope Island herd is now one of the most successful bison herds in the nation. The 1890's have been identified as the low point for bison as only 800 were known to exist at this time.

#8: People involved.

Several important personages have been involved with this site. Brigham Young selected the island as the repository for church cattle, he built the *Timely Gull* to travel to the island and took holidays at the site. Lot Smith led the 1869 roundup and always rode an Antelope Island horse. Fielding Garr was the first manager of the Tithing Herd. Christopher Layton who ran 10,000 sheep on the island from 1871-1875 , had more wives than any other Mormon practicing polygamy. John Dooly was instrumental in preserving bison. Jack Dempsey hunted bison on the island. Other notables could be added as well.

#9: Environment.

The site is notable ecologically. Productive marshes, the interface of freshwater with salt water, and migrant birds make the ranch a popular site for bird watchers. Other wildlife, most consistently bison, can often be viewed from the site. A logical tie is the ever-fluctuating Great Salt Lake. Lake level affects wildlife and life at the ranch.

#10: Differences in evolutionary & chronological changes.

Because of the isolation of the ranch technological advances typically reached the island later than the mainland.

#11: Interaction with mainland.

The level and ease with which the ranch inhabitants interacted with the mainland will be discussed with this theme. Lake level was the over riding variable that affected the frequency of interactions. Through time the method of travel changed and fluctuated with horses, sailboats, motorboats, and vehicles. The southern causeway was constructed to aid transportation to and from the mainland.

#11: Transportation of cattle.

The transportation of cattle changed through time. Great cattle drives across the Antelope Bar and later the southern causeway were used at least until the 1960's. During high water, cattle were boated across the lake. In modern times trucks hauled cattle to and from the ranch.

An interesting parallel could be drawn with the bison herd. The first bison arrived to the island in a boat. The first bison roundup transported bison from the island in a boat. Currently bison are transported by vehicles.

#11: Native American use of site.

Scant archeological evidence has been found on the island as a whole. Enough has been

found at or in the vicinity of the ranch to allow archeologists to conclude the site was used by prehistoric cultures. A Fremont culture pottery shard was found at the site.

#12: Roundup.

Roundups have been and remain today an integral part of the site. The great horse roundup of 1869 is a fascinating story. Driving sheep and cattle across the Antelope Bar is interesting. Oral histories revealed that some years cattle could walk all the way to the island and other years had to swim a 1/4 mile. Currently the site is used as the staging area for horse riders participating in the annual bison roundup.

#13: Site Planning.

This theme will explore the arrangement of the structures. The shearing shed was situated adjacent to the corrals to allow for the movement of sheep. The lean-to was located along side the shearing shed to store needed supplies. The tack room was built in the corrals so as to be located near the horses. A puzzling feature is the proximity of the bunk house to the ranch house.

#14: Pre-mechanized agriculture.

This theme will explore the early years of the site when horses were the primary mode of transportation. An interesting element of this time period is the LDS Church's Antelope Island horses. The island horse herd was reportedly the pride of Brigham Young. According to journals the island horses had one fault: they loved their island home. Stories exist how island horses would break away from their mainland corrals and return to the island. No crops were raised on the island until the advent of machinery.

#15: Irrigation.

Crops were raised on the island but only dry-farmed, not irrigated. Spring water was diverted from the ranch spring using a syphon pump to push water up to a cistern. From the cistern water gravity fed to the ranch house, gardens and orchard.

In later years ranchers developed Mushroom Springs to supply water to the ranch. Early Mormon ranchers probably irrigated the mulberry trees northwest of the ranch.

#15: Birds.

The avian resources of the site are probably most notable as a migrant warbler trap and a bald eagle winter use area. The marshes along lake shore are very productive and large numbers of yellow-headed blackbirds, marsh wrens and rails nest by the site. Avocets and stilts nest along the lake shore. Great-horned owls nest in the shearing shed. The largest California gull rookery in the world is a couple miles northeast of the site. The site is well known by local birding clubs and is visited yearly, primarily in May during the warbler migration.

#16: Polygamy and island wives.

A number of famous polygamists are associated with the site. One entertaining story exists about a young lady who eloped with her husband and hid on the island to escape the wrath of her gentile father - who had forbid the marriage of his daughter to a Mormon.

APPENDIX C: BUILDING PRESERVATION PLAN

State of Utah
Department of Community & Economic Development
Division of State History
Utah State Historical Society

Michael O. Leavitt
Governor
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15 November 1995

Ms. Karen Krieger
Utah Division of Parks and Recreation
1636 West North Temple
Salt Lake City, Utah 84116

RE: Shearing Barn at the Fielding Garr Ranch

Dear Karen:

Thank you for the opportunity to inspect the shearing barn at the Fielding Garr ranch on Antelope Island. The attached report briefly summarizes my observations and recommendations for stabilizing and rehabilitating the barn for continued use.

Although the barn was constructed relatively late in the history of the site, it has sufficient historical significance and architectural integrity to merit rehabilitation and reuse. The barn appears to have great potential value at the ranch as a large covered space for public meetings and entertainment, tour orientation, site interpretation, etc.

As I describe in the report, some structural aspects of the barn are questionable. The barn has been, or is currently being, acted upon by forces which are manifesting themselves in ways I do not understand. The building does not appear to be in danger of imminent collapse, but I do recommend engaging a structural engineer to evaluate the barn and determine if any remedial work is required.

Thank you again for the opportunity to comment on this project. Please call if we can be of additional assistance.

Sincerely,

Donald Hartley
Historical Architect

Building Evaluation
Shearing Barn at the Fielding Garr Ranch
Antelope Island

Inspection was conducted 22 September 1995
Present: Karen Krieger, Parks and Recreation; Paul Brown, Architect; Don Hartley, State History

The following evaluation was based on visual observation only; no destructive tests were employed in this evaluation.

General

The shearing barn at the Fielding Garr ranch was constructed during the late 1920's. It has timber frame walls with roof trusses fabricated from dimensional lumber. The roof and walls are clad in corrugated sheet steel. The barn has a dirt floor. A stone lean-to structure on the south side of the shearing barn, which probably pre-dated the barn, collapsed sometime after 1981 during the period of State ownership.

The dimensions and rustic qualities of the barn make it a desirable public space for interpreting the history of ranching activities and entertaining larger groups that visit the site. However, it may not be currently suitable for hosting large groups. The barn does not appear to be in danger of imminent collapse, but it does appear to need some remedial structural work to make it more safe for the public. The structural concerns will be discussed in the Observations and Recommendations below. We recommend limiting activities in the barn until it can be evaluated by a structural engineer and reinforced, if necessary.

The barn was constructed with simple, utilitarian materials, by semi-skilled workers. Any structural repairs should be executed with the same common materials and simple building techniques.

Observations and recommendations

1. Observation: The wood columns on the north wall are in good condition, but the columns on the south wall, particularly at the southeast corner, are decaying at their bases. The grade in and around the barn has increased over time to where it now covers the tops of the concrete foundations and the bottoms of the columns where thy bear on the concrete. The dirt, manure, etc. has trapped moisture in the columns causing them to decay at an accelerated pace.

   Recommendation: Re-grade the site in and around the barn to lower the grade level 6" minimum below the wood column bases. Either replace the bottom decayed sections of the wood columns in-kind, or consolidate the decayed area with epoxy, and stabilize the repaired areas with steel plates or straps.

2. Observation: The barn has very little bracing to resist lateral forces from seismic or wind. The roof trusses are braced to the columns they bear on with short knee-braces to provide limited resistance in the north/south direction. Minimal diagonal bracing in the structural bays adjacent to the corners of the barn provide limited resistance in the cardinal directions. The corrugated steel cladding also acts as a diaphragm to resist lateral forces.

   Recommendation: The barn should be evaluated by a structural engineer to calculate the lateral forces it can and should resist. Add additional diagonal bracing in the walls, knee braces, cross braces at the trusses, etc. as necessary to reasonably resist the anticipated lateral forces the building may encounter.

3. Observation: The roof trusses are deflecting in unusual patterns. The trusses are made up of short sections of dimensional lumber, lapped and sistered together, to form the chords. The trusses have steel or iron vertical tie rods that extend from each top chord to the bottom chord, presumably to strengthen the bottom chord. The bottom chord of each truss in the barn is bowing in an easterly direction toward the lake. It does not appear that the tops of the exterior walls are bending inward, which would cause or result from such deflection in the bottom chords. In many cases the vertical tie rods are slack, with the bottom nut and bearing plate hanging several inches below the bottom of the bottom chord.

   One possible reason for the odd deflection is that the trusses were over-stressed at some time during the barn's history and now with the excessive loads removed the trusses have relaxed back toward their original configuration, leaving the rods hanging loose. Another reason may be that the top chords of the trusses are sagging downward, pushing the tie rods down through the bottom chords and putting pressure on the web members, causing the bottom chords to deflect to the side. It also appears that the trusses may be made up of too many small pieces of lumber without adequate lapping or attachments and the individual pieces have moved sufficiently under stress to cause a cumulative deflection throughout the trusses.

   Recommendation: The roof trusses should be evaluated by a structural engineer to determine the causes of deflection and design the bracing or shoring necessary to reduce the potential for structural failure, if such exists.

4. Observation: The corrugated steel exterior cladding at the walls and roof is in good condition. A few pieces are missing or damaged and the bottom edge of the cladding on the north wall has been pushed outward away from the building.

   Recommendation: Examine all sheets of corrugated steel to make sure the fasteners, probably nails, are all present and holding the metal tight to the wood frame. Replace any missing or damaged sheets of corrugated steel with new sheets that match the existing. After re-grading around the barn (see No. 1, above) replace the wood girts which span between the columns at grade, as necessary, and reattach the steel sheets to the girts.

5. Observation: the clerestory windows on the south wall above the roof line of the now-collapsed stone structure are missing and damaged.

   Recommendation: Rehabilitate the existing windows or mill new window sash and frames to match the existing. Prep and paint all exposed woodwork at the window openings and reglaze the window sash.

6. Observation: The stone lean-to structure on the south side of the barn has collapsed, leaving a pile of stone rubble and exposed concrete at the foundations.

   Recommendation: Either reconstruct the stone lean-to from the pile of bubble or interpret the rubble. If the lean-to is left as a pile of rubble, clean all refuse and sharp, rusty metal objects from the area and limit public access to reduce the potential hazard to visitors who may climb on the rubble.

7. Observation: The barn contains debris from the ranch and is being used as a storage shed.

   Recommendation: Relocate the modern matter, such as lawn care equipment, to another less publicly visible location; organize the historic contents such as the wagons and implements; and remove the sharp objects and tripping hazards so the barn is safer for visitors.

End of report.

State of Utah
Department of Community & Economic Development
Division of State History
Utah State Historical Society

Michael O. Leavitt
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3 June 1996

Ms. Karen Krieger
Utah Division of Parks and Recreation
1636 West North Temple
Salt Lake City, Utah 84116

RE: Miscellaneous Structures at the Fielding Garr Ranch

Dear Karen:

Please find enclosed the condition assessment and recommendation report for various structures at the Fielding Garr Ranch on Antelope Island. The report does not include the Shearing Barn since recommendations for that structure were sent to you previously. Also, the report does not include a recommendation to rebuild the stone lean-to structure on the south side of the Shearing Barn since the report only addresses extant resources.

The following priorities for implementing the recommendations in the attached report and graphic information generated by the site development work group are based on 1) promoting long-term maintenance and preservation of the historic site; 2) providing a safe, enjoyable, and informative experience for guests; and 3) aiding Parks and Recreation staff in their management responsibilities.

1. PARKING, RESTROOMS AND APPROVED DRINKING WATER
   - Visitors who now make the trek to the ranch understand that it is in a primitive condition and don't expect amenities. Paving the road to the ranch will encourage visitors who expect/demand amenities, such as families in private automobiles and tour busses.

2. RANCH HOUSE
   - a key structure at the ranch
   - probable focus for most visitors
   - the major interpretive venue at the ranch until other programs (sheep shearing, blacksmithing, horse concession, etc.) can be developed

3. SILO
   - eliminate health/safety risks

4. SHEARING BARN
   - high potential for hosting large group events and activities
   - key structure for interpreting agricultural aspects of the ranch

5. STONE LEAN-TO
   - high potential for site orientation and exhibits, especially for persons requiring barrier-free access
   - provide ancillary/support space for events and management operations
   - accurate reconstruction is possible from available historical data

The balance of recommendations are not as critical to improving visitor experience and interpreting the historic site. In fact, some of the activities, such as making whitewash and applying it to the stone building foundations could actually be demonstration or interpretive activities for park guests.

Thank you for the opportunity to assist with this important project. Please let me know if you need additional or more specific information beyond what is contained in this report.

Sincerely,

Donald Hartley
Historical Architect

enc.

RANCH HOUSE

1. wood shingle roof

Observation: The wood shingles are beginning to cup or curl at the edges from weathering. Also, moss is growing on the roof, particularly at the edges, due to the constant shady condition caused by the large trees surrounding the house.

Recommendation: Clean the shingles with the solution described in the attached literature from the Oregon State University Extension Service. The liquid bleach in the solution will help kill existing moss and fungus growths. After the shingles have been cleaned, apply a wood preservative such as Olympic Wood Preservative Clear. Another possible preservative is Weather-Master, available from Russ Dutton in Iron County, 590-2983 (mobile.) The staff at Iron Mission State Park has been using Weather-Master on non-historic wood structures and are apparently pleased with the results.

2. exterior woodwork, including eaves, porch, and windows

Observation: A few pieces of wood molding are missing at the eaves. The porch framing and trim is in good condition. The windows (wood components and glass) appear to be in good condition but the screens are generally rusted, damaged or missing. The paint is generally failing at all exterior woodwork.

Recommendation: At the eaves and porch, replace the missing or damaged molding, reattach the loose molding, and prep and paint all surfaces. At the windows, prep and paint all wood components and replace all rusted, missing, or damaged window screen with new metal or vinyl screen fabric in a shading density similar to the existing screen.

Paint exterior woodwork with alkyd primer and best quality exterior latex or acrylic house and trim paint, satin or semi-gloss sheen, colors to selected in consultation with Karen Krieger.

3. exterior concrete block walls

Observation: The concrete block walls are in good condition but the paint is failing.

Recommendation: Prep and paint the exterior block walls with alkyd primer and best quality exterior latex or acrylic house and trim paint, flat sheen. Do not paint the east-facing adobe wall or the stone foundation.

4. exterior stone foundation

Observation: The stone foundation is in good condition, but mortar is missing from between the stones in random locations around the building.

Recommendation: Selectively repoint the exterior foundation, particularly on the east-facing wall south of the porch. Mix the mortar to the following proportions: 1:1:5-6, hydrated masons lime: Portland cement: sand. Use cleaned natural sand, indigenous to the island, if possible. The Division of State History can provide more detailed information for repointing techniques to Parks and Recreation personnel, if requested.

After the mortar has cured, typically 30 days, coat the foundation walls with lime-based whitewash. Please refer to the attached article from Old House Journal for whitewash recipes.

5. adobe

Observation: The adobe wall on the east side of the Ranch House was constructed at two different times. The south portion was assembled with a soft mud mortar and appears plumb and generally in good condition. The north portion of the wall was assembled with an overly-hard mortar which has caused individual adobe blocks to fail.

Recommendation: The adobe wall needs repair and conservation. At the south portion, replace the individual failed blocks and rebuild the damaged sections of wall with mud mortar. At the north portion, carefully remove the entire exterior wythe of adobe blocks and rebuild the wythe with salvaged adobe blocks and mud mortar. The mud for the mortar should be made from indigenous clay containing some sand and/or silt. The liquid for the mud should be 5 parts water to 1 part Rhoplex E-330, a concrete admixture that will increase the weatherability of the mud mortar.

Two stacks of salvaged adobe blocks have been located on site; one in the ranch house and one in the tack room at the south end of the stables adjacent to the corrals.

After the adobe walls are repaired, coat the walls with lime-based whitewash. Please refer to the attached article from Old House Journal for whitewash recipes.

The Division of State History can provide more technical information regarding adobe manufacture and repair if Parks and Recreation staff wants to attempt the rehabilitation work, or the name of an adobe conservation specialist from Washington County if specialized consulting is desired.

6. fireplace in south room

Observation: The chimney does not have a damper or flue cap and is open to the weather. Water entering the chimney is eroding the adobe blocks in the chimney and firebox. It appears that the fireplace at one time had a decorative front, probably wood, which is now missing.

Recommendation: For the exterior portion of the chimney above the roof, remove the existing fired clay brick to a level below the roof line and rebuild the chimney with similar salvaged make-up brick. Install a new cement wash on top of the brick chimney and a metal flue cap to limit rain and snow penetrating into the chimney. If the fireplace is made operable, install a chimney-top damper and spark arrestor to prevent burning material from landing on the wood shingle roof.

Research available documentation for a description of the fireplace front. If an accurate description or photographic information can be found, fabricate and install a new fireplace front to match the original.

7. hearth at fireplace in south room

Observation: The hearthstone is cracked and collapsing, and the floor in front of the hearth is sagging. Upon inspection, it appears that the hearthstone was inadequately supported when installed and its failure caused progressive failure in the floor framing adjacent to the hearth. Mortar was applied to the cracked hearthstone to cover the damage and level the surface. The floor framing away from the hearth appears to be in good condition and the crawlspace below the floor appears dry and ventilated.

Recommendation: Remove a little more flooring in front of the hearthstone to confirm these findings and recommendations. Fabricate a new sandstone hearthstone to match the original and install it with adequate structural support, such as a concrete foundation; or properly support and install a new 3-4" thick concrete hearth with about the same dimensions as the original hearth. Leave the concrete depressed 3/4" from the level of the finish floor and top the concrete with pourable refractory, trowelled (not very neatly) to match the appearance of the existing mortar topping on the failed hearthstone.

8. concrete block addition at northwest corner of Ranch House

Observation: The west wall of the room has settled and pulled away from the roof framing, and the baseboard and adjacent floor is damaged from dry rot and possibly termites. The dry rot is probably a combination of grade water saturating the exterior foundation wall and water from laundering clothes on the interior.

RANCH HOUSE, continued

Recommendation: Strip all interior finishes and trim from the room, including the finish and subfloors, to evaluate the extent of the damage cause by the settling, moisture, and termites. Repair structural damage such as decayed floor joists and inadequate ceiling joist bearing, if necessary. Have the northwest corner of the house inspected by an exterminator and, if termites are discovered, have them exterminated prior to refinishing the room. Install new 2 coat plaster at the walls and ceiling. install new fir or pine floor boards to match the existing boards under the linoleum, and install new woodwork (baseboard, door casing, etc.) to match the existing.

Investigate the grade around the concrete block addition and, if necessary, alter the grade to divert water away from the addition rather than towards it. Also, check to make sure the level of the grade against the outside wall is not at a height which will hold moisture in the wall at a level commensurate with the interior wood floor joist bearing.

9. general interior

Observation: The interior of the house is in good condition with only localized water damage visible, such as in the laundry room. Only minor cracking is evident in the wall and ceiling plaster, which is very typical.

Recommendation: Prep and paint all interior wall and ceiling surfaces and trim, and clean the house.

END OF RANCH HOUSE

BUNKHOUSE

1. wood shingle roof

   Observation: The wood shingles forming the roof membrane have outlived their service life.

   Recommendation: Remove the existing shingles and replace damaged/decayed sheathing boards, if any, in-kind. Install new, No. 1 (Blue Label) taper-sawn cedar shingles.

2. exterior woodwork

   Observation: The exterior wood trim (principally at eaves, and door and window openings) is in good condition, but the paint is failing.

   Recommendation: Prep and paint all exterior woodwork, as recommended for the Ranch House.

3. exterior concrete block walls

   Observation: The exterior wythe of concrete block masonry is in good condition, but the paint is failing.

   Recommendation: prep and paint all exterior concrete block walls, as recommended for the Ranch House.

4. exterior stone foundation

   Observation: Small sections of mortar are missing generally throughout the stone foundation. The missing mortar is allowing the stones in the southeast corner of the building foundation to fall out of place.

   Recommendation: Selectively repoint the stone foundation with lime-rich mortar containing local sand and whitewash the foundation, as recommended for the Ranch House. Continue to monitor the foundation at the southeast corner and if additional movement or settling is observed, install a concrete footing under the foundation as described for the northwest corner of the Blacksmith Shop.

5. interior adobe walls

   Observation: The interior, or liner wythe of masonry at the walls is adobe block. The adobe just above the floor line has been damaged by moisture in many locations around the interior. The source of the moisture appears to be excessive water wicking up through the stone foundation into the adobe.

BUNKHOUSE, continued

Recommendation: Carefully remove the remaining loose plaster adjacent to the failed portions of adobe to determine the full extent of the damage. Repair the adobe as described for the Ranch House. After the mud mortar has dried, attache galvanized expanded metal lath to the adobe with galvanized nails carefully driven into the mortar joints. Install new 2-coat plaster on the interior face of the adobe wall to match the existing plaster finish.

Check the lawn sprinklers around the bunkhouse to determine if they are spraying directly on the building or saturating the ground at the base of the stone foundation wall. Redirect or even eliminate sprinkler heads that are depositing water on or directly at the base of the wall.

END OF BUNKHOUSE

SPRINGHOUSE

1. wood shingle roof

   Observation: The wood shingles forming the roof membrane are in good condition but beginning to weather.

   Recommendation: Clean the shingles and apply a preservative/fungicide, as described for the Ranch House.

2. exterior stone foundation

   Observation: Small sections of mortar are missing generally throughout the stone foundation.

   Recommendation: Selectively repoint the stone foundation with lime-rich mortar containing local sand and whitewash the foundation, as recommended for the Ranch House.

3. interior

   Observation: The stone walls and wood plank ceiling are in good condition. It appears that the stone walls were whitewashed, historically, but the whitewash has generally failed on the walls.

   Recommendation: Re-coat the interior wall surfaces with whitewash. Please refer to the attached article from Old House Journal for whitewash recipes.

END OF SPRINGHOUSE

BLACKSMITH SHOP/STORAGE ROOM

1. wood shingle roof

   Observation: The wood shingles forming the roof membrane have outlived their service life.

   Recommendation: Remove the existing shingles, and replace damaged/decayed sheathing boards, if any, in-kind. Install new, No. 1 (blue Label) taper-sawn cedar shingles.

2. exterior stone foundation and concrete block walls

   Observation: The exterior wythe of concrete block masonry is in generally good condition, but a major crack has developed in the wall at the northwest corner of the building and the paint is failing throughout. A number of volunteer elm trees are growing into the stone foundation along the west wall. One particularly large tree, growing near the northwest corner, is probably responsible for the differential movement in the masonry wall which resulted in the large crack.

   Recommendation: Carefully cut off the trees at or just below grade level and poison the stumps. Do not attempt to remove the stumps; the tree roots are probably entwined in the stone foundation and pulling the stumps and roots out could damage the foundation. If it is desirable to have trees growing adjacent to the Blacksmith Shop to help define the "gate" or entry to the barnyard, cultivate the volunteer elms currently growing several feet to the west of the Blacksmith Shop.

   Install a new concrete strip footing under the north- and west-facing walls, adjacent to where the walls have settled and moved, at the northwest corner. Refer to the attached sketch for a suggested footing detail. Repoint the crack in the block masonry with a conventional mortar mix.

   Prep and paint all exterior concrete block walls, as recommended for the Ranch House.

3. exterior woodwork

   Observation: The eaves are generally weathered, and are damaged on the west side from the trees growing next to the building. The paint is generally failing at all the exterior woodwork.

   Recommendation: Generally around the building, replace the missing or damaged trim, reattach loose trim, and prep and paint all exterior woodwork, as recommended for the Ranch House.

4. wood windows

Observation: The windows are boarded over on the exterior and difficult to fully inspect from the interior, so their condition was not fully assessed. It does appear that glass is broken and sash is damaged or missing at some of the windows.

Recommendation: Remove the exterior plywood covers to gain full access to the windows. Replace broken panes of glass where the sash is in good condition, and install new matching sash and glazing where the sash is missing or damaged. The existing sash can either be repaired or replaced by the American Heritage Window Rebuilding Co., Salt Lake City, 359.6639; or new matching sash can be obtained through an old-line mill such as Salt Lake or Granite Mill in Salt Lake City, or Ellis Planing Mill in Ogden.

Since it is unlikely that the windows will need to be opened for ventilation, do not attempt to make them operable. Rather, to aid security, fix the windows closed by installing screws through the meeting (check) rail from the interior side. Also, if security is a problem for this building (as evidenced by the existing plywood window covers) consider installing polycarbonate or laminated security glazing in the windows, in lieu of conventional or even tempered glass, to discourage breakage.

After the windows are rehabilitated and glazed, prep and paint all existing and new wood window components as recommended for the Ranch House.

5. interior adobe walls

Observation: The interior, or liner wythe of adobe masonry has been damaged by moisture just above the floor line in many locations around the interior. The source of moisture appears to be grade water that is saturating the exterior foundation wall wicking up through the stone foundation into the adobe. Also, rodents have created a tunnel through the outside foundation and the interior adobe wythe at the very northwest corner of the blacksmith shop, just above the floor line.

Recommendation: Selectively remove and replace individual damaged adobe blocks as described for the Ranch House.

Block the exterior entry to the rodent passage with new mortar, or a new stone set in mortar if the opening is too large to fill with mortar alone (3/4" + in width.)

Investigate the grade at the northwest corner of the Blacksmith Shop and, if necessary, alter the grade to divert water away from the building rather than towards it. Also, check to make sure the level of the grade against the outside wall is below the level of the adobe on the interior.

BLACKSMITH SHOP, continued

6. storage room interior

Observation: The storage room at some time was improved for habitation (probably for hired help) with residential-type finishes.

Recommendation: Depending on the desired interpretation of the room derived from the site interpretive plan, either strip out the later finishes to recreate an earlier, utilitarian, appearance; or keep the finishes and clean and paint as recommended for the Ranch House.

END OF BLACKSMITH SHOP/STORAGE ROOM

STABLES

1. masonry walls

Observation: The outside (away from corrals) wall is comprised of rubble stone masonry and adobe masonry. The stone portion of the wall, toward the north end of the structure, is in fair condition. Sections of stone have fallen out of the face of the wall and, in at least one location, enough stone has fallen out to create a void through the thickness of the wall. The adobe portion of the wall, toward the south end of the structure, is in poor condition. Large sections of adobe are eroded or missing. The adobe wall has been repaired with fired clay brick. No part of the stone or adobe walls appear in danger of imminent collapse that could trigger progressive failure in the adjacent wood frame portion of the stable.

Recommendation: At the stone wall, use the stone which has fallen from the wall and is lying adjacent on the ground to make repairs. Stack the stone back into the wall in a random pattern with the mortar recommended for the Ranch House foundation. Use local field stone for make-up stone, if needed.

At the adobe wall, temporarily support the roof and carefully take down the existing adobe wall. Rebuild the wall with adobe salvaged from the wall, along with other new or salvaged make-up adobe blocks, if needed. Rebuild the wall with the original bond pattern, using the mud mortar as described for the Ranch House. Do not whitewash the stable walls. As with the Ranch House, the Division of State History can provide more technical information if Parks and Recreation staff wants to attempt the adobe repairs, or the name of an adobe conservation specialist from Washington County if specialized consulting is desired.

2. vegetation

Observation: Volunteer elm trees are growing at the base of the masonry wall and close enough to the wall that their branches are damaging the masonry.

Recommendation: Carefully cut off the trees growing at the base of the wall at or just below grade level and poison the stumps. Do not attempt to remove the stumps. The tree roots are probably entwined in the stone wall and pulling the stumps and roots out could damage the wall. Remove any adjacent trees whose branches may be damaging the wall, but are far enough away that their main and secondary roots are not growing into the wall.

STABLES, continued

3. wood frame structure, including metal roof

Observation: The stables are constructed with a post-and-beam structural frame, and a wood frame roof structure. The roof membrane is common galvanized corrugated sheet steel, nailed to the roof structure. The pens and partitions between the stables are built from common planks and 2x lumber. The post-and-beam structure and stable dividers are in good condition with only minor repairs needed. In many areas, the sheet metal roofing has blow loose, either exposing the roof framing to the elements or introducing stresses into the frame as the steel was ripped from the structure by the wind. As a result, the roof structure is in poor condition and in need of repairs.

Recommendation: Generally, check the wood structure and framing to identify missing or broken members, missing or damaged anchors or connectors, etc. Where necessary, install new wood members to match the original. Make repairs with common lumber, either new or salvaged on site and not artificially treated or altered to look aged.

After the wood structure and roof framing repairs are complete, install the sheet steel roofing. Use any sheets that can be salvaged at the site and reinstalled, and new sheets with the same profile to complete the membrane. Use roofing screws with neoprene washers, rather than nails, to attach the sheet steel to the roof frame. The screws will provide a more secure attachment in windy conditions and introduce little or no ballistic impact on the old wood structure as they are installed.

General Observation: The corals and stables are simple, vernacular structures created by semi-skilled labor. As such, repairs and maintenance should be undertaken in a compatible manner, i.e., Parks staff and/or supervised volunteers could probably complete appropriate repairs on the stone masonry walls, for example, in lieu of a skilled mason. The goal of any rehab work should be to maintain the existing weathered or rustic feel, or a sense that the work was completed by ranch hands using readily available materials, new or used.

END OF STABLES

SILO

1. safety

Observation: The silo is a concrete prefabricated type, erected at the site. It is in overall good condition and a quality surviving example of this type of silo. It does, however, present a series of potential safety problems for park staff and visitors. The safety concerns include:

a. biohazard from the existing, potentially contaminated grain,
b. potential tipping or structural failure in an earthquake,
c. visitor trip or fall hazard.

Recommendation:

a. Remove the grain from the bottom of the silo. The grain traps moisture against the concrete walls, causing them to decay, and exerts outward pressure on the concrete structure. Also, the grain could be contaminated with mouse urine and feces which may contain Hantavirus, or pigeon droppings which may transmit tuberculosis. Take skin protection and respiratory precautions when removing the grain and disposing of it off-site. Any existing bacteria and virus will not remain alive in the grain for long, but the grain could be re-contaminated if it is left in a waste pile where vermin are allowed access to it.

b. Have an engineer examine silo and make recommendations for increasing its seismic resistance. Such recommendations might include using the existing interior timber structure, or a new one similar to it, to brace the silo; anchoring the base of the silo to the existing concrete floor slab or new concrete footings installed through the existing floor on the interior of the silo; and realigning and reattaching the bottom 3 or 4 external tension rings by welding the threaded, turn-buckles in a fixed position.

c. Install galvanized steel hardware cloth or screen with 1/2" voids, set in a wood or metal frame, into the access openings in the bottom four sections of the silo. This will allow inspection of the interior, but discourage visitors from climbing on or into the silo.

2. concrete wall panels

Observation: The concrete is in good condition but is beginning to weather.

SILO, continued

Recommendation: Clean the silo with a concrete or limestone cleaner, and apply a breathable penetrating sealer to the entire exterior and the bottom 4'-5' of the interior of the silo. The silo must be cleaned first so that the dirt and grime will not inhibit the effectiveness of the penetrating sealer, and the sealer will not permanently seal the dirt into the concrete. Recommended products: Limestone Restorer and Weather Seal Siloxane WB, both manufactured by ProSoCo of Kansas City, Kansas. Please refer to the attached literature from SURE KLEAN products. The Division of State History can provide more detailed product information and contractor referrals to Parks and Recreation, as requested.

3. roof, including structure and shingles

Observation: Visual inspection was made from the ground. It appears that the wood shingles have outlived their service life and the wood framing for the roof structure atop the silo is in disrepair.

Recommendation: Inspect the roof structure and, if possible, rehab the structure by installing new sheathing and 2x framing members, as needed. If the structure is too decayed or damaged to be reasonably repaired, remove the entire structure and construct a new one to match. After the structure is rehabilitated or replaced, install new wood shingles as recommended for the Ranch House.

END OF SILO

Chemical treatments

There are several types:

1. You can easily prepare *cleaning solutions* to help remove dirt, mild stains, and light growths of molds and mildew.
2. For more persistent stains, *bleaching formulations* will be recommended.
3. In some cases of excessive moss growth, you can apply *chemical solutions* to kill the mosses and any fungi that may be present.
4. Finally, you may sometimes apply *preservative chemical solutions* that will retard the growth of molds, fungi, and mosses.

Considered as a whole, the chemicals in #3 and #4 are chosen for their fungicidal or herbicidal effects. It's important to note that the chemicals listed in the following sections will perform differently under various environmental conditions. As a result, the frequency of application required for long-term protection depends on the chemical you use, the amount of precipitation, average temperatures, and the roof exposure conditions.

The chemicals we recommend are available in products available through hardware stores, building supply centers, or lumber yards.

1. Cleaning solutions

You've removed the debris from your roof, and you can see light staining or irregular discoloration. Cleaning the roof with a mild detergent solution may provide an improvement. This is the recommended solution:

3 oz Tsp (trisodium phosphate, available in paint or hardware stores)
1 oz detergent (for example, Tide or All)
1 qt 5% sodium hypochlorite (liquid bleach—Chlorox, for example)
3 qt warm water

Apply this mixture and scrub the surface with a soft brush or lightly with a broom. Then rinse the surface with water to eliminate any residue. If you accidentally splash any plants, rinse them thoroughly.

Use pesticides safely!

- **Wear** protective clothing and safety devices as recommended on the label. **Bathe or shower** after each use.
- **Read** the pesticide label—even if you've used the pesticide before. **Follow closely** the instructions on the label (and any other directions you have).
- **Be cautious** when you apply pesticides. **Know** your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.

2. Bleaching formulations

For more persistent stains, you can increase the sodium hypochlorite (chlorine bleach) concentration, even to the point of using it full strength from the bottle for spot applications.

Formulate stronger solutions by using granular chlorine (calcium hypochlorite), mixed at a rate of 2 ounces per gallon of water. This chemical is used for algae control in swimming pools and is available through pool supply houses.

For safety, wear eye protection, rubber gloves, and aprons. It's best to apply these bleaches with brushes for small spots; spray large areas (use plastic or stainless steel sprayers).

Don't let bleaching solutions remain on the wood for more than ½ hour before rinsing. Experience shows these solutions provide more uniform results when you use them in lower concentrations; repeat the application, rather than use a single high concentration when you start.

Some further tips: It's best to use these solutions out of direct sunlight. Apply the chemical only to the stain. Avoid drips, runs, and splashes of bleach or *excessive* bleaching on the roof surface—these can mar the roof appearance. It's not necessary to scrub bleached areas, but rinse the wood thoroughly.

3. Chemical solutions for moss control

Note: It's extremely important to be careful when you apply the chemicals listed in sections 3 and 4; otherwise, you can seriously harm surrounding vegetation and—more importantly—people or pets. These chemicals often carry prominent warnings about exposure or ingestion.

Remember: The chemicals you apply to roofs to remove existing growth or prevent its reoccurrence are toxic—*handle them with care!* If you have any doubts about safe handling, write the manufacturer, see your county Extension agent, or phone the closest poison control center (see the list on page 7).

When there's so much moss that patches or mats are present, abrasive removal by sweeping may not remove it all. Scraping may not be possible because of the contours of the shakes—and it may damage the roof surface.

In these cases, applying moss-killing chemicals or using high-pressure washers (or both) may be a more effective method for removing the residual growth. Remember that the wood surface may not dry under a covering growth of moss. And this wet condition promotes the growth of wood-decaying fungi!

Moss-killing chemicals are recommended in the following order of effectiveness (most effective first):

Zinc sulfate (monohydrate). Mix 3 pounds powder in 5 to 10 gallons of water and apply to 600 square feet of moss growth. Apply higher concentrations to exceptionally heavy growths or where conditions favor moss growth. Use a watering can or pump sprayer. Don't use this solution if you have copper gutters, downspouts, or flashings (zinc sulfate corrodes copper).

Copper sulfate (also called blue stone). Mix ¼ to ½ ounce per 10 gallons of water. This chemical is also corrosive to metals, so be cautious where you apply it; wash all exposed gutters, flashings, and application equipment thoroughly. It may be applied in a similar manner as zinc sulfate, but is safer to apply where copper flashings are present.

Russ Dutton
652-0247
680-3422

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WHITEWASH

Whitewash has always been the apple pie of exterior finishes — a simple, pleasing, good-value-for-the-money coating appreciated by both rich and poor. Like apple pie, too, whitewash can be storebought, but the best mixes have traditionally been made from scratch as needed and according to taste.

Whitewash is a water-based lime paint — liquid plaster in many respects — and lime is the principal ingredient. Quicklime, with its long slaking (soaking) period was once the only lime for whitewash. Since the invention of hydrated limes, whitewash is made with virtually any of these modern substitutes.

Whitewash had many historical uses, including painting simple wood buildings, fences, greenhouses, and stonework of all kinds (left). Basically a thin mix of lime and water, whitewash is applied with a wide, fiber-bristle brush (right).

The list of other possible components is long. Most are binders, mixed in to add durability and chalking resistance to the basic lime-and-water combination. Salt is the across-the-board favorite, but glue, sugar, flour, starch, varnish, skim milk, whiting, and brown sugar have popped up in the past. Indigo and laundry bluing are popular still, to counteract yellowing and add brightness.

Recipes for whitewash abound. Here's a basic formula from the 1930s, which is good for general woodwork:

Salt, 15 lbs. OR Calcium chloride (dry), 5 lbs.
Lime paste, 8 gals.
Dissolve salt or calcium chloride in about 5 gallons of water, then add to lime paste, mixing thoroughly. (Lime paste: Soak 50 lbs. of hydrated lime in 6 gals. of water.) Thin, if necessary, with fresh water. The calcium chloride version is less likely to chalk.

Whitewash also has a history of being tinted for colored effects. The watchword for pigments is that they have to be limefast and insoluble in water. In the 19th century, brick dust, charcoal dust, and yellow ochre were all popular. Today, any mason's dry pigments usually work.

The interiors of stables and dairy barns regularly got whitewashed for the health of the animals. Fruit-tree trunks are still whitewashed as a barrier to ground-dwelling insects and frost. Spraying the tops of railroad cars was a method to detect coal thievery. In the 1800s, the U.S. government even adopted their own "lighthouse whitewash" mixture for painting these structures.

A recipe that works best on surfaces other than wood:

White portland cement, 25 lbs.
Hydrated lime, 25 lbs.
Elmer's Glue (white casein glue)
Combine cement and lime together in dry form, then add about 8 gals. of water. Mix thoroughly, adding a dollop of glue per working batch. The result should be a thick slurry, which is further diluted and mixed until the consistency of heavy cream is achieved. Don't mix more than you can use in a few hours.

Painting with whitewash is not an elaborate procedure, but you must follow some guidelines. Old whitewash scale, dirt, and other loose material should be brushed or scraped off first, and defects filled. If complete removal of a previous coat is necessary, washing with a solution of vinegar or dilute hydrochloric acid speeds the work. Wetting the prepared surface first helps the new whitewash coat dry gradually and reduces chalking.

Painting one or more thin (almost translucent) coats produces better results than applying thick layers. Use a whitewash or calcimine brush (a wide tool with plant-fiber bristles that resist lime) and brush evenly, stirring the paint mixture frequently. In decades past, a frequent practice for better adhesion was to paint the whitewash on hot. Sometimes this was done by preparing the wash with boiling water, but usually heat was the welcome byproduct of the chemical reaction of quicklime and water.

SUPPLIERS

Janovic/Plaza, Inc.
30-35 Thomson Ave., Dept. OHJ
Long Isl. City, NY 11101
(718) 786-4444
Whitewash brushes, limefast pigments

Johnson Paint Company
355 Newbury St., Dept. OHJ
Boston, MA 02115
(617) 536-4838
Martin Senour brand simulated whitewash

THOMAS P. VALLELY
SENIOR TECHNICAL REPRESENTATIVE
CONSTRUCTION PRODUCTS
POLYMERS, RESINS

ROHM AND HAAS COMPANY
ONE DUFFEL CENTRE, SUITE 105
39899 BALENTINE DRIVE
NEWARK, CA 94560
(415) 659-0990

ROHM AND HAAS

CEMENT MODIFIERS

RHOPLEX® E-330 Cement Mortar Modifier

RHOPLEX E-330 is a water dispersion of an acrylic polymer specifically designed for modifying Portland cement compositions. Improtant application areas include patching and resurfacing, floor underlayments, terrazzo flooring, spray and fill coats, precast architectural building panels, stucco, industrial cement floors, and highway and bridge deck repair. Additional information on cement modifiers is available in the technical notes for RHOPLEX MC-76, RHOPLEX MC-1834, and RHOPLEX E-2065.

Performance Advantages

Durability and Strength

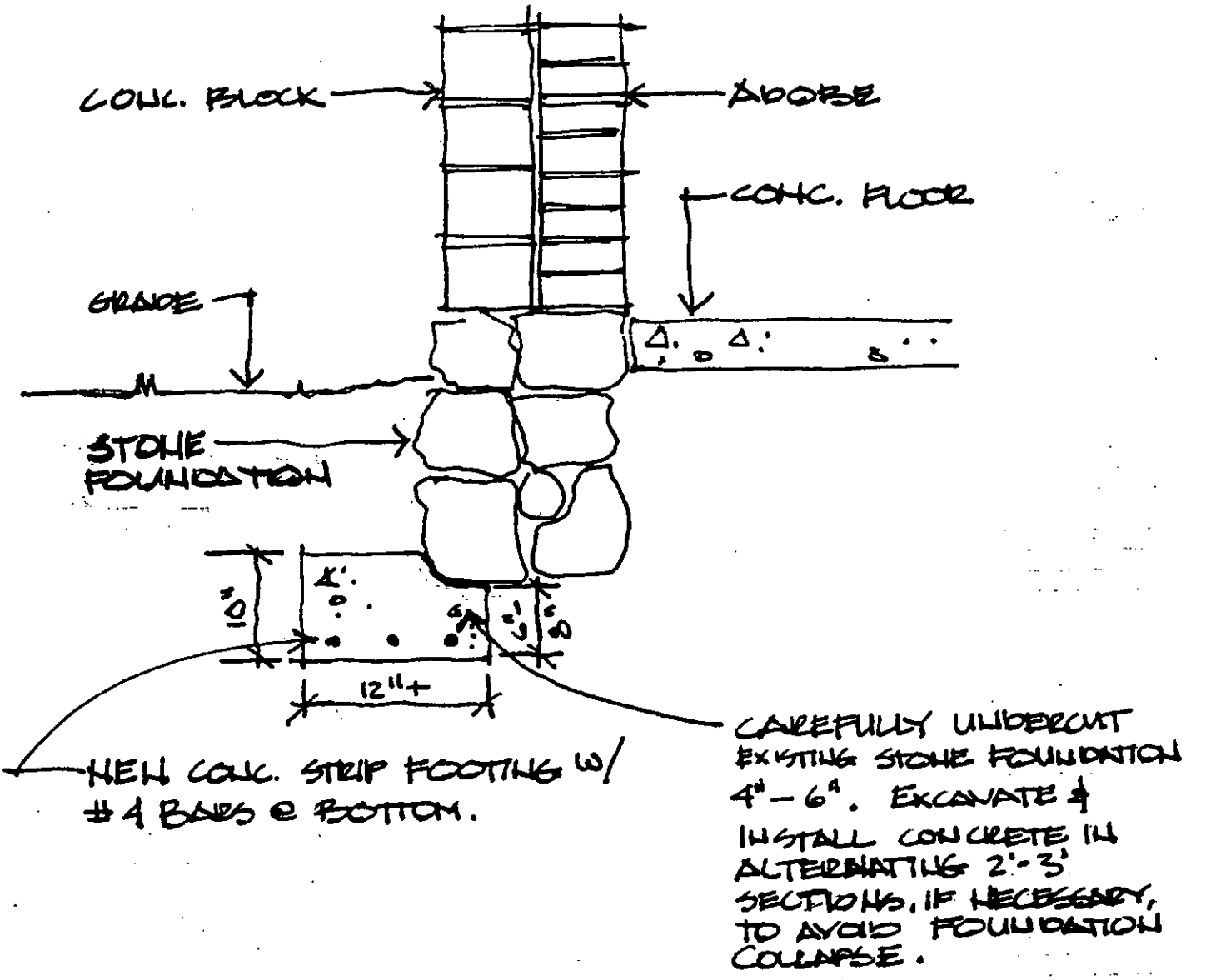
Cement mortars modified with RHOPLEX E-330 are hard, tough, and durable. Compared with unmodified mortars, polymer modified mortars have superior flexural, adhesive, and impact strengths, as well as excellent abrasion resistance. They are especially useful where thin sections are desirable and where excessive vibration and heavy traffic are encountered.

Adhesion

RHOPLEX E-330 modified cement mortars have excellent adhesion to a variety of surfaces such as concrete, masonry, brick, wood, metals, and others.

Resistance Properties

Cement mortars prepared with RHOPLEX E-330 are resistant to many industrial chemicals and have excellent resistance to ultraviolet light and heat. They dry to a uniform color with no tendency toward yellowing or discoloration



STRIP FOOTING

NOT TO SCALE.

PP/PRODUCT PRESENTATION

Restoration Cleaner

Restoration Cleaner is a liquid blend of inhibited acidic ingredients and wetting agents formulated as a "carbon solubilizer" for brick and most natural stone surfaces. Restoration Cleaner is a proven product for cleaning and restoring all types of older masonry with the exception of high calcium based surfaces such as limestone and concrete.

Designed for use with high pressure water rinse, Restoration Cleaner removes atmospheric dirt, carbon, algae and mold formations from masonry surfaces without harmful abrasives. Formulated specifically for masonry — properly applied, will not "etch" or otherwise harm the surface.

PP/PRODUCT PRESENTATION

Heavy Duty Restoration Cleaner

Heavy Duty Restoration Cleaner is a highly concentrated blend of strong acidic ingredients, inhibitors and special wetting agents formulated as a "carbon solubilizer" for masonry surfaces. Heavy Duty Restoration Cleaner is designed for use on older, heavily carboned surfaces typically found in large cities or high pollution areas. When used properly, this cleaner removes atmospheric dirt, carbon, algae and mold formations without damaging the surface.

LIMITATIONS: Sure Klean® Restoration Cleaner and Heavy Duty Restoration Cleaner are not suitable for restorative cleaning of limestone or concrete surfaces. See Sure Klean® Limestone Restorer or Limestone Prewash/Afterwash (below) for these applications. Use in well ventilated areas only.

TS/TECHNICAL SUPPORT

Suggested Short Form Specification: Masonry Restoration Cleaning.

All window glass and nonmasonry surfaces should be protected from exposure to the cleaning materials. Test Panels (minimum 4 feet by 4 feet) should be cleaned prior to beginning full scale operations to determine the effectiveness of the cleaning compound and precise cleaning procedures. Tests should be conducted on each type of masonry surface and available for inspection and approval by the architect.

All exposed masonry surfaces shall be cleaned free of all atmospheric dirt, mildew and carbon formations so as to restore the masonry surface to its original appearance. Masonry cleaning compound shall be Sure Klean® Heavy Duty Restoration Cleaner applied in strict accordance with manufacturer's printed instructions. Sandblasting, wet aggregate blasting or use of other abrasive materials will not be allowed.

PP/PRODUCT PRESENTATION

Limestone Restorer

Limestone Restorer is a concentrated blend of inhibited acidic ingredients and special wetting agents formulated for restorative cleaning of limestone and concrete surfaces. Limestone Restorer removes atmospheric dirt, carbon stains, rust and mildew from concrete and limestone without damaging the surface. It is appropriate for use on concrete, Indiana Limestone, Austin Stone and other high calcium-based natural stone surfaces.

PP/PRODUCT PRESENTATION

Limestone Prewash/Afterwash

Limestone Prewash/Afterwash is a special two-part cleaning system formulated specifically for extremely dirty, heavily carboned limestone surfaces. Limestone Prewash is a strong alkaline cleaning compound which softens built-up carbon formations on the limestone surface. Limestone Afterwash is a penetrative acidic-based cleaner which, when applied after Limestone Prewash, loosens carbon and atmospheric dirt allowing high pressure rinse to restore the limestone to its natural light appearance.

TS/TECHNICAL SUPPORT

Suggested Short Form Specification: Masonry Restoration Cleaning.

Test panels (minimum 4' x 4') should be cleaned prior to beginning full-scale cleaning operations to determine the effectiveness of the cleaning compound and precise cleaning procedures. Tests should be conducted on each type of masonry surface and available for inspection and approval by the architect.

All exposed concrete/limestone surfaces should be cleaned free of all atmospheric dirt, mildew and carbon formations so as to restore the masonry surface to its original appearance. Masonry cleaning compounds shall be Sure Klean® Limestone Restorer or Sure Klean® Limestone Prewash/Limestone Afterwash applied in strict accordance with the manufacturer's printed instructions. Sandblasting, wet aggregate blasting or use of other abrasive materials will not be allowed.

LIMITATIONS: Sure Klean® Limestone Cleaners are not generally effective for restorative cleaning of brick, terra cotta, sandstone, marble or granite. See Sure Klean® Restoration Cleaner/Heavy Duty Restoration Cleaner (above) for these applications. Cleaners may not prove effective where pressure water is not used to flush deeply embedded surface stains from porous limestone. Use in well-ventilated areas only.

PP/PRODUCT PRESENTATION

766 Masonry Prewash

An alkaline-based cleaning compound that assists in removing heavy carbon encrustations from brick, terra cotta, sandstone, limestone and most other masonry. 766 Masonry Prewash should be used with Sure Klean® Restoration Cleaner, Limestone Afterwash or Limestone Restorer. Will not damage or discolor the masonry.

PP/PRODUCT PRESENTATION

942 Limestone Cleaner

A ready-to-use, nonacidic alkaline cleaning compound in gel form for removal of moderate to severe atmospheric staining. 942 Limestone Cleaner can be used on interior or exterior masonry. Safe for use on some polished marbles, limestone surfaces and unpolished marble.

PP/PRODUCT PRESENTATION

Weather Seal Siloxane - WB

Sure Klean® Weather Seal Siloxane is a ready to use masonry water repellent based on oligomeric alkyl-alkoxy siloxane of excellent stability against alkali. Weather Seal Siloxane reacts with the masonry surface and humidity to form a highly water repellent siloxane compound which is chemically bonded to the substrate. Provides superior protection against moisture intrusion and resulting problems. Weather Seal Siloxane exhibits excellent resistance to acids, alkalis and the damaging effects of the environment such as acid rain and carbon crusting. Surfaces treated with Weather Seal Siloxane have a natural appearance.

TS/TECHNICAL SUPPORT

Suggested Short Form Specification: Masonry Water Repellent.

All exposed exterior masonry surfaces shall be treated with a siloxane type penetrating water repellent material. The water repellent shall not alter the natural appearance of the masonry. Surfaces to be treated may be "damp" but should be visually dry and thoroughly clean and free of surface dirt, dust, oils and other contaminants. Masonry water repellent shall be Sure Klean® Weather Seal Siloxane with application to be in strict accordance with the manufacturers printed instructions.

LIMITATIONS: Sure Klean® Weather Seal Siloxane may not be suitable for application to some types of natural stone — always test to assure desired results. Not suitable for application to asphaltic surfaces, gypsum, plaster or synthetic resin paints. May not be suitable for surfaces to receive surface paints or coatings — always test for compatibility. Do not apply at temperatures below 40°F or above 100°F.

PP/PRODUCT PRESENTATION

Weather Seal H40

Weather Seal H40 is a highly effective, deep penetrating water-repellent and consolidating treatment for concrete, brick, natural stone and other masonry building materials. Weather Seal H40 improves surface and substrate integrity with SiO_2 natural binding materials and special silane water-repellents which are chemically bonded into the surface producing a long lasting hydrophobic effect. Weather Seal H40 replaces the natural binding materials which have been lost due to weather and protects concrete and masonry from the damaging effects of moisture intrusion and attack by water-borne acids and alkalis.

TS/TECHNICAL SUPPORT

Suggested Short Form Specification: Masonry Water Repellent.

All exposed masonry surfaces shall be treated with a masonry water repellent and consolidating material consisting of a silicic ester/silane blend in a single component product. The treatment shall not darken or otherwise alter the natural appearance of the masonry. Surface to be treated shall be thoroughly dry and cleaned free of all surface dirt, dust, oil and other contaminants. Masonry water repellent/consolidating treatment shall be Sure Klean® Weather Seal H40 with application to be in strict accordance with the manufacturers printed instructions.

LIMITATIONS: Weather Seal H40 should not be applied to some types of marble — always test to assure desired results on all surfaces. Weather Seal H40 should not be applied at surface and air temperatures below 40°F or above 95°F. Do not apply on extremely windy days. Shelf life — approximately 12 months in sealed containers. Not suitable for application to asphaltic surfaces.

PP/PRODUCT PRESENTATION

Weather Seal 201-GP

Weather Seal 201-GP is a blend of modified stearates and special polymers suspended in a petroleum solvent. Weather Seal 201-GP is formulated as a clear, penetrating water repellent for general purpose application to all types of natural stone and masonry except lightweight concrete and concrete block. When properly applied Weather Seal 201-GP effectively weatherproofs the masonry surfaces for up to 5 years without changing the natural appearance of the masonry.

PP/PRODUCT PRESENTATION

Weather Seal SS

Weather Seal SS is a hydrophobic silica type water repellent for masonry surfaces. Weather Seal SS is a superior, penetrating water repellent appropriate for application to brick, stucco/plaster finishes and architectural concrete. Upon evaporation of solvent carrier, it chemically locks into the substrate and provides water repellent protection for up to 10 years. Totally colorless — does not alter the natural appearance of the masonry.

TS/TECHNICAL SUPPORT

Suggested Short Form Specification: Masonry Water Repellent.

All exposed exterior masonry surfaces shall be treated with a hydrophobic silica type penetrating water repellent material. The water repellent product shall not darken or otherwise alter the natural appearance of the stone. Surfaces to be treated must be **thoroughly dry** and cleaned free of all surface dirt, efflorescence and construction stains. Masonry water repellent shall be Sure Klean® Weather Seal SS or Sure Klean® Weather Seal 201-GP with application to be in strict accordance with the manufacturers printed instructions.

LIMITATIONS: Do not store or apply at temperatures below 40°F. Not suitable for application to asphaltic surfaces. May not be suitable for surfaces to receive surface paints or coatings.

GENERIC GUIDE TO SURE KLEAN® WEATHER SEAL PRODUCTS

Generic Description	Product	% Solids	Recommended Surface	Average† Aesthetic Change	Recommended Application	Coverage* Rate Per Gal.
Siloxane	Weather Seal Siloxane	6.7%	Architectural concrete, brick, concrete block, most natural stone	None	Airless spray, brush or roller	Brick: 100-150 sq. ft./gal. Architectural Concrete: 125-175 sq. ft. Concrete Block: 60-80 sq. ft. Natural Stone: 125-175 sq. ft.
Silicic ester/silane blend	Weather Seal H40	40%	Porous or deteriorating stone, brick, most natural stone	None	Airless spray, brush or roller	Brick: 80-150 sq. ft./gal. Natural Stone: 80-150 sq. ft.
Hydrophobic Silica	Weather Seal SS	6.5%	Clay brick, architectural concrete, precast, aggregate, stucco	None	Airless spray, brush or roller	Brick: 150-300 sq. ft./gal. Architectural Concrete: 250-350 sq. ft. Stucco: 300-400 sq. ft.
Modified Stearate	Weather Seal 201-GP	5%	Clay brick, architectural concrete, stucco, natural stone	None	Airless spray, brush or roller	Brick: 100-150 sq. ft./gal. Concrete: 200-300 sq. ft./gal. Natural Stone: 100-150 sq. ft./gal.
Modified Acrylic	Heavy Duty Weather Seal	15%	Concrete block, concrete brick	Slight darkening	Airless spray, brush or roller	60-100 sq. ft.
Modified Methyl Methacrylate	Acrylic Weather Seal 7½% 10% 15% 25%	8% 11% 16% 26%	Architectural concrete, concrete block, clay brick, porous stone	7%: very slight darkening 10%: light darkening, slight sheen on dense surfaces 15%: light sheen 25%: glossy sheen	Airless spray, brush or roller	7½%: 75-150 sq. ft. 10%: 100-175 sq. ft. 15%: 120-200 sq. ft. 25%: 125-300 sq. ft.
Modified Acrylic	Block Seal	25%	Porous lightweight units	Slight darkening	Airless spray, brush or roller	50-100 sq. ft.
Modified Acrylic	Weather Seal Stains	14-19%	Concrete block, lightweight block, architectural concrete	Color staining of the masonry surface. No covering or change in the texture of the masonry.	Airless spray	75-150 sq. ft.

†The degree of actual aesthetic change will depend on the porosity and texture of the masonry surface.
* Coverage ratios are averages and may vary depending upon surface texture and porosity. Adjustments will be necessary to account for recessed areas of fluted block and heavily textured surfaces.

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS AND RECREATION

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July 23, 1996

MEMORANDUM

TO: Tim Smith, Park Manager, Antelope Island
Jim Harland, Region Manager

FROM: Karen Krieger, Heritage Resource Coordinator KK

SUBJECT: Garr Ranch Restoration

Several months ago, Don Hartley from State History prepared a thoughtful plan of attack for stabilizing the buildings at the Garr Ranch. Jim Fillpot and I met several weeks ago to see how we might be able to divide up some of the assignments he had assessed could be taken care of with our own staffs. Attached is our analysis. It includes work for a carpenter. I spoke with Bob Ewing at This is the Place State Park about borrowing theirs to help with this project. He is willing to discuss the idea, but probably not until later in the summer.

I think what we outlined is a reasonable way to break a big project down into pieces several different entities can schedule and work on. Most of the specifications for the work have been provided by Don Hartley. I am hoping the costs for materials can be divided up similarly.

I welcome your comments about this project and hope we can begin some of the elements soon. I'm thinking you will be the one to actually schedule and coordinate the work, Tim. Please let me know what I can do to help further (besides my listed assignments)

Thanks for your assistance.

cc: Jim Fillpot
Bob Ewing

UTAH CENTENNIAL 1896-1996

Analysis of Garr Ranch Work/Assignments
7/13/96

Karen

Ranch House

Investigate the various roofing options with DFCM and/or the crew
Have licensed contractor address the adobe restoration
Have contractor replace south fireplace flue cap and decorative front

Bunk House

Investigate the various roofing options with DFCM and/or the crew

Blacksmith shop/Storage room

Investigate the various roofing options with DFCM and/or the crew

Silo

Have a certified engineer inspect the structure for safety and seismic resistance.
(Include this with engineering work for the barn and lean to at the same time)

Staff

Ranch House

Prep and paint cinder block walls with alkyd primer and then paint with exterior latex flat white.

Bunk House

Prep and paint cinder block walls with alkyd primer and then paint with exterior latex flat white.

Spring House

Clean the shingles with copper sulfate and then seal with clear Olympic wood preservative.

Silo

Continue removing existing grain in the structure
Weld the exterior tension rings so they cannot be tampered with, first 3-4 high.
Install galvanized steel hardware cloth to the lower opening to keep unauthorized people out of the structure.

Region Crew

Ranch House

Selectively repoint stone foundation particularly on the east side south of porch. Let cure 30 days then whitewash.

Bunk House

Selectively repoint stone foundation and whitewash as with ranch house. Examine southeast footings and add additional concrete footings if needed.
Address the plaster and adobe needs on the interior.

Spring House

Selectively repoint the stone foundation as specified for the ranch house and bunk house.

Blacksmith shop/Storage room

Install strip footing under the north and west walls.
Repoint the crack in the block masonry with conventional mortar mix

Address the adobe needs

Stables

Repair stone walls with rock that has fallen down. Rebuild adobe portions with spare adobe blocks

Silo

Check concrete footings and possibly attach structure to the footings

Clean the exterior with a concrete cleaner and apply penetrating sealer as specified

Inspect the roof and repair or replace as needed

Carpenter

Ranch House

Replace missing or damaged wood moldings around eaves. Prep all exterior wood surfaces.

Replace all window screen with metal fabric using the same shading density.

Replace hearth and floor repairs in front of south fireplace

Address the project in the store room west of the kitchen

Prep all interior wall, ceiling and trim surfaces for painting

Bunk House

Prep all exterior and interior woodwork

Blacksmith shop/Storage room

Replace missing or damaged trim, prep all exterior and interior woodwork

Remove plywood from windows and repair and prep window trims

Stables

Inspect, repair and/ or replace any broken roof or wall supports and roofing materials as per the specifications.

Volunteers

Painting of all interior and exterior woodwork, and other surfaces as specified (including exterior block work and whitewashing of adobe)