CONDITION ASSESSMENT and PRESERVATION PLAN
for
Various Structures
Manzanar National Historic Site

DECEMBER 31, 2000

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Color Scans
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Preservation Brief #10: Exterior Paint Problems on Historic Woodwork
Preservation Brief #15: The Preservation of Historic Concrete
Preservation Brief #19: The Repair and Replacement of Historic Wooden Shingle Roofs
Preservation Brief #31: Mothballing Historic Buildings
Preservation Brief #32: Making Historic Buildings Accessible
Preservation Brief #37: Appropriate Methods for Reducing Lead Paint Hazards in Historic Housing
Preservation Brief #39: Holding the Line – Controlling Unwanted moisture in Historic Buildings
1. INTRODUCTION
A. EXECUTIVE SUMMARY

This Condition Assessment and Preservation Plan has been produced to assist Manzanar National Historic Site with the preservation of its historic structures. It outlines specific recommendations for the preservation of these structures, with the exception of the Auditorium, which is being treated under a separate document. This document does not discuss preservation of site features such as gardens, landscaping, or parking lots.

The Manzanar Relocation Center is designated as a California Registered Historical Landmark, is listed in the National Register of Historic Places, and is a National Historic Landmark.

This document was produced through an agreement between the Architectural Conservation Projects Program of the National Park Service - Intermountain Support Office, located in Santa Fe, NM (IMSF-CAC) and Manzanar National Historic Site (MANZ). The author of this report is a Historical Architect with IMSF-CAC. Project management was provided by a Supervisory Exhibit Specialist from IMSF-CAC, with additional assistance provided by an IMSF-CAC Exhibit Specialist.

Recommendations within this document are based on the National Historic Preservation Act of 1966 (NHPA), Section 110, and Section 106, and the National Park Service's "DO-28" (formerly NPS 28), which includes the Secretary of the Interior's Standards for Treatment of Historic Properties, and the associated Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

B. BACKGROUND AND HISTORY OF MANZANAR NATIONAL HISTORIC SITE

Manzanar National Historic Site was established in 1992, and is administered by the Secretary of the Interior as a unit of the National Park system. The site was established to provide for the interpretation of the historical, cultural, and natural resources associated with the relocation of Japanese Americans during World War II. The entire site is owned by the Los Angeles Department of Water and Power, which purchased the land during the 1920's for its water rights.

The Manzanar War Relocation Center was one of ten permanent centers at which Japanese Americans were confined during World War II. Following the Japanese attack on Pearl Harbor in 1941, President Roosevelt signed an Executive Order that authorized the Secretary of War to exclude citizens and aliens from designated areas along the Pacific coast, in order to provide security against sabotage and espionage. After an initial effort at voluntary relocation, the US Army began to remove persons of Japanese descent and relocate them to temporary assembly centers, and then on to relocation camps, located in desolate areas of seven western states. Manzanar was the first of the permanent relocation centers, receiving its first occupants in March of 1942.

The original 6,000 acre site contained resident housing, administrative housing and offices, management/support facilities, factory/shops, warehouses, a hospital, a cemetery, and an auditorium; as well as agricultural lands, a reservoir, and water and sewer treatment facilities. The center living area was surrounded by barbed wire fencing with guard towers, and consisted of 36 blocks; each containing 16 wooden barracks which were divided up into "apartments." At its peak, more than 10,000 people were confined at Manzanar. The National Historic Site occupies 550 acres of the original 6,000.

The Relocation Center was closed in November 1945. Gradually, most of the structures and buildings were demolished or removed from the site, and much of the land returned to its "natural" state. There are only four surviving intact structures: the Military Checkpoint Post, the Police Post, the Cemetery Monument, and the Auditorium. The Military Checkpoint Post and the Police Post are small stone structures reminiscent of Japanese pagodas, and are located just inside the main entrance to the site. The auditorium, a large wood and masonry structure, was converted for use as a garage and maintenance shop for the Inyo County Highway Department in the 1950's, and used for this purpose until January 1996. The Cemetery Monument, a small stucco covered stone obelisk, is located in the cemetery on the west side of the site, and is the focus of an annual pilgrimage in the spring. The site also contains scattered remains of numerous other structures such as foundations, portions of water and sewer systems, landscaping and paving features, and the outlines of the road system's grid. There are also a variety of cultural resources associated with the history of human activity prior to the site's use as a relocation center.

Three documents exist which are pertinent to the study of the site: Manzanar, by John Armor and Peter Wright (with photographs by Ansel Adams), Times Books, 1988; Three Farewells to Manzanar, the Archeology of Manzanar National Historic Site, California, by Jeffrey F. Burton, Western Archeological Center, National Park Service, 1966;
C. PRESERVATION, USE, AND REGULATORY COMPLIANCE ISSUES

The Park has several objectives for the preservation and use of the structures. Obviously, preservation of the structures is required by the NHPA and NPS 00-28. Preservation and maintenance is also necessary to correct problems with the structures, as they exist, to prevent future deterioration, and to maintain their historic integrity.

In the GMP, in the section under Cultural Resources Management, the GMP discusses the Historic Structures, as follows:

"The three intact buildings on the site, the auditorium and rock sentry posts, would be preserved through regular maintenance after initial historic preservation and eventual restoration work projects are completed. Historic Structure Reports would be prepared to guide these activities.

There are a number of other intact structures on the site, including stone barbeques, stone planters, rock garden structures, etc., and many structural remnants, such as walls, steps, etc. A number of these structures and structural remnants, especially those located at interpretive site throughout the camp area, would be preserved through regular maintenance. Other structural remnants would be protected from theft and vandalism but would not be actively maintained."

The GMP plan also has a table of proposed treatments for classified structures, included in the appendix to this report. Where possible, these treatments were incorporated into this Condition Assessment and Preservation Plan. Of particular note is the recommendation of "Restoration," for the Military Sentry Post, the Police Post, the Main Entrance Gateway, and the Main Entrance Sign Posts.

The Significance of Manzanar National Historic Site has to do with its historical association with the wartime evacuation and relocation of 117,000 persons of Japanese ancestry; a dramatic and significant event in American History. Manzanar is symbolic of this tragic episode in our history, and is a reminder that our country needs to honor its commitment to the concept of liberty and the rights of its citizens. The Period of Significance for the Manzanar National Historic Site is that time period when relocated residents occupied it – 1942 to 1945. All preservation activities described in this document are based on the Period of Significance.

Special effort has been made to identify, retain, and preserve the remaining historic fabric and Character Defining Features of the property, as these features are what give the property its architectural character and significance. Character Defining Features include visual and physical aspects that comprise the appearance of the property, such as the overall form and shape of the structure, materials, craftsmanship, decorative features; and the site and landscaping. These features can be lost or damaged by neglect, weathering and related deterioration, construction (rehabilitation, remodeling, or removal), and/or maintenance. Character Defining Features are discussed further in Section 2, "Site and Structure Descriptions."

The fact that the site is open to the public means that attention must be paid to issues pertaining to life safety, building codes, and other regulatory requirements, such as accessibility. (In the section on Visitor Use, the GMP states the following: "All visitor facilities would be designed to be accessible to people with physical disabilities."") But because the public is not allowed into the interiors of the structures (indeed, most of the structures do not have interiors), conformance with regulatory requirements is made easier. Recommended treatments in this document have been considered in terms of these issues, however, this Condition Assessment and Preservation Plan does not attempt to make detailed recommendations for conformance, as this work is beyond the scope and intent of this document.

Finally, no Cultural Landscape Report, Historic Structures Report, or Preservation Plan exists for these structures. While this Condition Assessment and Preservation Plan attempts to provide the necessary background information necessary to stabilize and preserve the structures, it is no substitute for such documentation. Because of this, certain assumptions had to be made about the history or construction of the structures. These assumptions were necessarily conservative – it is easier to retain a possible historic material or feature than it is to re-create it if it is lost.
The methodology utilized to perform the condition assessment at Manzanar National Historic Site included site visits and review of extant documentation on file in the Park. The IMSF-CAC Historical Architect made the initial site visit to consult with MANZ Staff, survey general conditions, and gather data necessary for the preparation of condition assessment cost estimates. During the subsequent visit the IMSF-CAC Historical Architect documented existing conditions through photography, handwritten notes and drawings. All features of the structures were inspected for deterioration and degradation. Existing conditions were noted for later processing, and conditions were ranked as good, fair, or poor and then given prioritized as defined in this document.

Samples of the paint on the Cemetery monument were taken and lab tested for lead— but the lack of large enough samples, and the inability to obtain samples from interior finishes, precluded testing of the woodwork at the Military Sentry Post and Police Post.

From the inspections, documentation, and laboratory test results, and bearing in mind the preservation and use objectives for the structures, treatments were identified and prioritized, and treatment recommendations were developed. From the prioritized recommended treatments, a list of Recommended In-House Inspection and Maintenance Tasks was developed for the MANZ personnel in charge of the maintenance to use as a guide for future actions taken at the site, once the treatment is implemented.

**E. ADMINISTRATIVE DATA**

- **Location:** Manzanar National Historic Site
- **Nearest city:** Independence, CA
- **County:** Inyo
- **Year Constructed:** 1942
- **Number of Components:** N/A
- **Construction Materials:** Stone, concrete, wood
- **Relationship to other Structures:** N/A
- **Overall Length:** N/A
- **Overall Width:** N/A
- **Owner/Manager:** Department of the Interior, National Park Service
- **Beneficiary:** National Park Service
- **Current Use:** National Historic Site with some interpretation
- **Open to the public?** Yes
- **Access:** From US Highway 395, approximately 5 miles south of Independence, CA
- **National Register Status:** Listed, National Historic Landmark
- **HABS Documentation:** CA2399, 1994

**F. PROPERTY RECORD INFORMATION**

Records related to this property have not been researched.

**G. FIELD SURVEY INFORMATION**

1. **Site Visit Dates:** March 14, and July 26, 2000
2. **Weather:** Clear, windy, hot
3. **Inspection Team:** Mark Mortier, Historical Architect – IMSF-CAC, Jeff Brown, Project Manager – IMSF - CAC
4. **Point of Contact in Park:** Debbie Bird, Chief, Acting Superintendent, MANZ
5. **Existing Condition of Structures:** Varies
2. SITE AND STRUCTURE DESCRIPTIONS
SITE

Manzanar National Historic Site is located in east-central California, in the Owens Valley, at the base of the eastern slope of the Sierra Nevada. The site is just west of US Highway 395, approximately 200 miles north of Los Angeles, between the towns of Lone Pine and Independence. Manzanar National Historic Site sits at approximately 4,000 feet above sea level, and is in the rain shadow of the mountains. The climate in this valley is harsh, with little rainfall, high temperatures, high winds, and dust storms.

The site consists of sand and gravel soils, with some large rocks, and sparse desert vegetation.

STRUCTURES

The NPS List of Classified Structures (LCS) lists 30 historic structures located on-site. Of these, there are four surviving intact structures, three of which are described in this report. These structures are the Military Sentry Post, the Police Post, and the Cemetery Monument. (The Auditorium, the other surviving intact structure, is being evaluated and treated in a separate report and project.) The other remaining structures are all remnants and ruins, such as building foundations, walls, site features, and landscape features.

One feature of note that occurs in several of the structures is the use of a tinted and textured stucco finish, applied over concrete to simulate wood grain and texture.

The following are individual descriptions of the three intact structures, as well as a general description of the remnants.

Military Sentry Post

Physical Description: The Military Sentry Post is a small pagoda-like rectangular stone masonry building. It was built in 1942. It has battered walls and a curved, hipped pitched roof reminiscent of Japanese architecture. Of note are stucco covered lintels and door sills, which are tinted and textured to look like wood. Associated with the Military Sentry Post are two “tree trunks,” built from concrete and finished with the same tinted and textured stucco finish noted above.

Foundation: Assumed to be poured concrete and/or stone (it is not visible).

Walls: Battered stone masonry, consisting of large irregular flat-faced fieldstones, with Portland cement mortar. As noted above, the lintels over the doors and windows, as well as the door sills, are concrete with a tinted and textured stucco finish to make them look like wood. Also, the original mortar joints appear to have been tooled.

Roof: Wood framed, using conventional 2” x framing, with 1” x decking boards spaced several inches apart, and cedar shingles. Tapered shims installed on top of the rafter tails produce the change in plane that makes the roofs appear to be curved. The rafters project out to form an overhang that has 1” x sofit boards, 1” x wood fascia, and wood molding at the top of the fascia. The shingles are 16” long, varying in width up to approximately 9 ½”, and are laid up with 3 ½” exposed. The shingles are nominally 5/16” thick, but the exposed surfaces have weathered to less than ½”. The starter course is three shingles thick, and overhangs the fascia by 2 ½”. The same shingles are also used to make the ridge caps, and are installed over asphalt felt, which is nailed over the shingles below.

Doors and Windows: The original doors and windows have been removed (although the frames, which appear to have been built from 2” x material still appear to be intact), and the openings have been closed up with Plexiglas and/or plywood panels installed into wood framing. There are no sub-sills in the stone walls, but the top surface of the stone walls at the window sills have a slight pitch to drain water away from the windows. The door and window frames have been painted, the same as the exterior wood trim.

Exterior Trim: The only exterior trim is at the roof overhang – the fascia boards and the soffit boards. All of the wood trim has been painted.

Interior: The interior is not readily accessible. What can be observed is that the underside of the roof structure is
left exposed into the interior, as is the inside surface of the stone walls. The floor is dirt, at grade (although there is some documentation that suggests that the building had a wood floor at one time).

Other Features:

There are two small ventilated gables at the ends of the top ridge, which are finished out with wood trim and wood lathing.

There is a stone masonry monument built against the front (east) wall, which contains a cast metal plaque noting the significance of the site. The character of the stonework is not as well crafted as the stone work in the building.

There are some remnants of old knob and tube electrical wiring on the interior, and conduits in the soffits where flood lights were located.

There is a small stone and concrete stoop on the outside of the south doorway.

As noted above, on either side of the building, there are concrete "tree stumps" built from concrete with a tinted, textured stucco finish which simulates wood.

Character Defining Features:

Siting
Scale and Massing of the building
Plan Shape/Form
Roofline, roofing materials, roof structure, details
Exterior wall construction
Tinted and textured stucco covered concrete lintels and sills
Door and window openings
Tinted and textured stucco covered concrete “tree stumps”

Existing Condition:

Overall, the building is in fair to good condition. It was mothballed in 1992, but adequate provisions were not made for ventilation, prevention of insect infestation, or to provide access to the interior. The roof was also repaired in 1992, by replacing damaged or missing shingles.

Foundation: The foundation is assumed to be in good condition. There is no evidence of settlement or failure, although the grading around the base of the building does appear to have some low areas, which may allow water to pond against the foundation.

Walls: The walls are also in good condition. There is some minor cracking of the mortar joints, and some evidence of re-pointing which was done in the past, using mortar that doesn’t match the original mortar (in color or texture). There are also some paint drips on the stone from painting the trim, but none of this merits any need for attention.

There is a conduit that has been drilled through the wall at the window sill on the north.

The stucco covered concrete lintels and sills are in fair to poor condition. They all show some evidence of weathering, erosion, cracking, and vandalism. In one or two places, the stucco has spalled off and the substrate is exposed.

Roof: The roof is in fair to poor condition. The shingles are weathered, eroded, cupped, cracked, and dried out. A couple of the shingles are missing, and there are a couple of obvious holes in the roof.

Doors and Windows: The original historic fabric of the doors and windows is missing, although the frames are still in place. The plywood and Plexiglas panels, which have been installed in the door and window openings, do keep the weather out, and restrict access, but they do not allow enough ventilation, nor do they keep bugs out.
And, they are very difficult to remove to gain access into the building. In addition, they detract from the architecture and character of the building.

Exterior Trim: The exterior trim is in fair to poor condition. It is weathered, warped, cracked, and dried out.

Interior: The interior of the building is in good condition. The only obvious problem is the infestation of insects, and the lack of ventilation.

Other Features:

The stone masonry monument built against the front (east) wall, which contains a cast metal plaque, is an alteration that does not match the quality of the original construction.

The concrete "tree stumps" built on either side of the building suffer from the same problems listed above for the concrete lintels and sills - they show some evidence of weathering, erosion, cracking, and vandalism, and in one or two places, the stucco has spalled off and the substrate is exposed.

NOTE: The painted exterior woodwork may be painted with lead based paint. However, due to weathering and restricted access to the interior, samples that could be lab tested for lead were unobtainable. Therefore, precautions should be undertaken when working on this work, with the assumption that there is lead based paint.
Military Sentry Post from East

Military Sentry Post from North
Military Sentry Post from West

Military Sentry Post from South
Detail at Military Sentry Post Roof from East

Detail at Military Sentry Post Roof from East
Detail at Military Sentry Post Roof Overhang

Detail at Military Sentry Post Roof Overhang
Detail at Military Sentry Post Mothballed Window - Plexiglas
Detail at Military Sentry Post Concrete Window Lintel with Stucco Finish

Detail at Military Sentry Post Concrete Door Sill with Stucco Finish
Detail at Military Sentry Post Stone Walls Showing Mortar Joints

Detail at Military Sentry Post Stone Stoop
Detail at Military Sentry Post Mothballed Window
Plaque at Military Sentry Post

Dirt Floor Inside of Military Sentry Post
Stucco Covered Concrete Tree Trunk at Military Sentry Post

Detail at Stucco Covered Concrete Tree Trunk at Military Sentry Post
Police Post

Physical Description: The Police Post is also a small pagoda-like square stone masonry building, very similar in construction to the Military Sentry Post, and built at about the same time. However, upon close inspection, it does not appear to be quite as well crafted as the Military Sentry Post—particularly the quality of the stonework and mortar joints. It has battered walls and a curved, hipped pitched roof reminiscent of Japanese architecture, as well as tinted/textured stucco covered concrete lintels and sills, made to look like wood.

Foundation: Poured concrete (Unlike the Military Sentry Post, a small portion of the foundation is visible).

Walls: Battered stone masonry, consisting of large irregular flat-faced fieldstones, with Portland cement mortar. Of particular note are the lintels over the doors and windows, as well as the door sills, which are concrete with a tinted and textured stucco finish to make them look like wood. Also, the original mortar joints appear to have been tooled.

Roof: Wood framed, using conventional 2" x framing, with 1" x decking boards spaced several inches apart, and cedar shingles. Tapered shims installed on top of the rafter tails produce the change in plane that makes the roofs appear to be curved. The rafters project out to form an overhang that has rough textured 1" x soffit boards cut around the stone walls, which run up behind the soffit, a two piece 1" x wood fascia, and wood molding at the top of the fascia. Some of the fascia looks like it has been replaced with treated wood. The shingles are 16" long, varying in width up to approximately 9 1/6", and are laid up with 3" exposed. The shingles are nominally 5/16" thick, but the exposed surfaces have weathered to less then 1/8". The starter course is three shingles thick, and overhangs the fascia by 2". The same shingles are also used to make the ridge caps, and are installed over asphalt felt, which is nailed over the shingles below.

Doors and Windows: The original doors and windows have been removed (although the frames, which appear to have been built from 2" x material still appear to be intact), and the openings have been closed up with plywood and/or Plexiglas panels installed into wood framing. There are no sub-sills in the stone walls, but the top surface of the stone walls at the window sills have a slight pitch to drain water away from the windows. The door and window frames have not been painted.

Exterior Trim: The only exterior trim is at the roof overhang—the fascia boards and the soffit boards. The exterior trim has not been painted.

Interior: The interior is not readily accessible. What can be observed is that the underside of the roof structure is left exposed into the interior, as is the inside surface of the stone walls. The floor is dirt, at grade (although documentation exists which suggests that the floor may have been wood).

Other Features:

There are some remnants of old knob and tube electrical wiring on the interior.

There is a stone and concrete stoop, which extends from the doorway on the east.

Character Defining Features:

Siting
Scale and Massing of the building
Plan Shape/Form
Roofline, roofing materials, roof structure, details
Exterior wall construction
Tinted and textured concrete lintels and sills
Door and window openings
Stoop
Existing Condition:

Overall, the building is in fair to good condition. It was mothballed in 1992, but adequate provisions were not made for ventilation, prevention of insect infestation, or to provide access to the interior. The roof was also repaired in 1992, by replacing damaged or missing shingles.

Foundation: The foundation is assumed to be in good condition. There is no evidence of settlement or failure, although the grading around the base of the building does have some low areas, which expose the foundation, and may allow water to pond against the foundation.

Walls: The walls are also in good condition. There is some minor cracking of the mortar joints, some evidence of re-pointing which was done in the past, using mortar that doesn't match the original mortar (in color or texture). There are also some paint drips on the stone from painting the trim, but none of this merits any need for attention; with the exception of one small area at the window sill on the south window, which does need to be re-pointed.

The stucco covered concrete lintels and sills are in fair to poor condition. They all show some evidence of weathering, erosion, cracking, and vandalism. In one or two places, the stucco has spalled off and the substrate is exposed.

Roof: The roof is in fair to poor condition. The shingles are weathered, eroded, cupped, cracked, and dried out. A couple of the shingles are missing, and there are a couple of obvious holes in the roof.

Doors and Windows: The original historic fabric of the doors and windows is missing, although the frames are still in place. The plywood/Plexiglas panels, which have been installed in the door and window openings, do keep the weather out, and restrict access, but they do not allow enough ventilation, nor do they keep bugs out. And, they are very difficult to remove to gain access into the building. In addition, they detract from the architecture and character of the building.

Exterior Trim: The exterior trim is in fair to poor condition. It is weathered, warped, cracked, and dried out.

Interior: The interior of the building is in good condition. The only obvious problem is the infestation of insects, and the lack of ventilation.

Other Features:

The grade at the stoop in the east has eroded and has exposed the sides and bottom of the stoop.

NOTE: The painted exterior woodwork may be painted with lead based paint. However, due to weathering and restricted access to the interior, samples that could be lab tested for lead were unobtainable. Therefore, precautions should be undertaken when working on this work, with the assumption that there is lead based paint.
Police Post from East

Police Post from North
Detail at Roof at Police Post

Detail at Roof at Police Post
Detail at Roof Overhang at Police Post

Detail at Roof Overhang at Police Post
Detail at Roof Overhang at Police Post

Detail at Roof Overhang at Police Post
Detail at Mothballed Window at Police Post - Plexiglas

Detail at Police Post Concrete Door Sill with Stucco Finish
Detail at Police Post Foundation

Detail of Damage to Mortar at South Window Sill at Police Post
Interior of Police Post
Cemetery Monument

Physical Description: The Cemetery Monument is a painted, stucco covered stone masonry obelisk, built in 1943. It has a rectangular base that rises three times into progressively smaller rectangles to a height of approximately 4'-9", with the monument projecting out of the top. The overall height of the monument is approximately 14'-6". There are Japanese text inscriptions indented into the stucco on the east and west sides. The indented portion is painted black.

Foundation: Assumed to be poured concrete (it is not visible).

Structure: Assumed to be stone Masonry, consisting of large irregular flat faced field stones, with cement mortar. The surface of the monument is covered with stucco and painted.

Other Features:

The monument is surrounded by 9 concrete "tree stumps" built from concrete with a tinted, textured stucco finish, which simulates wood. The thickness of the color coat is approximately 1/8". A metal chain connects the tree stumps.

There is also a textured, poured concrete slab located on the east side of the monument.

Character Defining Features:

Siting
Scale and Massing
Form
Exterior wall finish
Recessed Japanese script

Existing Condition:

Overall, the structure is in good condition.

Foundation: The foundation is assumed to be in good condition. There is no evidence of settlement or failure, and the grading and drainage seems adequate.

Structure: The structure is also in good condition. There are some small areas where the stucco and/or paint have deteriorated, or the stucco has spalled off, but this is minor. The yearly repainting/whitewashing appears to cover all of this up and protect it.

The concrete/stucco covered tree stumps are showing signs of weathering and improper maintenance. The weathering has led to deterioration of the stucco finish – most noticeably fading, erosion, and cracking. Some of the stucco is loose or has spalled off. Also, the structures have been painted at some time in the past, and the paint is very deteriorated.

Finally, the concrete slab on the east has a large crack right in the middle.

Note: The paint at the Monument was tested for lead, and although it contains minute amounts, it is not enough to be considered "lead based" or "lead containing." However, worker protection and environmental protection and cleanup would be needed if the paint is removed or disturbed. The waste from such a removal would not be considered hazardous, and could be disposed at a legal disposal site without special measures.
Cemetery Monument from East

Detail at Base of Cemetery Monument
Detail of Concrete Slab at Base of Cemetery Monument

Detail at Base of Cemetery Monument
Stucco Covered Concrete Tree Trunk at Cemetery Monument

Detail at Japanese Script Recessed into Stucco at Cemetery Monument
**Other Structures**

*Physical Description:* The other structures are primarily small structures, remains of larger structures which are no longer extant, or ruins. They are listed on the LCS, and are as follows:

<table>
<thead>
<tr>
<th>LCSID</th>
<th>Structure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>58669</td>
<td>Main Entrance Gateway</td>
<td>Small stone masonry piers, with cement mortar</td>
</tr>
<tr>
<td>None</td>
<td>Main Entrance Sign Posts</td>
<td>Wood posts with Stone Bases – sign has been removed</td>
</tr>
<tr>
<td>58673</td>
<td>Stone Planters</td>
<td>Small stone masonry planters, with cement mortar; some with cement parging on top of structure</td>
</tr>
<tr>
<td>58674</td>
<td>Stone Traffic Circle</td>
<td>Small stone masonry planter, with cement mortar and cement parging on top of structure</td>
</tr>
<tr>
<td>58672</td>
<td>Block 1 Storm Drain</td>
<td>Small stone masonry structure, with cement mortar and cement parging on top of structure</td>
</tr>
<tr>
<td>58675</td>
<td>Stone Masonry Object</td>
<td>Small stone masonry structure, with cement mortar, and tinted/textured stucco covered concrete “bench” on top (similar to “tree stumps” at Military Sentry Post and Cemetery Monument)</td>
</tr>
<tr>
<td>58678</td>
<td>Camp Director’s Residence Patio Walls</td>
<td>Stone masonry walls, with cement mortar</td>
</tr>
<tr>
<td>58677</td>
<td>Caucasian Recreation Club Patio Wall</td>
<td>Stone masonry walls, with cement mortar</td>
</tr>
<tr>
<td>58687</td>
<td>Hospital area Features</td>
<td>Stone masonry remains, some remains of concrete structures, and stone or concrete steps</td>
</tr>
<tr>
<td>58684</td>
<td>North Park Barbeques</td>
<td>Stone masonry structures, with cement mortar; and cement parging on top</td>
</tr>
<tr>
<td>58658</td>
<td>Picnic Area Barbeques</td>
<td>(Not found)</td>
</tr>
<tr>
<td>58689</td>
<td>Chicken Farm Incinerator</td>
<td>Small stone masonry structure, with cement mortar, and tinted/textured stucco covered concrete top (similar to “tree stumps” at Military Sentry Post and Cemetery Monument). Concrete trough and ancillary structures on side.</td>
</tr>
<tr>
<td>58690</td>
<td>Chicken Coop Foundations</td>
<td>Stone masonry structures, with cement mortar, and cement parging on top. Also various concrete foundations and slabs. Some of the structures have hand carved initials (presumed to be of the builders) in the parging or top of the concrete foundations.</td>
</tr>
<tr>
<td>58676</td>
<td>Concrete steps</td>
<td>(Not found)</td>
</tr>
<tr>
<td>58679</td>
<td>Stone Lined sidewalks</td>
<td>Concrete sidewalks with stones on sides. Some sidewalks have scored patterns in them</td>
</tr>
<tr>
<td>59696</td>
<td>Hospital Laundry Steps and Retaining Wall</td>
<td>Stone masonry foundation walls, with cement mortar; remains of concrete slabs, stone steps</td>
</tr>
</tbody>
</table>

(LCS listings for Gardens, Parking Lots, and other landscaping features are not addressed in this report)
Character Defining Features:

Siting
Scale and massing
Construction

Existing Condition:

General comments about the stone masonry structures are that they are all showing the effects of weathering and neglect, although some are in better condition than others. Some of them have deteriorated mortar joints, cracking, and loose or missing stones. Some of them have impact damage. And some of them have cement parging on the top of the structure, which has weathered, cracked, eroded, or spalled off. Many of these structures have also been impacted by vegetation growing on, in or near the structures. Finally, some of the structures are partially covered by earth, either from wind and water transportation, or activities of people.

The concrete structures also have been affected by many of the same concerns listed above. These structures show signs of erosion from wind and water, and many have significant cracking; as well as impact damage. Many of these structures have also been impacted by vegetation growing on, in or near the structures. Finally, some of these structures are partially covered by earth, from the same causes listed above.

Specific condition notes are as follows:

Main Entrance Gateway: These structures are in good condition.

Main Entrance Sign Posts: This structure is in good condition. However, the sign is missing.

Stone Planters: Generally, these structures are in good to fair condition.

Stone Traffic Circle: This structure is in fair condition.

Block 1 Storm Drain: This structure is in good condition.

Stone Masonry Object: Generally, this structure is in good condition, although the condition of the stucco covered concrete is fair to poor, showing the effects of weathering, fading, erosion, cracking, and spalling.

Camp Director’s Residence Patio Walls: This structure is in good condition. However, there is a tree, which has died and fallen on top of the wall.

Caucasian Recreation Club Patio Wall: This structure is in good condition.

Hospital area Features: These structures are in fair to poor condition. They are scattered about and hard to identify.

North Park Barbeques: These structures are in fair condition.

Picnic Area Barbeques: These structures were not found.

Chicken Farm Incinerator: These structures are in fair condition. The main structure itself is in fair to good condition, but the finishes (tinted stucco over concrete) are deteriorated.

Chicken Coop Foundations: These structures are in fair to poor condition. Like the Hospital Area features, they are scattered about and hard to identify. The inscriptions carved into the concrete and mortar are in fair to good condition. Some of the parging is weathered, cracked, or spalling off.

Concrete steps: These structures were not found.

Stone Lined sidewalks: These are in fair to poor condition.

Hospital Laundry Steps and Retaining Wall: These structures are in fair condition.
Main Entrance Gateway
Main entrance Gateway
Stone Traffic Circle
Stone Masonry Object
Camp Director's Residence Patio Walls

Caucasian Recreation Club Patio Walls
Hospital Area Features

Hospital Area Features
Hospital Area Features

North Park BBQ's
North Park BBQ's

Chicken Farm Incinerator
Chicken Farm Incinerator

Chicken Coop Foundations
Chicken Coop Foundations with Inscriptions

Chicken Coop Foundations with Inscriptions
Stone-Lined Sidewalks

Hospital Laundry Steps and Retaining Wall
Hospital Laundry Steps and Retaining Wall
4. LIFE SAFETY, CODE, AND REGULATORY CONFORMANCE
A. INTRODUCTION

Although NPS DO28 does not specifically require conformance with codes and regulations for historic structures, it states that historic structures are “generally expected to meet modern safety, access, and energy standards.” Further, it requires that historic structures provide accessibility for disabled persons that conforms to Uniform Federal Accessibility Standards (UFAS).

These structures are unusual, in that except for the Military Sentry Post and the Police Post, they are all remnants of structures, and only accessible and usable as site features (there are obviously no interiors). There are no electrical or mechanical systems. And, the two Post buildings are not used or open to the public - they are treated as site features. However, any work done to these structures should conform to code requirements, as this affects their structural performance, fire safety, and life safety.

Therefore, the following building codes and regulatory requirements apply to the structures in this report:

- Uniform Building Code (UBC), 1997
- Uniform Code for Building Conservation (UCBC), 1997
- California Historical Building Code (CHBC), 1998
- California Code for Building Conservation (CCBC), 1998
- Uniform Federal Accessibility Standards (UFAS), Section 4.1.7.

The basic code document affecting the Post structures is the UBC, which covers life and fire safety, use and occupancy, building limitations, types of construction and building materials, finishes, egress and accessibility, and structural design. There are also limited provisions for existing and historic buildings. Both the UCBC and CHBC provide more flexibility and alternatives for existing and historic buildings to meet requirements of the UBC. The UCBC has more detailed requirements for existing and historic buildings dealing with life safety, egress, construction and building materials, structural design and occupancy, as well as accessibility and seismic strengthening. The CHBC goes further with requirements for use and occupancy, fire protection, egress, accessibility, mechanical, electrical, and plumbing; and has more specific provisions for structural design and construction materials and methods. Finally, the CCBC has California specific requirements for seismic strengthening of un-reinforced masonry.

UFAS 4.1.7 specifically addresses accessibility for historic preservation projects, and allows some flexibility in meeting the general requirements of UFAS.

B. ANALYSIS

The following is a summary of the analysis of the code and regulatory requirements that affect the Military Sentry Post and the Police Post. This is based on the assumption that the buildings will continue to be maintained as they are now, without major alterations to the structure, occupancy, or features. As the buildings are not occupied or used, compliance with all of the provisions may not be necessary now (except for those provisions which directly affect the proposed work to be done), but may have to be considered in the future.

Military Sentry Post:
- Occupancy: B
- Construction Type: VN
- Gross Square Footage: 210
- Occupant Load Factor: 100 SF/person
- Occupant Load: 2 occupants
- Exits Required: 1

Police Post:
- Occupancy: B
- Construction Type: VN
- Gross Square Footage: 80
- Occupant Load Factor: 100 SF/person
- Occupant Load: occupants: 1
- Exits Required: 1
The following is a listing of the problems or requirements that may affect the modification or use of the building, and are recommended to be studied further:

Interior Finishes – Flame Spread requirements  
Egress: illumination, emergency lighting.  
Exits/Egress: Doors, swing, force, floor level, landings, and width.  
Exits: access, discharge.  
Accessibility: accessible route, egress/exiting, doors, swing, hardware, floor level, landings, width, approach, ramps, signage, access to building, storage, parking.  
Roofing: Class C roof covering  
Structure: Seismic upgrading  
Construction: Use of archaic materials and methods

There is flexibility in all of this if the building does not become unsafe or hazardous, or otherwise become less conforming than before work is done.  
Additions and other new construction must conform to the requirements.  
CHBC has special structural/seismic provisions for existing structures that have stood over time without distress to structure.

The only issue that affects the immediate design of the proposed work on these buildings is the requirement for a class C roof covering.
5. TREATMENT RECOMMENDATIONS
A. RECOMMENDED TREATMENT - GENERAL

Based on the preservation and use issues discussed in Part 1 (C) of this document, and the analysis of the on site observations, the recommended treatment for the structures described herein is as follows:

For the Military Sentry Post, Police Post, Entrance Gateway, and Entrance Sign – Restoration

For the other structures and features – Preservation

Within these broad categories, specific treatment recommendations were developed and prioritized, and are discussed below. Implementation of all restoration and preservation work will follow NPS D0-28, the Secretary of the Interior’s Standards for the Treatment of Historic Structures, and the associated Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

B. DEFINITIONS OF STANDARD TREATMENTS AND NOMENCLATURE

Definitions of standard treatments from the Secretary of the Interior’s Standards for the Treatment of Historic Structures, along with the associated Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings are included to aid in understanding the terminology for the proposed treatment of the structures.

1. THE FOLLOWING STANDARDS APPLY TO ALL TREATMENTS:

Use is monitored and regulated to minimize both immediate and long-term damage.

Use of destructive techniques, such as archeological excavation, is limited to providing sufficient information for research, interpretation, and management needs.

All other work that may affect resources is evaluated by an historical architect and other professionals, as appropriate.

All modification, repair, or replacement of materials and features is preceded by a sufficient study and recording to protect research and interpretive values.

New work, materials, and replacement features are identified, documented, or permanently marked in an unobtrusive manner to distinguish them from original work, materials, and features.

A proposed treatment project is initiated by the appropriate programming document, including a scope of work and cost estimate. Such projects include preservation maintenance as well as major treatment. No treatment is undertaken without an approved HSR or work procedure documenting the work, and Section 106 compliance.

A treatment project is directed by an historical architect and performed by qualified technicians.

Representative features salvaged from a historic structure are accessioned and cataloged.

All changes made during treatment are graphically documented with drawings and photographs.

2. PRESERVATION:

Preservation maintains the existing integrity and character of a historic structure by arresting or retarding deterioration caused by natural forces and normal use. It includes both maintenance and stabilization. Maintenance is a systematic activity mitigating wear and deterioration of a structure by protecting its condition. Stabilization involves reestablishing the stability of an unsafe, damaged, or deteriorating structure while maintaining its existing character. The following standards based on the Secretary of the Interior’s Standards for the Treatment of Historic Properties apply:

A historic structure is used as it was historically, or is given a new or adaptive use that maximizes the retention of historic materials, features, spaces, and spatial relationships. Where a treatment and use have not been
CONDITION ASSESSMENT and PRESERVATION PLAN
Manzanar National Historic Site

3. RESTORATION:

Restoration accurately presents the form, features, and character of a historic structure as it appeared at a specific period (in this case, the Period of Significance). It may involve the replication of missing historic features and removal of later features, some having cultural value in themselves. The following standards based on the Secretary of the Interior's Standards for the Treatment of Historic Properties apply:

A historic structure is used as it was historically, or is given a new or adaptive use that interprets the structure and its restoration period. Adaptive use of prehistoric structures is prohibited.

Materials and features from the restoration period are retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period is not undertaken.

Each historic structure is recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features from other structures, are not undertaken. Work needed to stabilize, consolidate, and conserve historic materials and features from the restoration period is physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
Materials, features, finishes, spaces, and spatial relationships that characterize other historic periods are documented prior to their alteration or removal.

Historic materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period are preserved.

Deteriorated features from the restoration period are repaired rather than replaced. Where the severity of deterioration requires repair or limited replacement of a historic feature, the new feature matches the old in design, color, texture, and where possible, materials.

Replacement of missing features from the restoration period is substantiated by archeological, documentary, or physical evidence. A false sense of history is not created by adding conjectural features or features from other structures, or by combining features that never existed together historically.

Chemical or physical treatments that cause damage to historic materials are not used.

Archeological and landscape resources are protected and preserved in place. If such resources must be disturbed, mitigation measures are undertaken including recovery, curation, and documentation.

Designs that were never executed historically are not constructed.

The following additional standards apply:

Archeological, documentary, or physical evidence is sufficient to permit accurate restoration with minimal conjecture.

Restoration is essential to public understanding of the cultural associations of a park.

Reinforcements required for stability of existing support systems and protective or code-required features (HVAC, electrical, security, fire protection, handicapped accessibility, etc.) are concealed whenever possible so as not to intrude upon or detract from a historic structure's aesthetic and historical qualities, except where concealment would result in the alteration or destruction of historically significant features, materials, or physical relationships.

4. DEFINITIONS

*Historic Property* – a district, site, building, structure, or object significant in American history, architecture, engineering, archaeology or culture at the national, state, or local level.

*Integrity* – the authenticity of a property's historic identity evidenced by the survival of physical characteristics that existed during the property's historic period.

*Character-Defining Feature* – Defined as a prominent or distinctive aspect, quality, or characteristic, of a historic property that contributes significantly to its physical character. Structures, spatial relationships, materials, finishes, vegetation, views, furnishings, decorative details, and objects may be such features.
C. TREATMENT RECOMMENDATIONS - SPECIFIC

The Treatment Recommendations which follow are prioritized to take care of the most critical needs first. The Recommended Treatments included here are only those necessary for the restoration and/or preservation of the structures – the Recommended Treatment for the life safety, code and regulatory conformance (including accessibility and seismic) would be generated upon detailed analysis and design of modifications to achieve this conformance.

What follows is a general structure-by-structure discussion of recommended treatments. Detailed Specifications and supplementary materials for this work are included in the Appendix.

Military Sentry Post:

The high priorities for this structure are the repair of the roofing and associated wood trim, repair/stabilization of the tinted/textured stucco covered concrete lintels, door sills, and tree stumps, restoration of the doors and windows, correction of deficiencies in the mothballing, and treatment of exposed wood work.

The cedar shingle roofing needs to be replaced, using shingles that match the existing shingles. At the same time, the roof trim needs to be repaired (as is possible) or replaced. Once the existing shingles are removed, the substrates can be inspected for damage, and repaired as is appropriate.

Next, the tinted/textured stucco covered concrete lintels and door sills, as well as the concrete tree stumps adjacent to the building, need to be repaired and stabilized.

The plywood/Plexiglas panels that were installed in the door and window openings as a part of the mothballing should be removed and replaced with new doors and windows, built to match the documented historical doors and windows.

Correction of the deficiencies in the mothballing, such as adding screening and sealing off holes in the structure, will also provide for better ventilation, and prevention of entry of insects and rodents.

Finally, all the exposed wood should be painted, taking precautions for possible lead in the existing paint that remains.

A lower priority, but minor in terms of execution, is to re-grade around the building to ensure positive drainage away from the foundation.

At this time, no treatment is necessary for the stone walls; nor is removal of the conduit in the window sill necessary.

One final consideration is whether to move the stone masonry monument and brass plaque to a location a little farther from the building – possibly off to the side or closer to the entrance.

NOTE: The painted exterior woodwork may be painted with lead based paint. However, due to weathering and restricted access to the interior, samples that could be lab tested for lead were unobtainable. Therefore, precautions should be undertaken when working on this work, with the assumption that there is lead based paint.

Police Post:

The high priorities for this structure are the repair of the roofing and associated wood trim, repair/stabilization of the stucco covered concrete lintels and door sills, restoration of the doors and windows, correction of deficiencies in the mothballing, treatment of exposed wood work, and correction of deficiencies in the grading.

The cedar shingle roofing needs to be replaced, using shingles that match the existing shingles. At the same time, the roof trim needs to be repaired (as is possible) or replaced. Once the existing shingles are removed, the substrates can be inspected for damage, and repaired as is appropriate.

Next, the stucco covered concrete lintels and door sills need to be repaired and stabilized.
The plywood/Plexiglas panels that were installed in the door and window openings as a part of the mothballing should be removed and replaced with new doors and windows, built to match the documented historical doors and windows.

Correction of the deficiencies in the mothballing, such as adding screening and sealing off holes in the structure, will also provide for better ventilation, and prevention of entry of insects and rodents.

All the exposed wood should be painted, taking precautions for possible lead in the existing paint that remains.

Finally, the site should be re-graded around the building to ensure positive drainage away from the foundation, and to cover the exposed portions of the foundation and stoop.

At this time, no treatment is necessary for the stone walls, except to repair/repoint the damaged mortar joint on the south window.

**NOTE:** The painted exterior woodwork may be painted with lead based paint. However, due to weathering and restricted access to the interior, samples that could be lab tested for lead were unobtainable. Therefore, precautions should be undertaken when working on this work, with the assumption that there is lead based paint.

**Cemetery Monument:**

The Cemetery Monument itself is not in any need of treatment. Continued annual re-painting maintenance should be sufficient.

The stucco covered concrete tree stumps need to be repaired and stabilized. The repair of these structures will also require the removal of the paint finish, which has been applied over the stucco.

The cracked slab is probably best left as is, unless the cracking becomes so serious that it creates a safety hazard, then it would probably need to be replaced.

**Note:** The paint at the Monument was tested for lead, and although it contains minute amounts, it is not enough to be considered “lead based” or “lead containing.” However, worker protection and environmental protection and cleanup would be needed if the paint is to be removed or disturbed. The waste from such a removal would not be considered hazardous, and could be disposed at a legal disposal site without special measures.

**Other Structures:**

A general comment about stabilizing the stone masonry structures is that most of them will require some treatment. This treatment may involve repair of loose masonry, repair or re-pointing of the mortar joints, and repair of the parging.

Also, removal of vegetation and site clean up is required for many of these structures. Attention should be paid to drainage, and removal of earth, which has built up around and over the structures.

Not much can be done for the concrete structures, except to remove the vegetation which is encroaching on them, correcting deficiencies in drainage, and removing earth, which has built up or over them.

One other critical treatment is the repair and stabilization of the tinted and textured stucco over concrete finish on some of the structures.

Specific condition notes are as follows:

**Main Entrance Gateway:** No treatment required

**Main Entrance Sign Posts:** Install new sign (which is being fabricated and delivered to the Park under a separate project), remove vegetation, stabilize stone masonry, stabilize wood posts.

**Stone Planters:** Remove vegetation, stabilize stone masonry

**Stone Traffic Circle:** Remove vegetation, stabilize stone masonry
Block 1 Storm Drain: No treatment required

Stone Masonry Object: No treatment required for the stone masonry portion; repair and stabilize the stucco covered concrete bench

Camp Director’s Residence Patio Walls: Remove vegetation, stabilize stone masonry

Caucasian Recreation Club Patio Wall: Remove vegetation, stabilize stone masonry.

Hospital area Features: Remove vegetation, stabilize stone masonry

North Park Barbeques: Remove vegetation, stabilize stone masonry

Picnic Area Barbeques: These structures were not found.

Chicken Farm Incinerator: Remove vegetation, stabilize stone masonry, repair and stabilize stucco covered concrete finish

Chicken Coop Foundations: Remove vegetation, stabilize stone masonry

Concrete steps: These structures were not found.

Stone Lined sidewalks: Remove vegetation, stabilize stone masonry

Hospital Laundry Steps and Retaining Wall: Remove vegetation, stabilize stone masonry
D. RECOMMENDED IN-HOUSE INSPECTION AND MAINTENANCE TASKS

Maintenance of any structure begins with scheduled inspections, and cyclical and routine maintenance. Scheduled inspections are the most basic form of maintenance and are critical in the long-term preservation of a structure. The inspection process is a method for identification of maintenance issues and should be carried out on an annual basis.

For recently preserved structures comprehensive inspections could be scheduled once every three to five years. Annual visual inspections, and inspections after major weather events would still be recommended. A beneficial aspect of this procedure is that problems identified during an inspection can be scheduled for treatment during the next maintenance cycle.

If the recommended preservation treatments are carried out, the annual maintenance will be routine in nature. Cyclical maintenance planning would allow for 3-5 year and 10-year cycles for recording maintenance activities such as re-painting, etc.

The regularly scheduled inspection is the tool for monitoring implemented treatments and for creating a record of the changes to the structure. It is also the primary means for monitoring during the post construction phase of a project. Inspection report forms should be developed to provide a checklist of features or elements of the structures, and the filled in forms should be retained to plan for future maintenance for the structures.

The following items will contribute towards the preservation of the structures on the site, and do not require the use of skilled preservation craftspeople, but rather may be carried out by those with a solid background in routine and cyclic maintenance activities.

Regular Inspection and Monitoring
Routine cleaning
Vegetation control
Maintaining roof, doors, windows, and site
Painting, caulking and sealing
5. RECOMMENDATIONS FOR FUTURE STUDY
A. HISTORIC STRUCTURE REPORT

Although this document fulfills some of the requirements of a Historic Structures Report (HSR), it is still recommended that an HSR be completed for the structures. The Historic Structure Report is a scholarly document that contains research specific to the individual structures and the site. This brief outline points out specific elements that a Historic Structures Report should contain. Graphic documentation is undertaken to record preservation treatment, provide a baseline for monitoring, aid in interpretation, support scholarly research and serve as a reference for repair or reconstruction.

These documents will also answer some of the questions that are unanswered in this Condition Assessment and Preservation Plan.

General Outline for the HSR

Part I General
Cover Page
Table of Contents
Executive Summary
Administrative Data

Part I. Developmental History
Historical Background and Context (Determines Period of Significance).
Chronology of Development and Use (Construction chronology/or structure morphology, material analysis from all components of structure).
Physical Description (Systematic accounting of all elements of the structure referencing the significance, ages, and condition).

Part II. Treatment and Use
Ultimate Treatment and Use (Defined through planning documents – if not, specific recommendations will be outlined as per draft plans.)
Requirements for Treatment (Outlines code compliance, life safety factors, Federal, State, and local laws, functional requirements.)

Part III. Record of Treatment
Technical Data and any Completion Reports
(Include any recent NPS related construction and outline for intended construction).

B. LIFE SAFETY, CODE, AND REGULATORY CONFORMANCE

The life safety, code, and regulatory conformance research and study done in this document has looked at the general overall requirements for the structures only, and made recommendations based mainly on stabilization and preservation, as well as correcting any glaring life safety problems. However, detailed recommendations dealing with certain aspects of the requirements (such as accessibility and seismic/structural safety) go beyond the scope of this document, and should be dealt with as a separate study and series of recommendations.

C. CULTURAL LANDSCAPE MANAGEMENT PLAN

The GMP recommends that a Cultural Landscape Plan be prepared to provide detailed guidance for the preservation and maintenance of the historic scene, including management of representative gardens, orchards, and other vegetation.
PROPOSED TREATMENTS FOR CLASSIFIED STRUCTURES
### PROPOSED TREATMENT
CLASSIFIED STRUCTURES
MANZANAR NATIONAL HISTORIC SITE

<table>
<thead>
<tr>
<th>STRUCTURE NUMBER</th>
<th>STRUCTURE NAME</th>
<th>TREATMENT</th>
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<tbody>
<tr>
<td>HS-01</td>
<td>Auditorium</td>
<td>Restoration/Adaptive Use</td>
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<tr>
<td>HS-02</td>
<td>Sentry House</td>
<td>Restoration</td>
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<td>HS-03</td>
<td>Police Post</td>
<td>Restoration</td>
</tr>
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<td>HS-04</td>
<td>Main Entrance Gateway</td>
<td>Restoration</td>
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<td>HS-05</td>
<td>Main Entrance Sign Posts</td>
<td>Restoration</td>
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<td>HS-06</td>
<td>NHL Plaque Monument</td>
<td>Preservation</td>
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<td>HS-07</td>
<td>Stone Planters</td>
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<td>Stone Traffic Circle</td>
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<td>HS-11</td>
<td>U-Shaped Masonry Structure</td>
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<td>Stone Masonry, Administration Area</td>
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<td>HS-13</td>
<td>Patio Walls, Camp Director’s Residence</td>
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<td>Patio Wall, Caucasian Recreation Club</td>
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<td>Garden- Block 9</td>
<td>Preservation/Possible Restoration</td>
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<td>Garden- Block 34</td>
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<td>HS-18</td>
<td>Cemetery Monument</td>
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<td>HS-19</td>
<td>Hospital Garden</td>
<td>Preservation/Possible Restoration</td>
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<td>HS-20</td>
<td>Hospital Complex Steps</td>
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<td>HS-21</td>
<td>Merritt Park</td>
<td>Preservation/Possible Restoration</td>
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<td>HS-22</td>
<td>North Park Barbecues</td>
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<td>Picnic Area Barbecue</td>
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<td>HS-25</td>
<td>North Park Road</td>
<td>Preservation</td>
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<td>HS-26</td>
<td>Chicken Ranch Boiler</td>
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<td>HS-27</td>
<td>Chicken Ranch Retaining Walls</td>
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<td>Concrete Steps</td>
<td>Preservation</td>
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<td>Stone-Lined Sidewalks</td>
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</tr>
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<td>HS-30</td>
<td>Main Entry Parking Area</td>
<td>Restoration</td>
</tr>
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</table>

Proposed treatment Tables for Classified Structures – From GMP
HAZARDOUS MATERIALS TEST REPORTS
CONDITION ASSESSMENT and PRESERVATION PLAN
Manzanar National Historic Site

ASSAIGAI
ANALYTICAL
LABORATORIES, INC.

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3332 Westgatewood Dr., Suite N • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820
127 Eastgate Drive, 212-C • Los Alamos, New Mexico 87544 • (505) 662-2555

Explanation of codes:
B = analysis detected in Method Blank
E = result is estimated
H = analyzed out of order time
N = tentatively identified compound
S = subcontracted
--- = see footnote

NATIONAL PARK SERVICE

Client: NATIONAL PARK SERVICE
Project: 0008065

Assaigai Analytical Laboratories, Inc.
Certificate of Analysis

QA Group Run Sequence CAS # Analyte Result Units Dilution Detection Limit Code Date
0008065-01A SWB46 1150A/7000 series AA-FL
M00173 MW.0005.1164-14 7439-82-1 Lead 46.8 mg/Kg 1 5 08/07/00

--- Sample specific Detection Limit is determined by multiplying the sample Dilution Factor by the Listed Reporting Detection Limit. ---
--- ND = Not detected, less than the sample specific Detection Limit. Results refer only to the item tested. ---

Page 1 of 1 Client Reports 2.0 Report Date 6/7/2000 2:34:41 PM

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