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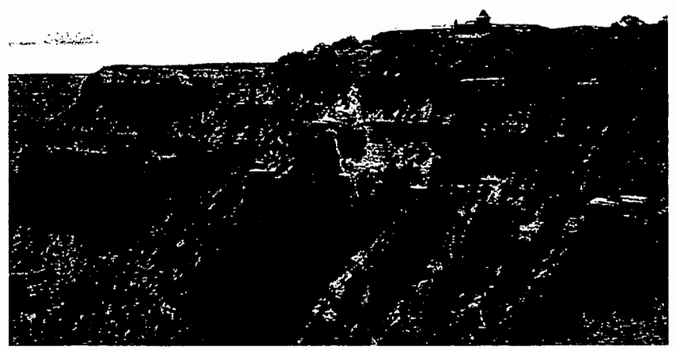

Grand Canyon Village
National Historic Landmark District
Cultural Landscape Report

Grand Canyon National Park
Arizona

January 2004

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Cover Images (clockwise from upper left) Kolb Brothers Studio (JMA 2001), 1935 aerial photograph of Grand Canyon Village (Grand canyon Museum Collection Catalog #9539), view of El Tovar Hotel (JMA 2001).

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Chapter One
Introduction

Chapter I • Introduction

Management Summary

The following constitutes a Cultural Landscape Report (CLR) that has been prepared by John Milner Associates, Inc. (JMA), formerly the Charlottesville, Virginia office of OCULUS, to further the National Park Service's (NPS) goals of better understanding and managing the Village Historic District landscape. The CLR addresses the physical development and existing character of the landscape as it has evolved since American explorers and settlers arrived at the South Rim. This information is presented in two chapters: a landscape physical history that documents the Village Historic District from 1848 until 2002, and a documentation of 2001 existing landscape conditions. The CLR also provides a preliminary statement of significance, a comparative analysis of existing and historic conditions, an evaluation of the landscape's integrity, and a treatment plan that proposes long-term management strategies for the park's cultural, historic, and natural resources.

The need for this CLR arose from the identification of proposed projects that could potentially alter the existing landscape and its associated cultural and historic resources. These projects are identified in the GRCA's 1995 General Management Plan (GMP) and CLR scope of work. These issues are described in more detail in Chapter V, Treatment.

The overall vision for the South Rim, including the Village Historic District,—as stated in the 1995 GMP—is to "allow visitors direct access to canyon panoramas and to offer a range of visitor experiences—from more social experiences in Grand Canyon Village to solitary experiences elsewhere along the rim.[1] The GMP discusses threats to this vision that include overcrowding, excessive vehicular traffic, the need for alternative transportation opportunities, potential damage to cultural and natural resources from development, and lack of visitor services. To address these threats, the NPS has proposed several projects that will affect the Village Historic District. These projects include the Heritage Education Center, Greenway system, Light Rail transit system, and conversion of several facilities from government or concessionaire use to public use.

In light of these threats and proposed projects, the purposes of this CLR are to provide a landscape history for the entire project area; to document and evaluate the significance, integrity, and condition of existing cultural landscape characteristics, including the identification and description of contributing and non-contributing landscape characteristics; and to develop a preservation strategy for the long-term management of the cultural landscape. The information within this CLR will be used by the NPS in the development of appropriate proposed actions for the Village Historic District and during the NEPA/106 process to aid with the determination of effects on the cultural landscape.

This CLR was developed by JMA and its consultant, History Matters, under the guidance of NPS park and regional personnel. In October 2000, JMA project personnel, including project manager Rob McGinnis, met with NPS park and regional personnel in the Grand Canyon Village on the South Rim to initiate work on the project. In March 2001, History Matters staff performed preliminary research for its 1848 to 2002 physical history documentation. In May 2001, JMA (then OCULUS) architectural historian Gina Haney and project designer Rachel Evans Lloyd visited the park and completed existing conditions documentation for the Village Historic District. JMA project designers Julie Basic and Adriane Fowler completed the remaining tasks within the scope of work to prepare the draft and final documents.

Numerous individuals from the NPS and GRCA were involved in the development of this CLR by supplying critical information, documents requested by JMA, and detailed reviews of draft versions of the report. These persons include Inter-Mountain Region Historical Landscape Architect Jill Cowley; GRCA Chief of Cultural Resources Jan Balsom; GRCA Project Manager Michael Terzich, LA; Denver Service Center Project Manager Paul Cloyd, PE/RA; GRCA Fee Demo Program Manager Shelley Mettlach, PE; and Denver Service Center AE Manager/Contracting Officer's Representative Karen Vaage, LA/RLA—all of whom provided review comments for various draft submissions and/or information that supported the preparation of this CLR. Several individuals provided JMA with information regarding on-going and proposed projects within the Village Historic District that helped to ensure the preparation of a more accurate and useful treatment plan. These persons included GRCA Project Management Team Leader Brad Traver, GRCA Historical Architect Robert Powell. Intermountain Support Office Architect and LCS Coordinator Sayre Hutchison and Denver Service Center Engineering Technician Tim Fields also contributed time and resources to this project.

1 U.S. Department of the Interior, National Park Service, *General Management Plan for Grand Canyon National Park* (Denver Service Center, 1995), 28.

Historical Overview

The Village Historic District is part of the larger Grand Canyon Village setting on the South Rim of the Grand Canyon in Arizona. For thousands of years, the South Rim and surrounding region have been the site of human occupation. European exploration began in the 1540s when Spanish explorers first viewed the giant chasm of the Grand Canyon. In the 1860s, American exploration continued with John Wesley Powell's trip down the Colorado River. Mining operations began in the 1870s marking the beginning of permanent Euro-American occupation of the region. When mining failed to bring substantial profit, due to low mine output and transportation difficulties, miners and other settlers turned toward tourism operations to earn money. Miners such as John Hance, Ralph Cameron, Buckey O'Neill, and William Bass built and operated tourist facilities including stagecoach lines, hotels, and tent cabins and camps.

In September of 1901, the Grand Canyon Railway, a subsidiary of the Atchison, Topeka, and Santa Fe Railroad (ATSF), completed its line between Williams, Arizona and the Grand Canyon. With increased accessibility available from the railroads, more and more visitors came to the South Rim generating a tourism boom. Between the years of 1901 and 1919, the ATSF and second subsidiary, the Fred Harvey Company tour operator, built numerous buildings and structures to make the rim a tourist destination and resort.

The San Francisco World's Fair was held in 1915. Because the Grand Canyon was in relatively close proximity to San Francisco and also near the route to the fair, visitation exploded at the South Rim during the fair. The U.S. Forest Service, steward of Grand Canyon operations in 1915, issued tourism permits to any and all livery, stable, and tourism operators willing to relieve the visitation pressure. The result was a messy, noisy, unregulated spate of development along the rim. This unplanned development was the impetus for future planning efforts in what would become Grand Canyon Village.

In 1919, the Grand Canyon was transferred to the NPS. The NPS was better equipped to handle developed landscapes and already had a staff of landscape architects and engineers in place who were familiar with principles of community planning and landscape architecture.

Although several plans were undertaken and issued by men like Aldo Leopold, Don Johnston, Frank Waugh, and Pierce Anderson, the master plans with the most and longest-lasting impact were those of Daniel Hull. Hull's 1921 and 1924 plans formed the "blueprint" for the majority of planning efforts and development within the park. Hull's plans, along with the plan for Yosemite Valley village, set a precedent for future national and state park planning.

Between 1933 and 1942, Civilian Conservation Corps (CCC) crews were located in the Grand Canyon Village. These crews had a major impact on the physical design and appearance of the Village. They constructed roads, buildings, sidewalks and paths, stone walls, headwalls, culverts, and a host of other features. Crews were also involved in revegetation efforts, transplanting of vegetation, wildflower plantings, landscaping with native plants, pest control, and eradication of invasive species.

In the years following CCC encampment and World War II, up until 2002, the Village continued to grow and change. New construction projects, such as the South Entrance Road and Thunderbird and Kachina Lodges, were undertaken. However, the current Village Historic District remained amazingly intact, as growth tended to occur outside of the Village Historic District boundary on undeveloped land. According to previous National Register of Historic Places nominations and preliminary findings of this CLR, the Village Historic District continues to maintain a high degree of integrity.

According to the Grand Canyon Village 1995 National Register of Historic Places nomination, the Grand Canyon Village is significant under Criterion A for its important association with the development of GRCA. The district is also significant under Criterion C as an example of community planning within a national park, and as a comprehensive illustration of NPS Rustic architecture and landscape architecture that harmonizes with nature. The historic district meets the criteria in the areas of significance of Community Planning and Development, Politics/Government, Architecture, Landscape Architecture, and Tourism. The district illustrates the origins, growth, and development of the village as the hub of tourist and transportation- related activities at the South Rim of the Grand Canyon during the historic district's period of significance (1897 to 1942).[2]

Additionally, the Village Historic District meets National Historic Landmark Criterion 1 for its association with the American park movement. The imitation of advanced town planning techniques in the design of national park villages and other developed areas was an essential step in the progress of planning and developing large scenic reservations for public use without unduly marring the scenery being made accessible. The development of NPS town planning techniques also influenced and was integrated into later "master planning" procedures, another milestone in the history of American park planning. The district also meets Criterion 4 as an exceptionally valuable example of American landscape architecture, specifically as the most significant example with the greatest integrity of NPS town planning.[3]

The period of significance of the district—as defined in the National Historic Landmark nomination and supported by CLR research—begins in 1897 with the construction of the Buckey O'Neill Lodge in 1897, the oldest standing structure built on the rim. The period of significance ends in 1942 when the CCC was disbanded and by which time the Village was largely complete.

2 The Criteria were adapted from the 1995 National Register nomination for the Grand Canyon Village.

3 The National Historic Landmark Criteria information was adapted from the 1997 National Historic Landmark nomination for the Grand Canyon Village.

Scope of Work and Methodology

Project Scope

In April of 2002, the NPS developed a scope of services for the Grand Canyon Village National Historic Landmark District CLR that included the following items:

Administrative Data

- preparation of an administrative data report;

Landscape History

- research of primary and secondary source materials relating to all cultural landscape elements within the project area;
- preparation of a narrative landscape physical history;
- preparation of landscape chronology maps;
- compilation of a bibliography;

Existing Conditions Documentation

- completion of field surveys to inventory and document existing conditions in the project area. Conduct additional fieldwork to prepare an accurate planning-level base map indicating existing topography and all built and natural features;
- completion of existing conditions photography where selected photographs will be incorporated into the text;
- undertake existing conditions photography in locations of historic ground photographs for the purpose of comparative analysis;
- preparation of an existing conditions photographic station point map documenting the location and orientation of photographs;

Landscape Analysis and Evaluation of Condition, Significance, and Integrity

- identification and description of the significance of the entire study area as a cultural landscape including preparation of a draft Statement of Significance and identification of Period(s) of Significance;
- evaluation and preparation of CLR sections assessing the condition of existing characteristics and features;
- identification of landscape features and characteristics that contribute to the significance of the cultural landscape and why they are contributing, non-contributing features, and those features that are no longer extant;
- labeling of contributing and non-contributing features on a site plan;
- discussion of building massing and form on the South Rim;
- documentation of the evolution of both native and non-native vegetation;
- preparation of a district-wide graphic analysis that clearly identifies the landscape characteristics of land use, spatial organization, circulation, and natural systems and features;
- preparation of a specific project graphic analyses for the Heritage Education Campus; Light Rail Station and Pedestrian Bridge; Bright Angel Trail and Backcountry Office; Victor Hall and Annex conversion; Maintenance Office conversion; Historic Train Depot rehabilitation; Possible Greenway Segment into the Village; and removal of Kachina and Thunderbird Lodges.

Treatment Recommendations

- development of district-wide treatment recommendations including an overall primary treatment and justifications for this treatment, more detailed recommendations that address surviving historic landscape features and systems, recommendations that address preservation and rehabilitation of surviving historic landscape features and systems, recommendations that address compatibility of new features proposed within the historic landscape, and recommendations that provide for continued local community and visitor use, accessibility, and interpretation and enhancement of visitor understanding of the significant cultural landscape;
- development of specific project recommendations that support specific park projects including evaluation of planning and design options developed for these projects and development of recommendations for maintaining landscape integrity and significant features within the project areas;

Project Methodology

The primary standard used to produce this CLR was *A Guide to Cultural Landscape Reports: Contents, Process, and Technologies* published in 1998 by the NPS. This guidance document details the content, format, and method appropriate for preparing a CLR. This CLR was also produced in accordance with the following documents:

- NPS Management Policies (2001);
- NPS Director's Order No. 28, Chapter 7;
- The Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes (March 1996); and
- The Secretary of the Interior's Guidelines and Standards for Archaeology and Historic Preservation.

Other documents used include National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation and The Chicago Manual of Style*, 14th edition. The methodology developed by the JMA team to complete each of the components of this CLR is described in detail below.

Background Research and Data Collection

History Matters focused on the post-1848 historic contexts of the site physical history chapter of the CLR. History Matter's research methodology was based on the parameters set by its agreement with JMA. Under this agreement, History Matters obtained research material from two sources: from JMA and from a five-day research visit made to the archives at the GRCA Museum in March 2001. As part of its research visit, History Matters undertook an overview tour of the Village Historic District.

JMA provided History Matters with site-specific maps and reports about the Grand Canyon that it had received from NPS sources. No historic maps related to Grand Canyon Village were included in this material. In addition, JMA provided History Matters with information about the Grand Canyon that it had gathered at the University of Virginia as well as secondary sources from its own library. At the GRCA Museum, History Matters gathered available primary and secondary documentary evidence, particularly planning documents, annual reports issued by GRCA superintendents, special reports issued by GRCA's management, architectural drawings, and comprehensive plans. The GRCA Museum does not contain complete sets of any of these documents. The preliminary conclusions outlined in the post-1848 site physical history of the Village Historic District are based completely on the documentary evidence gathered from these two repositories of research material.

Site Physical History

The site physical history was organized chronologically within six periods of landscape development. The description of each period is introduced by a narrative summary outlining the physical landscape developments known to have occurred during that period. Following each narrative is an annotated chronology of events organized by landscape characteristic.

Graphic illustrations are interleaved within the text to depict important events or provide representative examples of particular concepts. These photographs, maps, and drawings were obtained by History Matters during their research efforts.

Graphic chronologies were prepared to depict important changes to the landscape. They were based on review, evaluation, and comparison of primary map and graphic resources including photographs, historic master plans, historic narratives, and information provided in the site physical history. All maps exist as AutoCAD 2002 files, using an electronic base map provided by NPS and hand-drawn overlays scanned into electronic format and attached to each AutoCAD drawing. Features appearing over multiple periods were consistently located. Vegetative change over time is representative and incorporates educated assumptions.

Evaluation of Significance

Preliminary significance evaluations were undertaken primarily using existing National Register of Historic Places and National Historic Landmark nominations for the Village Historic District. Also utilized was Linda Flint McClelland's book, *Historic Park Landscapes in National and State Parks*, which provided the historic contexts for the project area and its associated resources and suggested the appropriate application of National Register criteria. The evaluation of significance included an identification of potential historic contexts associated with the site and park, review of the physical history to determine potential significance associated with all National Register criteria, identification of periods of significance based on park resources, and important periods of physical development.

Comparative Analysis of Historic and Existing Conditions by Landscape Characteristic

The comparative analysis included in Chapter IV was undertaken for each of the nine landscape character areas. The analysis is organized according to landscape feature, as described in Chapter III, Existing Conditions. The analysis was based on information gathered during existing conditions field-work and mapping, from the physical history prepared by History Matters, and from numerous historic images, maps, and plans. Comparative photograph pairs, a map of missing features, and a map of contributing and non-contributing features help to illustrate the findings of the analysis.

Identification of Contributing and Non-Contributing Resources

Through the development of the comparative analysis of historic and existing landscape features, three categories of features were identified:

- Contributing features (those surviving from the periods of significance);
- Non-contributing features (those that post-date the periods of significance); and
- Missing features (those features dating from the period of significance that are no longer extant)

Each inventoried, extant feature is labeled as contributing or non-contributing on the existing conditions base maps in Chapter III of this CLR. Missing features are identified within the comparative analysis and labeled as such on the period plans within Chapter II.

Treatment Plan

JMA followed guidelines presented in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* when identifying the appropriate treatment approach for the Village Historic District. This approach was chosen while taking into consideration the integrity and degree of proposed development within the Village Historic District and its landscape character areas.

Recommendations and guidelines within this CLR provide a preservation strategy for long-term management of the Village Historic District landscapes. They are based on an understanding of the significance, integrity, and condition of surviving landscape features as well as the knowledge that several new construction projects are planned for the project area. Recommendations and guidelines were prepared according to JMA's assessment of the landscape and also in reaction to specific project information provided to JMA by the NPS.

Recommendations were provided for the Village Historic District covering general and detailed concerns, issues, and opportunities. They were also provided for specific, proposed projects identified within the CLR scope of work. AutoCAD base maps, also used for the existing conditions documentation, illustrate concepts within the treatment plan.

Description of Study Boundaries

The South Rim of GRCA provides the setting for the Grand Canyon Village (*Figure 1*). Within the Grand Canyon Village, the Village Historic District was listed on the National Register of Historic Places in 1975 and later revised in 1982 and 1995 (*Figure 2*). The Village Historic District was listed as a National Historic Landmark in 1997. The CLR project boundary follows the National Historic Landmark boundary.

The boundary of the Village Historic District starts at the beginning of Hermit Road, in the northwest corner of the district. The boundary continues eastward along the Canyon rim. At Verkamp's Store, the boundary turns south to include the Original Superintendent's Residence and Public Garage. The boundary extends southward along the eastern edge of the NPS residential area. It wraps around service buildings and then turns northwest to parallel the western edge of Sunset Drive. The boundary continues west to include the elementary and middle schools and the southern edge of the Concessionaire residential area. The boundary turns north at Coconino Street and follows Village Loop Drive west and north to encompass the Maswik Cabins and former amphitheater site west of Village Loop Drive. Continuing north, the boundary edges the railroad yard to the east and then returns to the northwest corner of the boundary at Hermit Road.

The District encompasses two historic residential and service areas in its southern half: the NPS housing and service area east of the Center Road, and the original Fred Harvey Company's and Santa Fe concessionaire residential area on the west side. The elementary and middle schools are also within the boundary and situated west of Center Road. The Maswik camp area anchors the western section of the district. In the middle of the district are the railroad, utility, and visitor/community service areas. These areas will be formally defined and described in Chapter 3 of this report, under Existing Conditions.

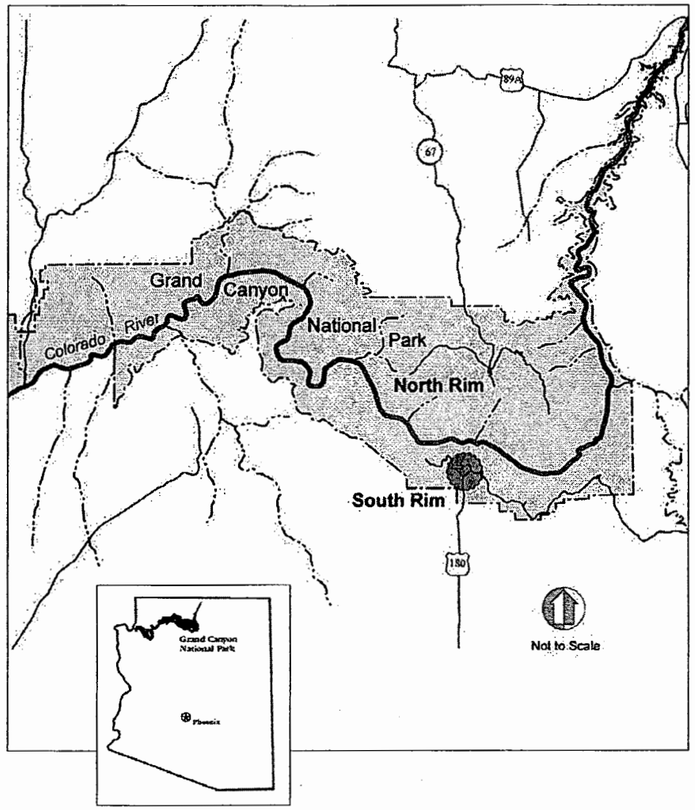


Figure 1.
Location Map

Source: John Milner Associates, Inc., 2003

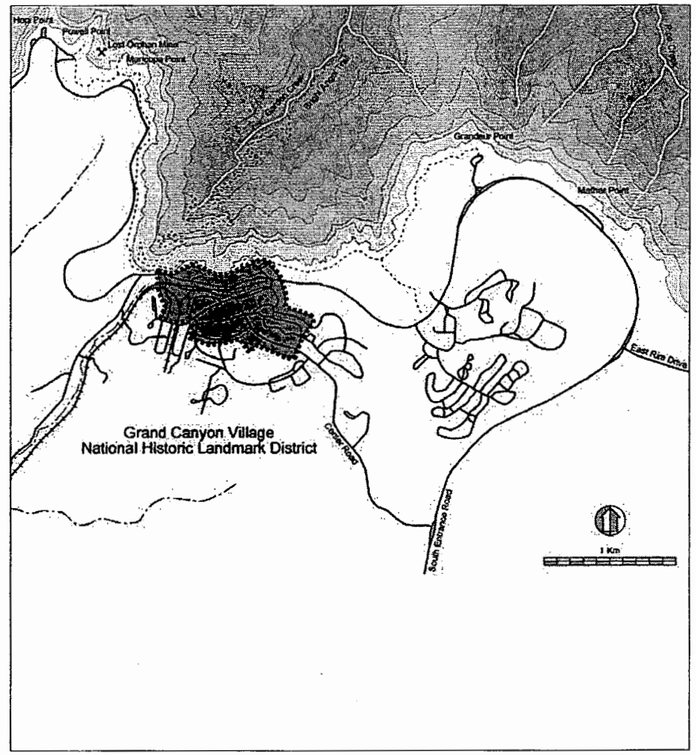


Figure 2.
Context Map

Source: John Milner Associates, Inc., 2003

Recommendations for Future Research

Given the highly developed historic character and design significance of the Village Historic District, the research and physical history documentation of this CLR focused upon the post-1848 timeframe, regarding the development of tourism-related facilities. Initially, the CLR team historians undertook research of the prehistoric to mid-nineteenth-century use and occupation of the Village region. The needs of the project, however, with respect to management of existing historic resources, the scope of research limitations, and the lack of comprehensive documentation of the pre-1848 period, restricted the physical history documentation.

To gain a better understanding of human use and occupation of the Village region, several sources may be consulted that were developed as part of specific cultural resource management initiatives. The Park's Chief of Cultural Resources should be consulted regarding the availability of documentation of landscape use and occupation for the period of time prior to 1848 and regarding any future ethnographic studies that may be undertaken that could provide relevant physical history information.

Additionally, preparation of this CLR raised a number of unanswered questions that merit further investigation. Resolution of these issues may potentially yield information critical to understanding the Village Historic District landscape and establishing well-grounded management and interpretive plans for significant resources dating from the period of significance, between 1897 and 1942. These research efforts should include the following:

Post-1942 and Mission 66 Resources

- Resources that remain from the post-1942 and Mission 66 eras between 1943 and 1966—should be identified and assessed for their potential significance as National Register of Historic Places-eligible properties. Resources dating from between 1954 and 1966 will soon meet the fifty-year cut-off date to be nominated to the National Register, or may have exceptional importance making them potentially eligible for the National Register under Criterion G, *Properties That Have Achieved Significance Within the Past Fifty Years.*

  If any of these resources within the Village Historic District boundary are found to be eligible for the National Register, NPS personnel might consider adding them to the current National Historic Landmark nomination. A new National Register nomination may also be created that addresses significant resources outside of the Village Historic District boundary.

Vegetative Surveys

- An obstacle that prevented more thorough understanding of how vegetation changed over time in the Village Historic District was lack of exhaustive historic and contemporary vegetative surveys. Efforts should be made to determine if any historic vegetative surveys, other than those mentioned in this CLR, exist. Efforts should also be made to survey and inventory the existing vegetative stock within the Village Historic District so that change may be monitored and evaluated in the future. Vegetation surveys should include the density of existing trees and shrubs; an inventory of existing vegetation species type within the district; the condition of the vegetation in terms of overall health of the vegetative stock; the general age of the vegetation, including specific ages of any exceptionally mature trees; and an identification of exotic and invasive species present within the district.

Ornamental Vegetation

- Further study should be directed toward creating a baseline of information regarding typical Rustic-style ornamental planting designs and principles used by NPS landscape architects and designers within the Village Historic District. Although information is available regarding the naturalistic and "harmonious" principles used by the NPS, little focus has been placed on ornamental planting design created to stand alone, rather than as an accent for buildings. It may be shown, however, that this type of planting design—ornament for ornament's sake—was not used during the height of Rustic-style design efforts.

Coordination of Building Numbers

- During the preparation of this CLR, it became clear that multiple building numbering systems were in use, by both the park and its consultants, that created a source of confusion among all parties. These numbering systems include the National Register of Historic Places and National Historic Landmark numbers, NPS-appointed numbers found on the Denver Service Center building lists, and the List of Classified Structures numbers. GRCA and NPS personnel, and their consultants, who work with these numbering systems should consider coordinating their efforts to produce a single, cohesive, and useful numbering system that meets the needs of all parties while clearly identifying each building or structure within the Village Historic District.

Future research should also utilize several archives that were not used during this project due to contract limitations. The bulk of NPS records (Record Group 79) are housed at the National Archives in College Park, Maryland. A second substantial collection of NPS records exists at the NPS Historical Collection in Harpers Ferry, West Virginia. Together, both archives contain the most comprehensive holdings of NPS-related materials. In addition, the collection at the Department of the Interior Library in Washington contains a complete historical set of annual reports for both the Department of the Interior and the NPS, as well as complete sets of NPS proceedings of official conferences. The Department of Agriculture Library in Washington D.C. contains a complete set of annual reports for the Department of Agriculture and the U.S. Forest Service, the agency that was responsible for the GRCA prior to 1919.

Photographic collections were searched on-line, when possible. Certain photographs were used in this document when permission was granted by the source agency. Others were used solely during document preparation efforts and may prove useful to future researchers or GRCA personnel. The archives searched on-line were the Fred Harvey Collection at Northern Arizona University; the Denver Public Library collections, the Denver Museum of Art collections, and the Library of Congress' American Memory collection. It is likely that these collections have additional resources related to the Village Historic District that have not yet been digitized.

Summary of Findings

According to guidelines provided by the National Historic Landmarks program, further discussed in Chapter IV of this CLR, the Village Historic District is a nationally significant part of American history under National Historic Landmark Criterion 1 for its association with the American park movement and under Criterion 4 as an exceptionally valuable example of American landscape architecture, specifically as the most significant and intact example of NPS town planning principles. Prior to its National Historic Landmark eligibility, the Village Historic District was listed on the National Register of Historic Places under Criterion A for its important association with the development of Grand Canyon National Park. The district was also significant under Criterion C as an example of community planning within a national park, and as a comprehensive illustration of NPS Rustic-style architecture and landscape architecture.

The Village Historic District possesses a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association for its period of significance (1897-1942). Although changes have occurred within the district since the period of significance that have adversely affected the integrity level, none of these changes have generated a substantial loss of integrity.

The recommended treatment approach is rehabilitation, because the Village Historic District retains a high level of integrity, yet must undergo sensitive alterations, due to continued use and changes in visitation and visitor and staff needs. Rehabilitation is defined as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[4] Although rehabilitation is the primary treatment approach, it must be implemented with an emphasis on preservation of historic and contributing features. This combined approach will allow park managers and personnel to protect significant cultural resources while implementing necessary new features and services.

The 1995 GMP states that the vision for the South Rim of GRCA, including the Village Historic District, is "to allow visitors direct access to canyon panoramas and to offer a range of visitor experiences—from more social experiences in the Grand Canyon Village to solitary experiences elsewhere along the rim."[5] The over-arching treatment concept for the Village Historic District is to offer recommendations that support the GMP-stated vision while making alterations and new additions into the Village Historic District landscape compatible with the existing historic character and, at the same time, preserving contributing cultural landscape resources. The following general treatment recommendations for the entire Village Historic District reflect the treatment concept and GMP vision for the South Rim:

- **Retain the overall pattern of spatial organization and circulation** created by the layout of streets, vegetation, and topography. Avoid altering street alignments, removing large masses of contributing woodland vegetation, or excessively altering the existing topography.

- **Assess the presence of non-native and invasive vegetation** throughout the Village Historic District. Remove areas of non-native and invasive vegetation that are detrimental to contributing and native vegetation. Revegetate the disturbed areas with native vegetation. Areas that are not as intensively affected may be monitored and controlled, if removal efforts are not necessary.

- **Maintain the historic zoning and separation of land uses** within the Village Historic District and as developed through master planning efforts of NPS landscape architects during the period of significance.

- **Retain all contributing buildings and structures.**

- **Document all features prior to their alteration or removal.** Create a baseline of information about the selected feature(s) through photographic, graphic, and written documentation to aid future researchers in their studies or promote accurate reconstruction or restoration efforts if the feature will be re-installed in the future.

- **Assess the potential National Register eligibility for features within and adjacent to the Village Historic District that post-date the period of significance**, yet might soon meet the fifty-year requirement or might be eligible under National Register Criterion G, "Properties That Have Achieved Significance Within the Last Fifty Years." These include features that were built during the Mission 66 and Parkscape U.S.A. development efforts between 1956 and 1972. Features that are found to be eligible for the National Register should be protected and maintained.

- **Minimize new construction** as much as possible. If new facilities must be introduced, site them in previously developed or disturbed locations, such as the former site of Babbitt's Store at the intersection of Village Loop Drive and Center Road.

- **Sensitively site new accessibility features** in order to retain the historic character of the Village Historic District and the feature which will be altered. Consider the visual impact, as well as the impact to historic fabric, the proposed construction will have on historic features.

- **Refer to the *Grand Canyon National Park Architectural Character Guidelines***, particularly the section entitled "Site Materials and Elements," for guidance concerning appropriate designs and materials for small-scale features.

- **Perform maintenance on all features**—both contributing and non-contributing.

Cultural landscape management, rehabilitation, and preservation strategies included in this CLR take into account the sometimes conflicting goals of protecting historic, cultural, and natural resources, and providing for the comfort, edification, and enjoyment of visitors. The treatment plan included in this CLR carefully considers the inter-relationships between all park resources. The findings of future investigations into the site's history should be utilized to update and evaluate this CLR to assure that management strategies continue to properly address the needs of the park's resources.

4 U.S. Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington D.C.: Heritage Preservation Services, 1996), 48.

5 National Park Service, *General Management Plan*, 8.

Chapter Two
Landscape Physical History

Chapter II: Landscape Physical History

Introduction

This chapter focuses on the physical development of the Grand Canyon Village National Historic Landmark District (Village Historic District) landscape from 1848 until 2003. This CLR acknowledges that significant periods of regional and local prehistory and history exist prior to 1848, yet the post-1848 chronology documents the years that were most vital to the development and evolution the Village Historic District as it appears today.

The following historical narrative divides the 1848 to 2003 timeline into separate periods whose events significantly affected the physical evolution and appearance of the cultural landscape. These periods are as follows:

- Exploration, Mining, and Tourism: Nineteenth-century Development at the South Rim, 1848-1892
- Federal Ownership and Early Park Planning, 1893-1924
- Grand Canyon Village Matures, 1924-1932
- The New Deal and Park Development During the Great Depression, 1933-1942
- World War II and Post-War Recovery, 1943-1955
- The Mission 66 Era to the Present Day, 1956-2003

Exploration, Mining, and Tourism: Nineteenth-century Development at the South Rim, 1848-1892

With the signing of the Treaty of Guadalupe Hidalgo in early 1848, the United States government gained all Mexican territory north of the Rio Grande River and increased its territorial holdings by 20 percent. This new American territory encompassed almost all of what is now the American Southwest including today's Grand Canyon Village National Historic Landmark District in Grand Canyon National Park (GRCA).

In the 1850s, Americans began to lead organized expeditions to explore and survey the Grand Canyon territory. In 1858, Lt. Joseph Ives led a U.S. Army steamboat expedition to the Colorado River. The chief scientist of the Ives expedition was John Strong Newberry, who later became one the founders of the modern study of American geology (*Figure 3*).

With the outbreak of the American Civil War (1861-1865), American exploration of the Grand Canyon environment essentially halted. In 1869, American-led exploration returned in full force when John Wesley Powell, a one-armed veteran of the Civil War and future founder of the United States Geological Survey (USGS), led a small expedition that completed the first successful run of the Colorado River through the Grand Canyon.[1] In 1869, another event significant to the future GRCA occurred when the western work force of the Central Pacific Railroad met that of the eastern Union Pacific Railroad at Promontory Point, Utah to drive the final railroad spike that joined the lines to form the first transcontinental railroad in the United States. In 1871, another Army Corps of Engineers expedition, this time led by Lt. George Wheeler, set out to conduct a geological survey of the land west of the 100th meridian (*Figure 4*). One member of the Wheeler expedition was photographer Timothy O'Sullivan who, in 1872, published the first photographs of the Grand Canyon.

John Wesley Powell's successful Grand Canyon run won him national acclaim. Building on this, he raised funds to lead a second expedition on the Colorado in 1871-72 (*Figure 5*). In 1873, invited by Powell, noted American landscape painter Thomas Moran visited the North Rim of the Grand Canyon and painted the soon-to-be-famous *Chasm of the Colorado* (*Figure 6*). This image was published and distributed widely, helping to broaden the fame of and spark the public's fascination with the Grand Canyon. In 1874, the U.S. Congress bought the painting to hang next to Moran's *Grand Canyon of the Yellowstone* in the U.S. Capitol. In 1875, Powell would publish his recordings of these Colorado River investigations in *Exploration of the Colorado River of the West*, followed in 1878 by his historic work on the need for land reform in the West, *Report on the Lands of the Arid Regions of the United States*.[2]

The linking of rail lines from both the eastern and western United States, the wide distribution of the first images of the Grand Canyon, and Powell's writings about his travels created an interest that would drive how development would occur in the Grand Canyon in the century that followed (*Figure 7*). By the beginning of the twentieth century, Americans would regard the Grand Canyon as a destination to view and experience rather than a hazardous chasm to be avoided.

1 Powell was a self-taught geologist who lost his right arm at the Civil War Battle of Shiloh.

2 In 1879, Congress created the USGS and named Powell as its first director.

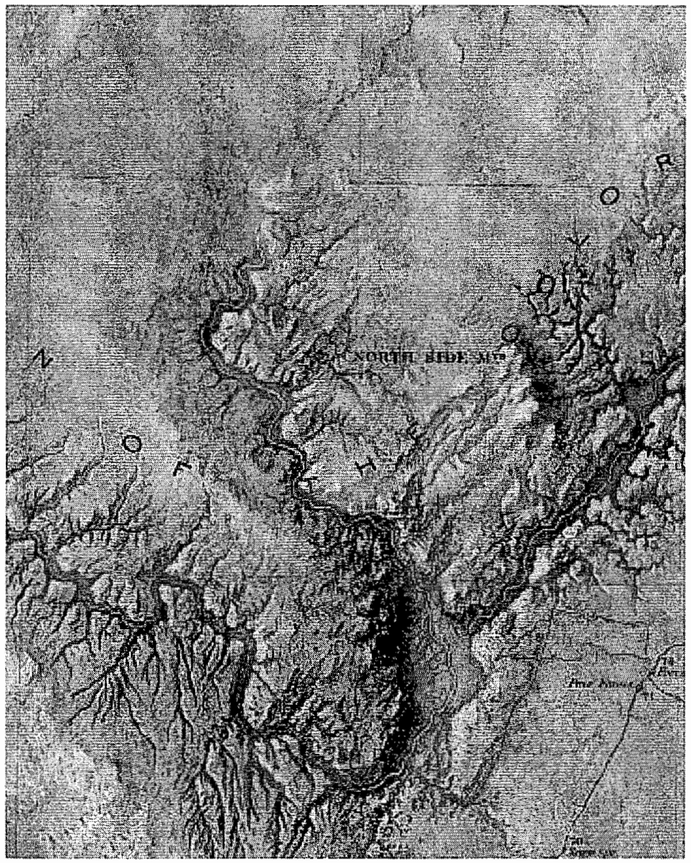


Figure 3. Detail from Rio Colorado of the West, explored by 1st. Lieut. Joseph C. Ives, Topl. Engrs. under the direction of the Office of Explorations and Surveys, drawn by Frhr. F. W. v. Egloffstein, topographer to the expedition, 1858. (Library of Congress Digital ID #g4302c np000062 http://hdl.loc.gov/loc.gmd/ g4302c.np000062)

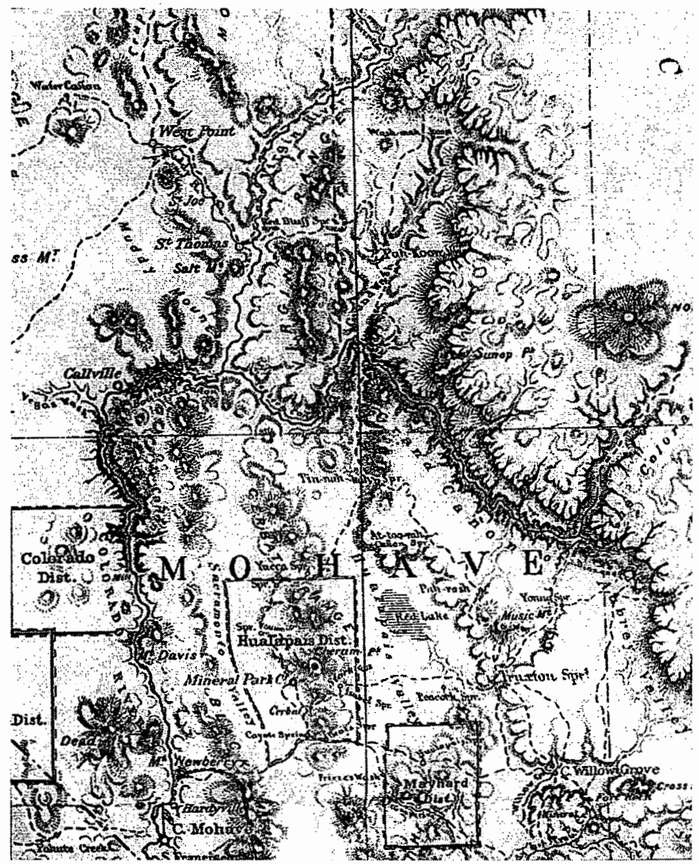


Figure 4. Detail, Explorations and Surveys South of Central Pacific Railroad. War Department, Preliminary Topographical Map. George M. Wheeler, 1871.

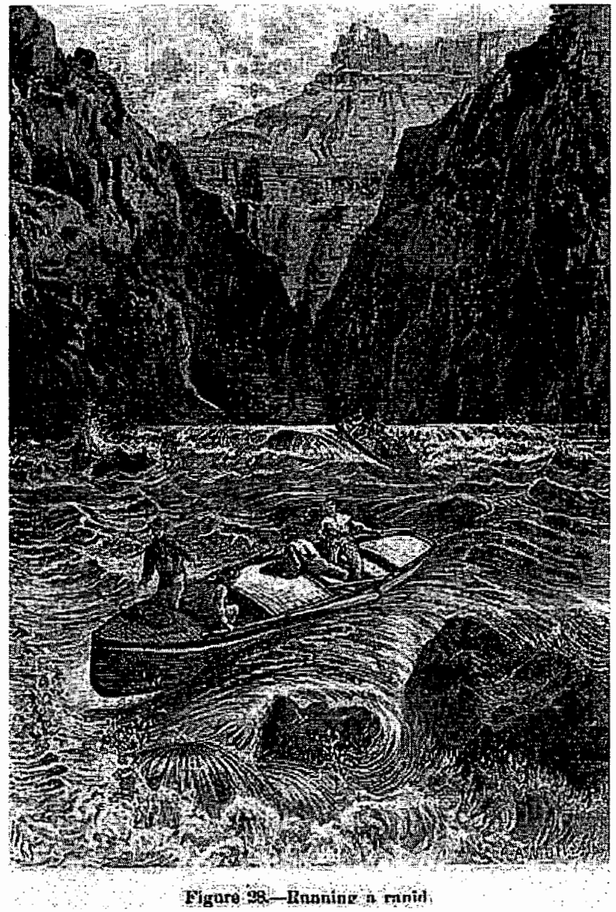


Figure 28.—Running a rapid.

Figure 5. "Running a Rapid," engraving by R.A. Muller illustrating John Wesley Powell's second Colorado River expedition, 1875. (John Wesley Powell Photographs, Grand Canyon National Park Museum Collection Catalog #17262.)



Figure 6. Thomas Moran, "Chasm of the Colorado," 1873-74. (Collection of the Department of the Interior Museum, Washington, DC.)

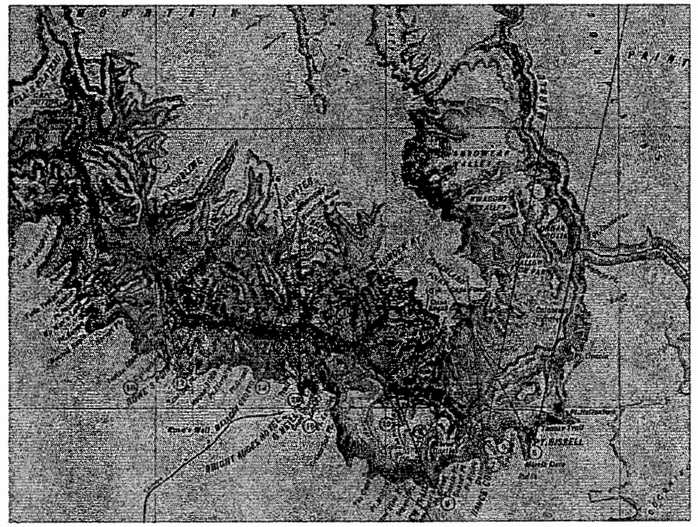


Figure 7. Underwood & Underwood's map, "Grand Canyon of the Colorado, Grand Canyon Tour, Map #2," 1904. Map shows location and extent of stereographic views of the area published. (Library of Congress Geography and Map Division, Washington, D.C., Call # G4332.G7 1904.U5 TIL.)

Mining, Tourists, and the Santa Fe Railroad Come to the South Rim

In the 1870s, several copper mining districts were developed in areas close to the Grand Canyon, including Grand Wash Cliffs, Mt. Trumbull, and the Grand Gulch Mine. In the 1880s, several mines were established near the western edge of the Grand Canyon, but anticipated mining riches within the canyon itself never materialized.[3] Despite the hundreds of mining claims in and around the canyon, marginal mines and inaccessibility stymied large-scale mining.

By the mid-1880s, however, prospectors like Capt. John Hance chose to make their homes at the canyon. These pioneers supported themselves by entertaining tourists. Hance built a cabin east of Grandview Point where visitors could stay, and built trails into the canyon which he used to guide tourists below the South Rim.[4] William W. Bass, another miner turned tourist guide and promoter, established a camp facility near Havasupai Point on the South Rim. Bass built a wagon road to his camp from Ash Fork, Arizona and ran a stage line that conveyed tourists to the rim. In 1896, James W. Thurber built the Bright Angel Hotel, later renamed the Bright Angel Lodge, at the present site of Grand Canyon Village, and extended a stage road from his other tourist camp at Grandview Point to the new hotel. In the mid-1890s, local prospector William "Buckey" O' Neill occupied a log cabin—O'Neill's Camp—near the head of the Bright Angel Trail (*Figure 8*).[5]

Five years earlier, the Santa Fe Railroad had published its first promotional booklet on the Grand Canyon, and thus began implementing its plans to bring travelers in the Southwest to the Grand Canyon (*Figure 9*).[6] In 1896, as part of this effort, the Santa Fe purchased the rights to one of Thomas Moran's later paintings entitled Grand Canyon. The railroad made color reproductions of the painting that were displayed in railroad terminals across the country.[7]

On September 17, 1901, the Santa Fe Railroad completed tracks from Anita, Arizona to the South Rim and inaugurated service to the Grand Canyon, initiating regular rail service to the Village.[8] Within the next ten years, nearly fifty buildings, both permanent and temporary, sprang up near the railroad's Grand Canyon terminus. Included among these was the photography studio that brothers Ellsworth and Emery Kolb built directly on the rim in 1904.[9] In January 1905, the railroad-sponsored luxury resort hotel, the El Tovar, designed by architect Charles Whittlesey, opened (*Figure 10*). The El Tovar's interior was designed by Mary Elizabeth Jane Colter. Soon after, Colter designed her first building: the Fred Harvey Company's Hopi House, located just east of the El Tovar Hotel.[10] In 1906, John G. Verkamp built a curio store to cater to tourists who were visiting the rim. In 1910, the Babbitt Brothers of Flagstaff, Arizona built a general store and a grocery at the rim. The Grand Canyon—specifically what developed into the Grand Canyon Village on the South Rim—was becoming a premier American tourist destination.



Figure 8. Early photograph of Bright Angel Camp on the South Rim (undated). (Fred Harvey Collection, Cline Library, NAU; AZ 326 Box 2, Folder 1, Print 2-1-4)

3 Donald J. Hughes, *In the House of Stone and Light: Introduction to the Human History of the Grand Canyon*, (Grand Canyon, AZ: Grand Canyon Natural History Association, 1978), 47.

4 Michael Anderson, *Living at the Edge: Explorers, Exploiters and Settlers of the Grand Canyon Region*, (Grand Canyon, AZ: Grand Canyon Natural History Association, 1998), 59. Grandview Point is approximately fourteen miles east of Grand Canyon Village.

5 O'Neill's cabin is the only structure from that period that still exists in Grand Canyon Village.

6 Kathleen L. Howard and Diana F. Pardue, "Promoting the Southwest in Pictures and Print," in *Inventing the Southwest: the Fred Harvey Company and Native American Art* (Flagstaff, AZ: Northland Publishing Company, 1996), 90.

7 The Santa Fe later hired Moran to produce more paintings of the Southwest, which the railroad used to promote their tourist routes and destinations; Ibid., 95-96.

8 The first automobile to be driven to the Grand Canyon arrived just three months after the Santa Fe; See Anderson, *Living at the Edge*, 81.

9 Anderson, *Living at the Edge*, 94-95.

10 The Hopi House was the first among Colter's eight buildings that would be built on the South Rim. The Fred Harvey Company operated the Santa Fe Railroad's hotel and railroad concessions, including those at El Tovar.

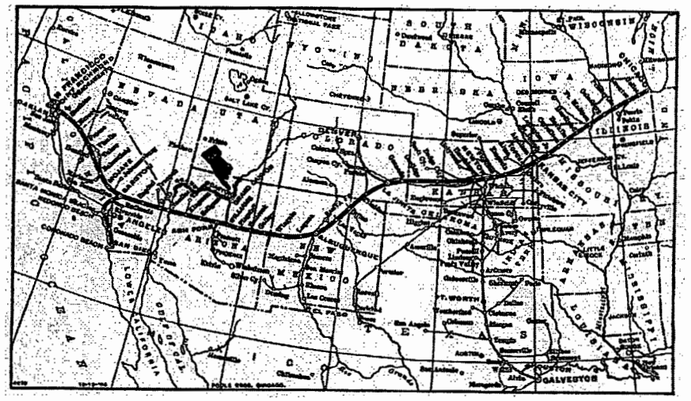


Figure 9. Map of Santa Fe System Lines. This map was included in a promotional booklet published shortly after the opening of the railroad's El Tovar Hotel at the Grand Canyon in 1904. (Grand Canyon Museum Collection Catalog #15781)

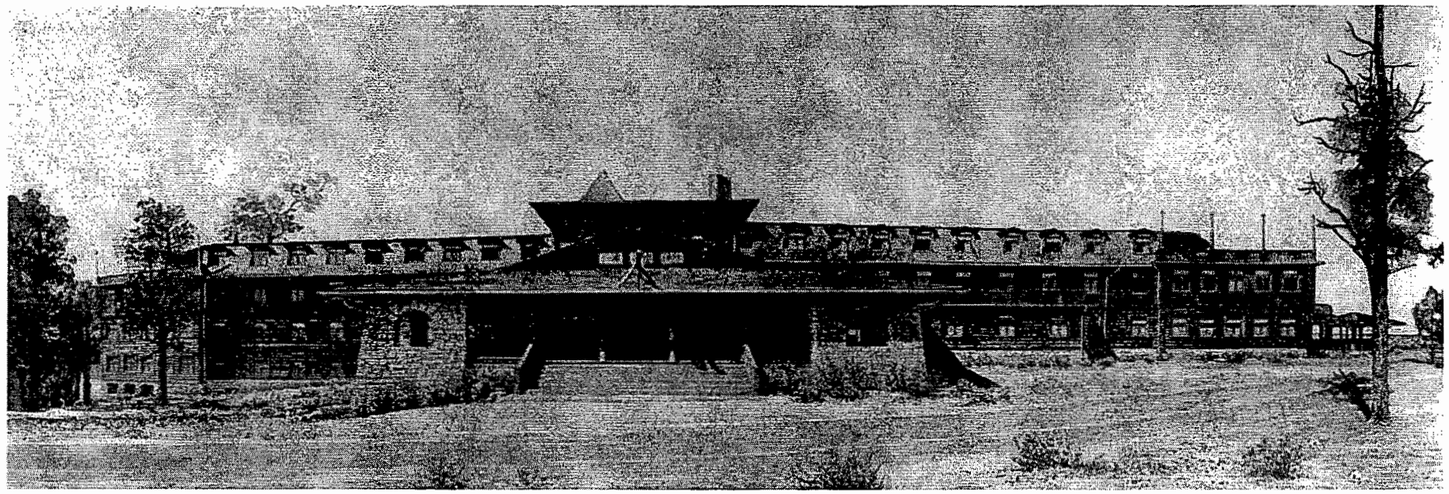


Figure 10. Panoramic photo of the eastern façade of the El Tovar Hotel, 1904. (Grand Canyon Museum Collection Catalog #9835)

Chronology by Landscape Characteristics, 1848-1892:

Land Use and Activities

Early Settlement	1884	Pioneer miner John Hance settled in a log cabin that he built at Grandview Point, approximately fourteen miles east of the present site of Grand Canyon Village. In addition to prospecting and mining, Hance developed his property as a tourist destination that later became known as the Hance Hotel. Hance built trails into the canyon and guided tourists below the rim.[11]
Early Tourism Initiated	1884	Philip and William Hull, early sheep ranchers at Grand Canyon, conveyed the first tourists into the canyon near Grandview Point in 1884.[12] Hance had built the canyon trail to facilitate his prospecting activities.[13]
Mining	1889-1891	Between 1889 and 1891, Louis D. Boucher, a Canadian prospector, arrived near the area of today's Grand Canyon Village. Prospecting over the Coconino Plateau and on the Tonto Platform below the rim, he eventually established a homestead beneath the rim, approximately nine miles west of the Bright Angel Fault at Dripping Springs. There he built several trails that led down to the Colorado River. Boucher lived alone and later became known as the "Hermit," after which today's Hermits Rest is named.[14]
W.W. Bass Camp Established	1890	William W. Bass, a miner-turned tourist guide and promoter, established a camp facility on the South Rim near Havasupai Point, approximately twenty-five miles west of the present site of Grand Canyon Village. He built a wagon road from Ash Fork, Arizona to his property, and ran a stage line that conveyed tourists to the rim.[15]
Prospecting Near Village Site	1890-1891	New York prospector Daniel Lorain Hogan arrived at the South Rim in 1890. He initially prospected along the Bright Angel Fault in the inner canyon. He and partners Jeffrey Sykes and Charles McLane built a winter shelter at Indian Garden. In 1893, Hogan filed the Orphan Copper claim with partner Henry Ward. The Orphan Mine was located below Maricopa Point just two miles west of the present-day Village.[16]
Tourism Promotion Begun	1892	The Santa Fe Railroad (the precursor to the AT and SF Railroad) published its first promotional booklet on the Grand Canyon in 1892.[17]

11 U.S. Department of the Interior, National Register of Historic Places, *Grand Canyon Village*, by Michael P. Scott, inventory-nomination form (Washington, DC: September 21, 1995).

12 Anderson, Living At the Edge, 59.

13 Ibid., 61.

14 Ibid., 76-77.

15 Ibid., 44.

16 Ibid., 77-78.

17 Howard and Pardue, Inventing the Southwest, 90.

Response to Natural Environment

Hydrology, Geology, Climate

Since 1848, development in and around the Grand Canyon has been predicated on the availability of water. The hydrologic and geologic character of the region makes water resources scarce. The Coconino Plateau, which extends from the South Rim of the canyon and gently slopes southward to the San Francisco Peaks, contains no perennial streams, and gets as little as seven inches of annual precipitation. In addition, the extreme geology and landforms make access to the springs that appear along the canyon walls difficult.

In the 1850s, when United States road surveyors located the east-west wagon road through Arizona, they avoided the arid Coconino Plateau, and instead chose a route that straddled the 35th parallel that followed a string of springs.

The Grand Canyon Village occupies a very arid region where initially water had to be obtained from distant sources or else catchment tanks had to be built to store rainwater. A series of natural slopes, swales, and washes in and around the Village site provided limited areas for rain runoff, where, during wet periods, dams could be built to create water basins.

Circulation Networks

A and P Railroad Completed	1882	In 1882, the Atlantic and Pacific Railroad line was completed to Williams, Arizona.
Wagon Road Constructed	1885	A seventy-three-mile-long wagon road was constructed from Flagstaff to Hull Ranch and on to John Hance's cabin at Grandview Point in 1885. This route, approximately nine miles east of today's Grand Canyon Village, would soon become the main tourist approach to the canyon.[18]
Stage line Inaugurated	1892	A regular Flagstaff-to-Grandview stage line was inaugurated in 1892. The line was run by Philip and William Hull who had maintained a cabin and sheep ranch near Grandview since the early 1880s.[19]
A and P Railroad Stage Line Commenced	1892	The Atlantic and Pacific Railroad inaugurated a thrice-weekly stage line to Grandview over the Flagstaff wagon road.[20]

Vegetation

Grazing Impacts	1880s–1930s	Prior to the erection of sufficient fencing around the Park boundary in the 1930s, the grazing of livestock impacted the density and types of vegetation in and around Grand Canyon Village.

18 Anderson, *Living At the Edge*, 59.
19 see *Chronology by Landscape Characteristic: 1848-1892*, "Land Use" section, 1884.
20 Anderson, *Living At the Edge*, 64.

Federal Ownership and Early Park Planning: 1893 -1924

In 1893, President Benjamin Harrison established the Grand Canyon National Forest, bringing all territory in and immediately adjacent to the Grand Canyon under the purview of the Federal government. In 1905, all U.S. forest reserves were transferred from the Department of the Interior to the Department of Agriculture's (USDA) Division of Forestry, the precursor to the U.S. Forest Service. The new division was led by Gifford Pinchot, a noted conservationist and close political ally of President Theodore Roosevelt. In 1903, Roosevelt himself visited the Grand Canyon and stated what would be the guiding principle, and contested ideal, of the Grand Canyon in the twentieth century. He declared that the Grand Canyon was a destination of singular national importance.

> The ages have been at work on it, and man can only mar it. What you can do is to keep it for your children, your children's children and for all who come after you, as one of the great sights which every American, if he travels at all, should see.[21]

During this period, Pinchot and Roosevelt developed a national forest policy with which they attempted to chart a middle course between the timbering of national forests for commercial purposes only and the desires of those such as Sierra Club founder John Muir, who wished to exclude government-owned forests from the national economy. In 1906, Roosevelt issued a presidential proclamation making the entire Grand Canyon a Federal forest preserve. In 1908, Roosevelt, again by presidential proclamation, created the Grand Canyon National Monument (*Figures 11, 12*). In less than ten years, one implication of Roosevelt and Pinchot's policy could be seen in the rapidly rising number of visitors to the Grand Canyon. Soon, the Federal government's key task at the Grand Canyon was to understand how to accommodate visitors. To do so, they turned to the nascent field of planning. These efforts had a direct effect on the future Grand Canyon Village.

Early Park Planning at Grand Canyon Village

In 1909, the U.S. Forest Service developed "A Working Plan For Grand Canyon National Monument." Written by District Forest Examiner W.R. Mattoon, the document outlined a general management and development plan for the Grand Canyon National Monument. Mattoon recommended extending the monument's boundary, adopting a fire protection plan, developing a scenic drive along the rim, regulating automobile traffic, constructing shelters and seating along the rim, creating tourist campgrounds, and constructing additional roads and trails to provide more public access.[22] In 1910, the Forest Service followed its "Working Plan" with a document titled "A Townsite Plan for Grand Canyon National Monument" (*Figure 13*). Also written by Mattoon, the document detailed plans to develop a townsite at the railroad's terminus, then known merely as "Grand Canyon."

In 1915, the World's Fair was held in San Francisco, California and Grand Canyon National Monument received more than 100,000 visitors, as many travelers incorporated a visit to the Grand Canyon into their World's Fair trip. The Forest Service's inability to handle so many visitors accelerated Federal planning efforts on the South Rim.[23] Early surveys of the Village show a place in disarray, with meandering roads and scattered buildings (*Figure 14*). In 1916, Mattoon's successor as Forest Supervisor, Don P. Johnston, in collaboration with forest examiner Aldo Leopold, completed a revised plan for the Village of Grand Canyon. They proposed using a system of land-use zones that they hoped would allow visitors to avoid the less attractive services and industrial activities at the canyon. In 1917, Johnston and Leopold refined the plan to include seven separate zones, each containing different uses that would be regulated by a specialized set of guidelines.[24]

In 1918, the Forest Service hired prominent landscape architect Frank Albert Waugh (1869-1943) to develop an even more comprehensive plan which, when published later that year, was formally titled "A Plan For the Development of the Village of Grand Canyon, Arizona." Waugh chaired the University of Massachusetts's Division of Horticulture—later the Division of Landscape Architecture—at Amherst. He influenced landscape architectural design through the publication of numerous books and articles, including his Book of Landscape Gardening and The Natural Style of Landscape Gardening. In his writings, Waugh developed his theory of the "natural style" which historian Linda Flint McClelland has described as being dependent on "a close study of nature for practitioners and adherence to the principles of composition followed by nature."[25] Indeed, McClelland asserts that "Waugh's unique contribution to American literature was his introduction of an ecological approach to landscape gardening."[26]

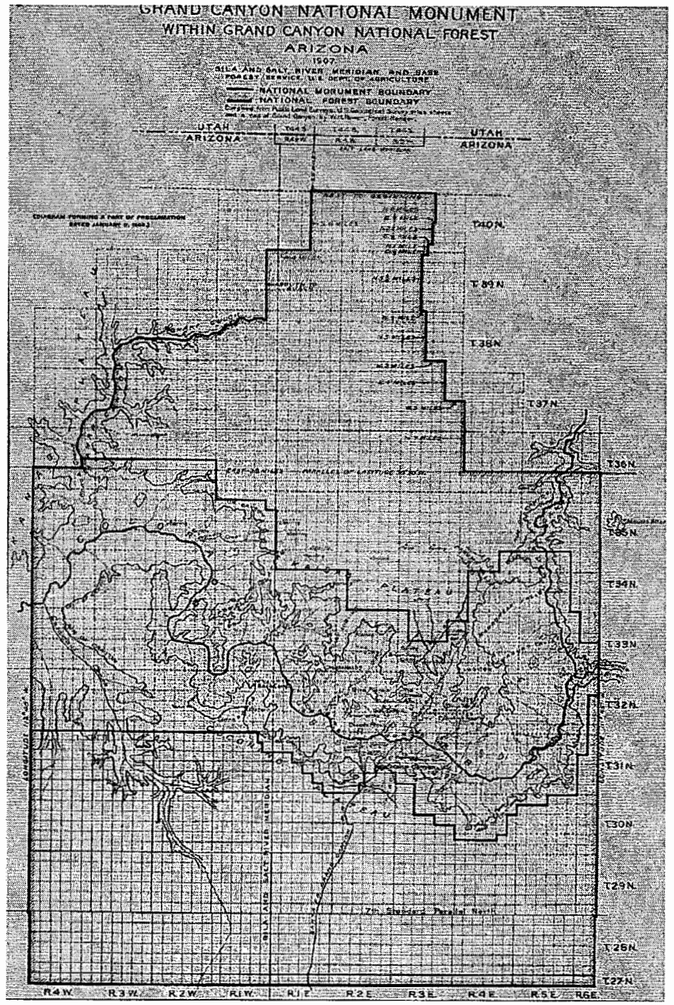


Figure 11. "Grand Canyon National Monument within Grand Canyon National Forest, Arizona," published by U.S. Forest Service, 1908. (Library of Congress Geography and Map Division, Washington, D.C., Call #G4332.G7 1908.U5 TIL.)

21 President Theodore Roosevelt quoted in Stephen J. Pyne, *How the Canyon Became Grand: A Short History* (New York: Penguin Group, 1998), 113.

22 W. R. Mattoon, *A Townsite Plan for Grand Canyon National Monument*, Prepared for U.S. Department of Agriculture, Forest Service, Tusayan National Forest (July 18, 1910, GC-NP Archives Accession #17460), 8-10.

23 See discussion in Ethan Carr's *Wilderness by Design: Landscape Architecture and the National Park Service*, (Lincoln, Nebraska: University of Nebraska Press, 1998), 117.

24 Ibid., 118.

25 Linda Flint McClelland, Building the National Parks: Historic Landscape Design and Construction, (Baltimore, MD: The Johns Hopkins University Press, 1998), 81-82.

26 Ibid., 81-82.

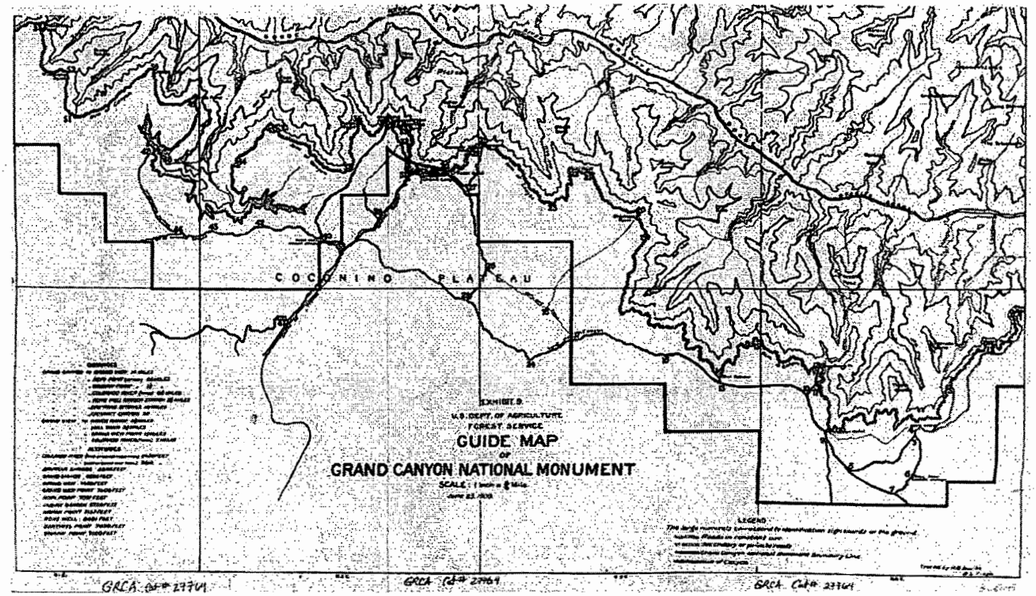


Figure 12. 1909 Guide Map of Grand Canyon National Monument. (Grand Canyon Museum Collection Catalog #27764)

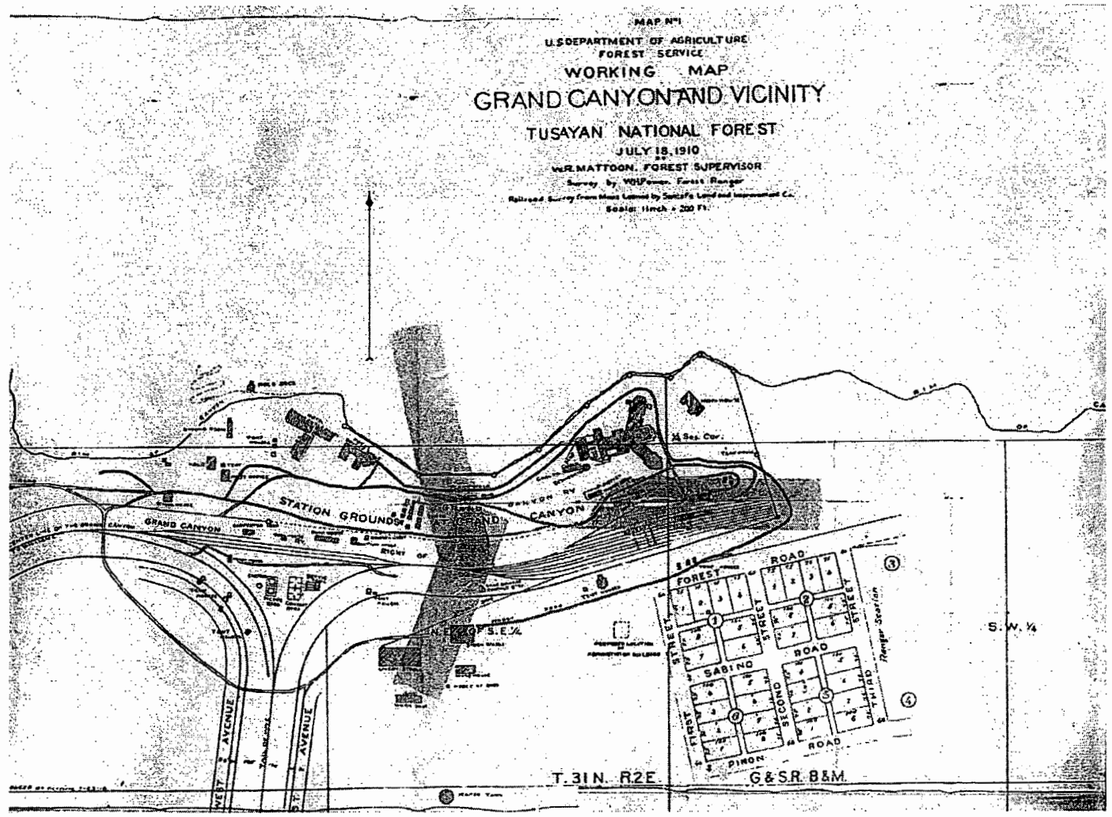


Figure 13. U.S. Department of Agriculture Forest Service, "Working Map Grand Canyon Vicinity, Tusayan National Forest," July 18, 1910. This map was included in Forest Supervisor W.R. Mattoon's report "A Townsite Plan for Grand Canyon National Monument," July 1910. It shows existing conditions as well as a proposed new street layout. (Grand Canyon Museum Collection Catalog #17460)

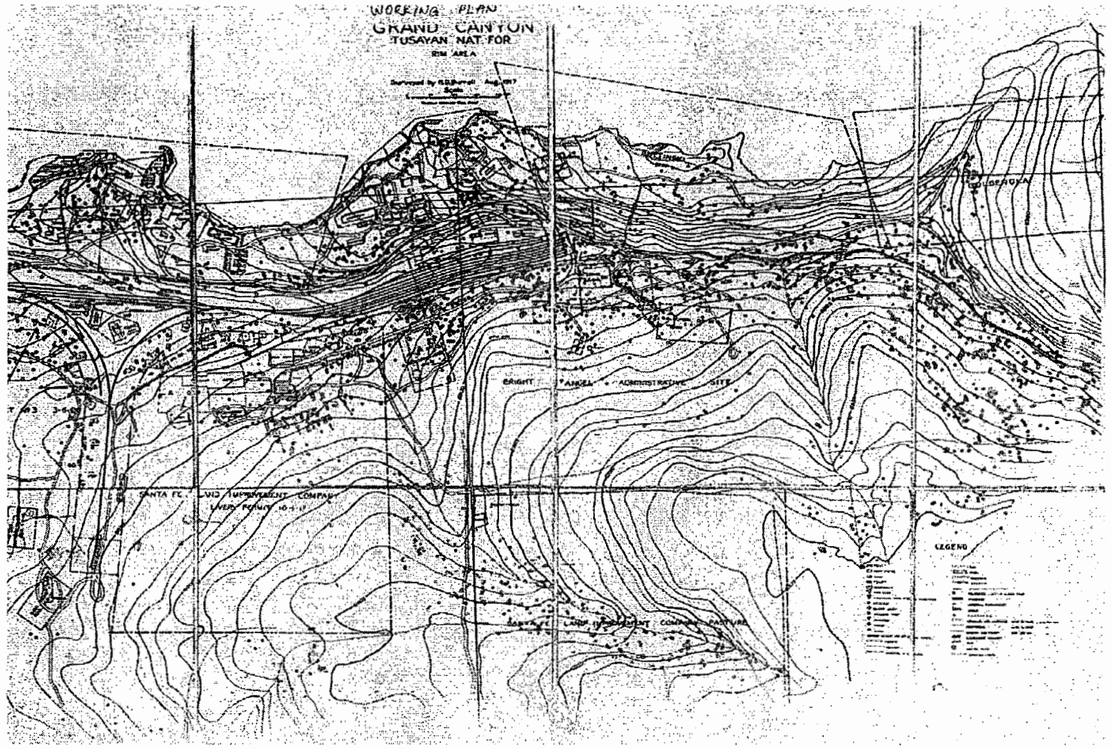


Figure 14. "Working Plan Map Grand Canyon, Tusayan National Forest, Rim Area," Surveyed by H.D. Burrall (U.S. Forest Service), August 1917. This map was the first topographical survey prepared of the Grand Canyon Village area. It depicts existing conditions and special use permits granted to various entities. (Grand Canyon Museum Collection Catalog #28344-G)

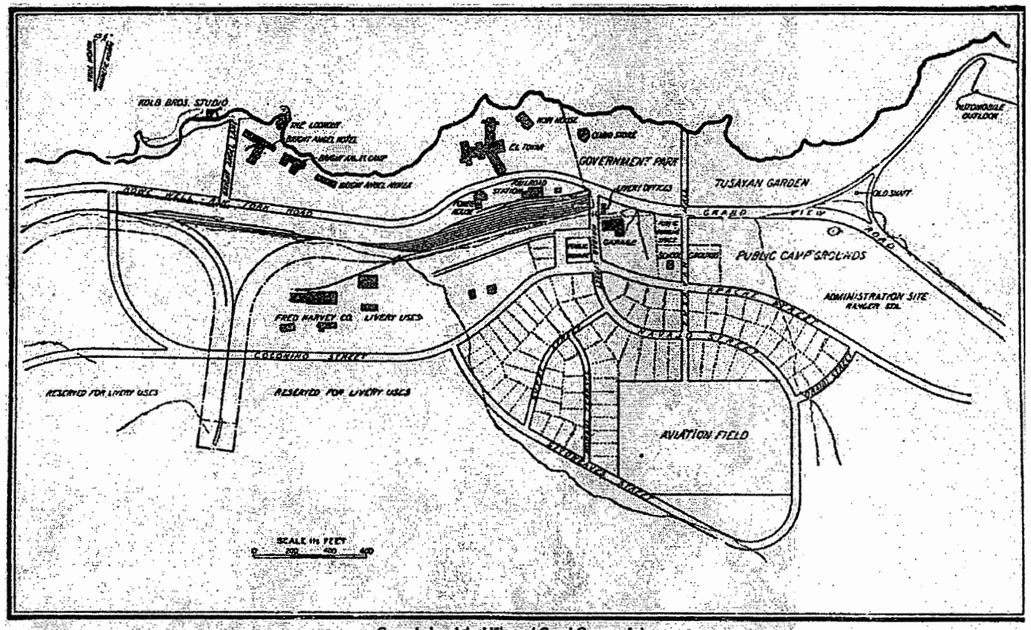


Figure 15. "General Plan of the Village of Grand Canyon, Arizona." This map was included in landscape architect Frank A. Waugh's 1918 report to the U.S. Forest Service: A Plan for the Development of the Village of Grand Canyon, Arizona. The plan depicts his proposed scheme for developing a rational village layout. (Grand Canyon Museum Collection Catalog #17458)

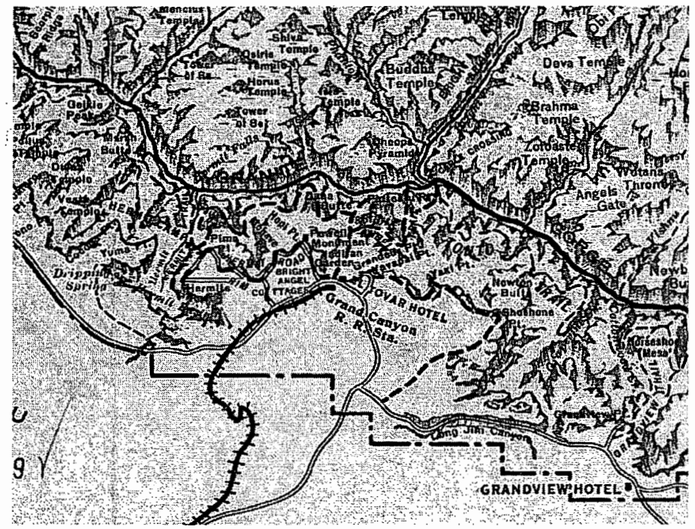


Figure 16. Detail from Rand McNally and Company's 1919 map of "Grand Canyon National Park, Arizona." This map shows the existing development and boundaries of the newly established Grand Canyon National Park. (Library of Congress Geography and Map Division, Washington, D.C., Call # G4332.G7 1919. R3 TIL.)

The Waugh Plan, 1918

Waugh's 1918 plan for Grand Canyon Village anticipated the imminent transfer of the Grand Canyon National Monument from the Forest Service to the newly-created National Park Service (NPS) in the Department of the Interior. His plan outlined the service, infrastructure, and organizational needs of the emerging town at the Santa Fe Railroad terminus that had become known as the town of Grand Canyon. Unlike written plans and reports that preceded it, Waugh's plan directly addressed the unique social, economic, and commercial situation of the town and accurately forecasted the central role that automobile travel would play in tourist accessibility to the park.

According to Waugh, since there was no outside commerce or industry to support it, and the majority of the land was owned by the Federal government, the town derived its existence solely from the scenic tourism value of the place. In addition to these atypical attributes, the site was devoid of any significant water source and thus required the Santa Fe Railroad to haul in water over 120 miles on rail tank cars.[27] Waugh recommended that the Federal agency that administered the site act paternalistically in order to insure both the enjoyment of the traveling public and the welfare of the residents of the town who served the public. Waugh maintained that "the Government is responsible to the public, trustee for the public, in effective control of the situation through land ownership, and must decide, not advise. The town is more of a public utility than a social group. Therefore every part of the Village plan must first submit to the test of being consistent with the interests of the visiting public and must be limited by that requirement."[28]

Waugh's physical plan also emphasized an asymmetric, non-linear, layout of streets and lots to the south and east of the proposed plaza (*Figure 15*). These mainly residential lots would provide space for housing for Santa Fe, Fred Harvey, and government employees. Irregularly shaped, quarter-acre lots lined each of the winding streets with variable widths. This design was intended to keep the "streets very simple and informal in character."[29] To further the informal character, Waugh suggested that scattered trees be maintained within the street right of way in order to "preserve and accentuate the natural informality of the surroundings."[30] Waugh believed that by using these design principles the town would obtain "a distinctive character" and "that that character is exemplified in the neighboring forests along the canyon rim and in the Tusayan National Forest through which we approach the town."[31]

Waugh's proposal also incorporated recommendations for improvements to tourist facilities. He suggested improving the existing footpath that led from El Tovar to Yavapai Point, east of the Village; constructing an automobile-accessible lookout at Yavapai Point; building a distinctive shelter at Yavapai Point that would entice visitors to this scenic destination; reserving an open area along the rim east of the railroad terminus; and developing Tusayan Garden as an "unpretentious botanic garden devoted exclusively to the local flora."[32]

Waugh aimed to create "an artistically effective introduction for the canyon view" by proposing a broad, straight walk that ascended from Grand View Road to the canyon rim through the proposed "Government Park" and "Tusayan Garden." Identified as the Tusayan Mall, Waugh envisioned this corridor as a pathway that would rise "by rustic stone steps," to the rim that would be "dignified and inviting and of sufficient dimensions and importance to suggest that it leads to something worth while."[33]

Waugh's proposals in his 1918 plan provided the blueprint for future planning efforts. although within a few years the NPS, in collaboration with the Santa Fe Railroad and their planning consultants, would propose an alternative plan. Waugh's work at the Grand Canyon, however, would later be referenced and many of his recommendations would be developed.

27 Frank A. Waugh, *A Plan for the Development of the Village of Grand Canyon, Arizona*, (Washington, DC: Government Printing Office, 1918), 4-6.

28 Ibid., 8-9; At the time that Waugh wrote the Village plan, Grand Canyon had a permanent population of approximately 300 to 400 persons, with another 200 tourists visiting daily. Although the Fred Harvey Company and the Santa Fe Railroad had organized both a school and a post office, Waugh argued that much needed to be accomplished in order to create a viable town. His design for the physical layout of the town was predicated on establishing a central plaza or civic center where the town's principle public buildings would be located.

29 Ibid., 11.

30 Ibid.

31 Ibid.

32 Ibid., 15.

33 Ibid., 14.

The National Park Service Era Begins at the Grand Canyon, 1919

In 1919, the Grand Canyon's designation as a national monument was abolished with the creation of the Grand Canyon National Park (GRCA) (*Figure 16*). The park was to be administered by the NPS, created in 1916 within the United States Department of the Interior.

In January 1919, NPS landscape architect Charles Punchard traveled to the Grand Canyon to study conditions and possible development options for the soon-to-be-designated national park. With the help of George Goodwin, the NPS Chief Engineer, and William H. Peters, the Acting Superintendent of the new GRCA, Punchard identified the need for improved scenic drives for automobile travelers as the park's most pressing issue. Heeding their recommendations, NPS Director Stephen Mather stated that the Grand Canyon needed "broad development," including road and trail improvements, administrative buildings, residential areas, campgrounds, and utilities (*Figure 17*).[34]

In 1920, NPS landscape architects Daniel Hull and Paul P. Kiesseg undertook a thorough study of the landscape at the Grand Canyon Village. In 1921, Hull began developing plans for the layout of the Village. In 1924, his Community Development Plan was adopted for Grand Canyon Village (*Figure 18*). This comprehensive plan was the result of a public-private collaboration between Hull, the Santa Fe Railroad, and the latter's consultants, the Chicago architecture and planning firm of Graham, Anderson, Probst and White.[35]

Hull's 1924 plans reiterated Waugh's proposal for a plaza or "Village Square" near the terminus of the railroad track, with the proposed administration building to be located on the north side. Hull left the vacant areas on the rim undeveloped and instead attempted to locate services and residential areas away from the rim. His design applied Johnston's and Leopold's zoning ideas and emphasized the use of existing vegetation and the area's topography for aesthetic effect. Ethan Carr maintains that Hull's 1924 plan for Grand Canyon Village "would become the essential blueprint for construction in the Village over the next twenty years."[36]

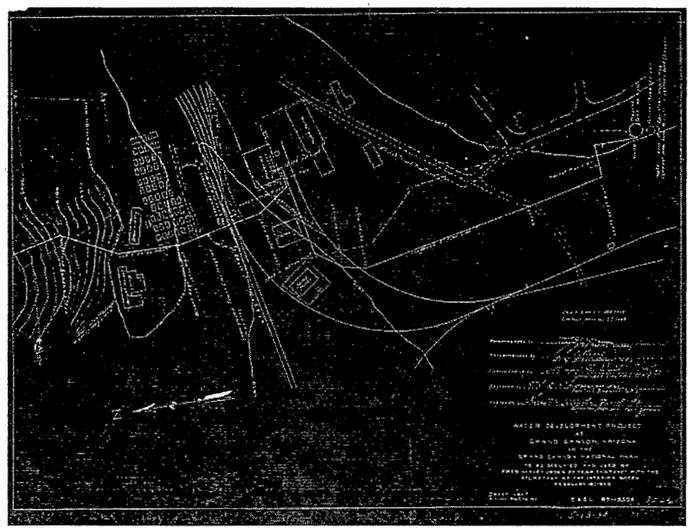


Figure 17. 1920 Water Development Project plan showing new water lines in vicinity of Bright Angel Camp. (Grand Canyon Museum Collection Catalog #3226)

Figure 18. "Grand Canyon National Park General Plan [for] Community Development," 1924. (Grand Canyon Museum Collection Catalog #71367)

34 Carr, *Wilderness by Design*, 119.

35 "Grand Canyon Village," *National Register of Historic Places Nomination Form*, 1995. Also see Ethan Carr's discussion of Graham, Anderson, Probst, and White in *Wilderness by Design*, 125-127.

36 Carr, *Wilderness by Design*, 120-121.

Chronology by Landscape Characteristics, 1893 -1924:

Land Use and Activities

National Forest Established	1893	The Grand Canyon National Forest was established by President Benjamin Harrison in 1893.
Tourist Facilities Purchased	1895	James Wilbur Thurber assumed operation of the Atlantic and Pacific's Flagstaff-to-Grandview stage line. That year, Thurber also purchased John Hance's ranch, trails and tourist facilities that were located at Grandview Point, fourteen miles east of Grand Canyon Village.[37]
Bright Angel Hotel and Stage Road Built	1896	In 1896, James W. Thurber built the Bright Angel Hotel, later Bright Angel Lodge, at the present site of Grand Canyon Village. He also extended a stage road from his tourist camp at Grandview to his new tourist hotel and camp.[38]
Santa Fe Promotion	1896	In 1896, the Santa Fe Railroad purchased the rights to one of Thomas Moran's paintings titled Grand Canyon. The railroad made color reproductions of the painting that were elaborately framed and hung in railroad terminals across the country. Moran was later hired by the railroad to produce paintings of the Southwest, which they then used in promoting tourist destinations.[39]
Control of Forest Preserves Transferred	1905	In 1905, control of the nation's forest preserves was transferred from the Department of the Interior to the Department of Agriculture's (USDA) Division of Forestry (later renamed the Forest Service).
Game Preserve Established	1906	In 1906, portions of the existing Grand Canyon Forest Preserve were set aside as Grand Canyon Game Preserve by Presidential Proclamation 694, November 28, 1906. The new game preserve was administered by the Forest Service (USDA).
Promotional Artwork Developed	1906	In 1906, at the behest of the Santa Fe Railroad, painter Louis Akin came to the Southwest. During his trip he painted a work titled *El Tovar Hotel, Grand Canyon*.[40]
National Monument Established	1908	The Grand Canyon National Monument was established under the purview of U.S. Department of Agriculture's Forest Service in 1908. The former National Forest and game preserve were incorporated into the new National Monument.[41]

37 Anderson, *Living At the Edge*, 63-64.
38 Ibid., 64.
39 Howard and Pardue, Inventing the Southwest, 95-96.
40 Ibid., 96.
41 President, Proclamation, "Grand Canyon National Monument, Proclamation 794," 11 January 1908.

Working Plan Published	1909	The U.S. Forest Service developed "A Working Plan For Grand Canyon National Monument" in 1909. Written by District Forest Examiner W.R. Mattoon, the document outlined a general management and development plan for the Grand Canyon area. Mattoon recommended extending the monument's boundary, adopting a fire protection plan, developing a scenic drive along the rim, regulating automobile traffic, constructing shelters and seating along the rim, creating campgrounds, and constructing additional roads and trails to provide more public access.[42]
Townsite Plan Published	1910	In 1910, Mattoon further developed the "Working Plan" and produced a document titled "A Townsite Plan for Grand Canyon National Monument." In it, Mattoon detailed plans to develop a town site at the railroad's terminus, then known merely as "Grand Canyon." This was the first published official government plan that stated the importance of controlling development along the rim. The plan was developed in response to the perceived unruliness of the commercial development then taking place at the South Rim.
Facilities Overwhelmed by Tourists	1915	In 1915, the year that the World's Fair was held in San Francisco, the Grand Canyon National Monument received over 100,000 visitors. In an effort to provide much-needed visitor services, the Forest Service freely issued licenses to all livery outfits that wished to offer their services to the visitors. The confusion, disorganization, and rampant competition that resulted increased awareness of the deficiencies of administration and funding at the Grand Canyon and furthered efforts to transfer the monument's administration from the Forest Service to the proposed new division of the Department of the Interior, the NPS.[43]
NPS Established	1916	NPS created.
New Forest Service Plan Completed	1916	In 1916, U.S. Forest Service supervisor, Don P. Johnston, in collaboration with forest examiner, Aldo Leopold, completed a revised plan for the Village of Grand Canyon. Their proposal employed a system of land-use zones that they hoped would allow visitors to avoid the less attractive services and industrial activities at the canyon. In 1917, they refined the plan to include seven separate zones, each to house different uses and to be regulated by a different set of guidelines. These zones were: the "Rim Zone," the "Accommodation Zone," the "Residence Zone," the "Commercial Zone," the "Seasonal Camp Zone," the "public Camp Grounds," and the "Stables Zone."[44]
Working Plan for National Monument	1917	In August 1917, the Forest Service completed a topographical survey and a detailed existing conditions plan of the rim area at Grand Canyon National Monument.

42 Mattoon, A Townsite Plan for Grand Canyon National Monument, 8-10.
43 Carr, Wilderness by Design, 117.
44 Ibid., 118.

Land Use and Activities (continued)

Waugh Plan Completed	1918	In 1918, at the request of the Forest Service, landscape architect and educator Frank A. Waugh (1869-1943) developed a report entitled "A Plan For the Development of the Village of Grand Canyon, Arizona." The proposals included in the plan provided a blueprint for future planning efforts at Grand Canyon.[45]
Improvements Recommended	1919	In January 1919, NPS landscape architect Charles Punchard traveled to the Grand Canyon to study current conditions and contemplate the future development of the soon-to-be-designated national park. With Punchard, NPS Chief Engineer George Goodwin, and William H. Peters, the Acting Superintendent of the new GRCA, made a careful assessment of conditions at the park. They recommended improving scenic rim drives for automobile travel as the park's most pressing issue. Heeding Goodwin and Peters' recommendations, the Director of the NPS, Stephen Mather, stated that Grand Canyon needed "broad development," including road and trail improvements, administrative buildings, residential areas, campgrounds, and utilities.[46]
National Park Established	1919	In February 1919, the U.S. Congress abolished the Grand Canyon National Monument and established the GRCA in its place. The NPS (created in 1916) assumed administrative control of the new park on August 15, 1919.
Landscape Study Completed	1920	In 1920, NPS landscape architects Daniel Hull and Paul P. Kiesseg undertook a thorough study of the landscape at the Grand Canyon Village. Hull began developing plans for the layout of the Village in 1920. His plans reiterated Waugh's proposal for a plaza or "Village Square" near the terminus of the railroad track with the proposed administration building located on the north side. His plans left undeveloped all of the vacant areas on the rim, and instead attempted to locate services and residential areas away from the rim. His design applied Johnston and Leopold's zoning ideas, emphasized the exploitation of existing vegetation, and conformance with the topography. Historian Ethan Carr maintains that Hull's 1920-1921 plan for Grand Canyon Village "would become the essential blueprint for construction in the Village over the next twenty years," and that "the town planning methods [Hull] employed established a basic procedure for planning new "park villages" that protected the visual character of the surrounding scenery, and responded both to natural features and to the demands of maintaining and ameliorating earlier tourist development."[47]
Congressional Appropriations	1924	In April 1924, President Calvin Coolidge signed a Congressional appropriations bill that set aside $7.5 million for road and trail construction in the National Parks.
NPS Community Development Plan Adopted	1924	After two years in development, a Community Development Plan was adopted for Grand Canyon Village. This comprehensive plan was the result of a public-private collaboration between the NPS Landscape Engineering Department, the Santa Fe Railway Company, and the latter's consultants, the Chicago architecture and planning firm of Graham, Anderson, Probst and White.[48]

45 Waugh, A Plan for the Development of the Village of Grand Canyon, Arizona, 4-6.

46 Carr, Wilderness by Design, 119.

47 Ibid., 120-121.

48 "Grand Canyon Village," National Register of Historic Places Nomination Form, 1995.

Circulation Networks

Road to Bright Angel Hotel Built	1896	James W. Thurber built the Bright Angel Hotel (later Bright Angel Lodge) at the present site of Grand Canyon Village in 1896. He also extended a stage road from his tourist camp at Grandview to his new tourist hotel and camp at the rim.[49]
SF and Grand Canyon Railway (SF and GCR) Organized	1890s	During the mid-1890s, William "Buckey" O'Neill, a local prospector, occupied a log cabin next to Thurber's Bright Angel Hotel near the rim. His mining interests in and around the canyon led him to pursue a rail link to the South Rim. In 1897, O'Neill became one of the key organizers of the Santa Fe and Grand Canyon Railway.[50] The SF and GCR was backed by a small New York City investment firm with mining interests in the area, by the Santa Fe Railroad Company, and by several local residents.
SF and GCR Constructed	1899-1900	Construction on the SF and GCR began in 1899. The line was completed only as far as Anita, Arizona, twenty miles short of the canyon rim. Service to Anita began in March 1900.[51]
Road Connection Made From West	1898-1901	In anticipation of the railroad's arrival at the South Rim, William Wallace Bass, proprietor of Bass Camp (tourist facilities) near Havasupai Point, constructed a primitive road that connected his camp to the railroad via Rowe Well, some three miles Southwest of the location of the proposed rail terminus.[52]
SF and GCR Foreclosed	1901	In 1901, due to mounting financial troubles related to the cost of construction, the SF and GCR went bankrupt. The Santa Fe Railroad Company, one of the venture's largest creditors, took control of the line that year. A subsidiary company, named the Grand Canyon Railway, was formed to run the new line.[53]
Grand Canyon Railroad Completed to Rim	1901	The Santa Fe Railroad completed the railroad tracks from Anita, Arizona to the South Rim of the Grand Canyon, and inaugurated service on September 17, 1901 (*Figure 19*).[54]
Williams-Grand Canyon Road Developed	circa 1901 to 1909	After the completion of the Grand Canyon Railway, a primitive automotive road began to appear alongside its tracks. The road led from Williams, Arizona to the Grand Canyon Railway terminus at the rim and was used by locals and by tourism operators like Martin Buggeln and Sanford Rowe. Eventually, both Coconino County and the U.S. Forest Service expended funds to maintain segments of this road.[55]

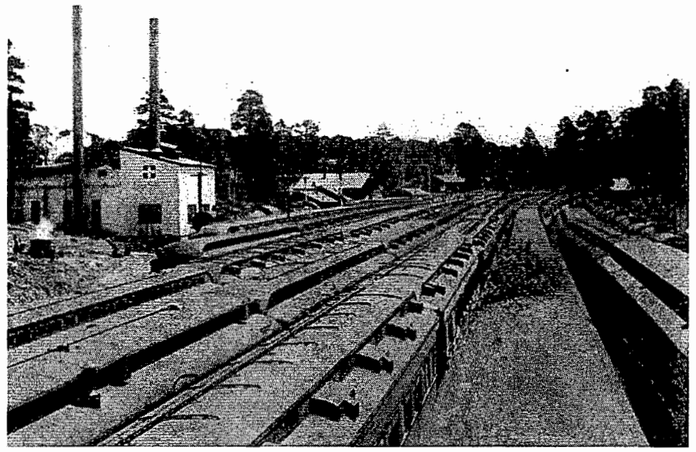


Figure 19. Trains in the railyard. Railroad Depot building is visible in center left background. Building on left is former 1913 power house. (Grand Canyon Museum Collection Catalog #4441)

49 Anderson, *Living At the Edge*, 64.

50 "Grand Canyon Village," *National Register of Historic Places Nomination Form*, 1995.

51 Spencer Crump, *Rails to the Grand Canyon*, (Corona del Mar, California: Zeta Publishers Company, n.d.), 21-27.

52 United States Department of the Interior, National Park Service, Historic American Engineering Record, *South Entrance Road Historic American Engineering Record*, by Michael F. Anderson, (HAER No. AZ-45, 1993), 3

53 Crump, *Rails to the Grand Canyon*, 21-27.

54 Ibid., 21-27.

55 Anderson, *South Entrance Road HAER Report*, 3.

Circulation Networks (continued)

Grandview Branch Road Developed	1913	By 1913, an alternative entrance to Grand Canyon Village had been developed. The approach consisted of a branch road that extended west from the Flagstaff-Grandview Stage Road to the approximate location of today's south entrance station. It then turned northward toward Grand Canyon Village. The route, which was never more than a fourteen-foot-wide, bladed earthen roadway, served early automobile traffic to the Grand Canyon.[56]
Olde Maine Road Built	1919-1920	Between 1919 and 1920, Coconino County built the Olde Maine Road that connected the town of Maine (about fifteen miles west of Flagstaff and later renamed Parks) to the Grand Canyon via the Williams-Grand Canyon Road. The County built the road to accommodate automobile traffic, and continued to maintain it until the BPR completed the modern south approach road in 1932.[57]
Park-to-Park Highway Inaugurated	1920	In 1920, Stephen Mather, Director of the NPS, announced the opening of a "National Park-to-Park Highway" that connected all of the western national parks. The loop road, which Mather had publicized for five years, extended from Denver, down the Rocky Mountains, across to California via the Grand Canyon, up the Sierra Range to the Cascades, across the northern Rockies at Glacier Park, and back to Denver. The loop was composed of over 6,000 miles of designated state and county roads, of which about 2,000 were paved.[58]
Congressional Appropriations	1924	In April 1924, President Calvin Coolidge signed a Congressional appropriations bill that set aside $7.5 million for road and trail construction in the National Parks.[59] GRCA received $275,000 in road and trail funding. The first road projects undertaken included the surveying and grading of Village Loop Drive, Avenues A, B and C (now Apache, Boulder and Coconino streets), and a section of South Park Entrance Road through the Village.[60]
NPS Community Development Plan Adopted	1924	After two years in development, a Community Development Plan was adopted for Grand Canyon Village. This comprehensive plan was the result of a public-private collaboration between the NPS's Landscape Engineering Department, the Santa Fe Railway Company, and the latter's consultants, the Chicago architecture and planning firm of Graham, Anderson, Probst and White.[61] The circulation elements of the plan included a new entrance road that approached the Village from the south and culminated at a central plaza on the south side of the railroad tracks. The plan also called for construction of a series of gently curving roads that followed the natural topography. It called for the creation of two residential areas on either side of the proposed south entrance road. One area would house NPS employees and the other would house Fred Harvey and Santa Fe employees.[62]

56 Ibid.

57 Ibid.

58 Carr, *Wilderness By Design*, 87.

59 Carr, *Wilderness By Design*, 151-152.

60 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.

61 Ibid.

62 United States, Department of the Interior, National Park Service, Division of Landscape Architecture, Western Office, Design and Construction, Grand Canyon National Park, General Plan Community Development, (June 24, 1924, Grand Canyon Museum Collection Catalog #71367).

Vegetation

Forest Thinning Recommended	1909	In his report on "A Working Plan for Grand Canyon National Monument," Forest Service examiner W.R. Mattoon explained the preferred technique for forest thinning for scenic effect along the rim of the canyon. He maintained that "the key to the operation is in opening up vistas through the trees ... [where] in places sweeping panoramas will be afforded."[63]
Road Clearing and Tree Pruning Recommendations	1910	W.R. Mattoon's 1910 "Townsite Plan for Grand Canyon National Monument" recommends that roads be laid out with a thirty-foot width, but argues that all western yellow pine trees and large junipers or pinyons should be left in the right-of-way. On residential lots, Mattoon recommended that the Forest Service ranger approve all cutting or pruning of green trees.[64]
Vegetation Described	1918	In his 1918 report entitled "A Plan for the Development of the Village of Grand Canyon, Arizona," landscape architect Frank Waugh described the existing vegetation. He described the existing land as rolling and "generally well timbered" with good specimens of western yellow pine in the ravines and a heavy growth of pinyon and juniper on higher ground.[65]
Botanic Garden Proposed	1918	Waugh recommended the development of Tusayan Garden, an "unpretentious botanic garden devoted exclusively to the local flora."[66]

Buildings and Structures

Bright Angel Hotel and Stage Road Built	1896	In 1896, James W. Thurber built the Bright Angel Hotel (later Bright Angel Lodge) at the present site of Grand Canyon Village. He also extended a stage road from his tourist camp at Grandview to his new tourist hotel and camp.[67]
O'Neill Cabin Built	1896-1897	William "Buckey" O'Neill, local prospector, erected a log cabin at the present site of the Bright Angel Lodge. His mining interests in and around the canyon led him to pursue a rail link to the South Rim. In 1897, O'Neill became one of the organizers of the Santa Fe and Grand Canyon Railway.[68] The "Buckey" O'Neill cabin still stands. It was incorporated into the Fred Harvey Company's 1935 development of the Bright Angel Lodge on the South Rim.

63 W. R. Mattoon, A Working Plan for Grand Canyon National Monument, Prepared for U.S. Department of Agriculture, Forest Service (June 28, 1909), 61.

64 Mattoon, A Townsite Plan, 6, 9.

65 Waugh, 4-5.

66 Ibid.,. 15.

67 Anderson, Living At the Edge, 64.

68 "Grand Canyon Village," National Register of Historic Places Nomination Form, 1995.

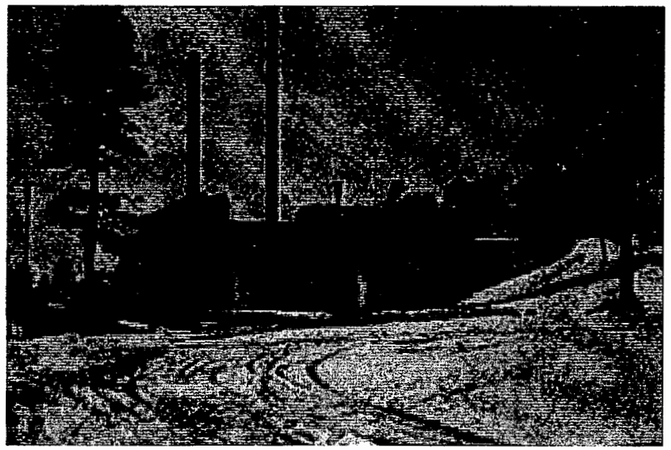


Figure 20. The first Grand Canyon power house, built in 1913 near El Tovar and the railroad tracks. This photo was taken in 1925 just before it was replaced with the existing Power House. (Northern Arizona University Cline Library, Jack Greening Collection: Call # NAU.PH.90.9.1847.)

Buildings and Structures (continued)

Railroad Related Construction	1901-1914	Between 1901 and 1914, nearly fifty permanent and temporary structures were erected near the terminus of the Grand Canyon Railway. Most of these structures were related to the developing tourist industry and associated service and residential needs. They included stables, a railroad depot, a power house, and numerous modest residences for railroad and Fred Harvey employees (*Figures 20, 21, and 22*).[69]
Cameron Hotel and Camps Built	1903	By 1903, Ralph Cameron had purchased the former Red Horse Stage station and moved it to the South Rim near the trailhead (Bright Angel Trail). He added a second story to the station building, built several tent cabins and opened Cameron's Hotel and Camps (*Figure 23*).[70]
Kolb Studio Built	1904	In 1904, near the Bright Angel trailhead, brothers Ellsworth and Emery Kolb erected the first section of their photography studio directly on the rim. The brothers expanded the building substantially in 1915 and again in 1925.[71]
El Tovar Hotel Built	1904	On November 1, 1904, the El Tovar Hotel opened. The Santa Fe Railroad hired architect Charles Whittlesey to design the luxury resort at the rim of the Grand Canyon.
Hopi House Built	1905	In 1905, Hopi House, designed by Fred Harvey architect, Mary Elizabeth Jane Colter, was built on the South Rim next to the El Tovar Hotel (*Figures 24 and 25*). It served as Fred Harvey's Native American craft demonstration and sales building. In 1905, the Santa Fe Railway also hired a "landscape artist" to design the area surrounding El Tovar, Hopi House, and the stables.[72]
Bright Angel Hotel Remodeled	1905	The Santa Fe Railroad hired California architect Francis Wilson to remodel and convert the Buckey O'Neill Cabin and Bright Angel Hotel into a Bright Angel Camp. The camp provided alternative, and more modest, guest accommodations than the El Tovar Hotel (*Figure 26*).[73]
Verkamp's Curio Store Built	1905	John G. Verkamp erected his curio shop near the site of the El Tovar in 1905. [74]
Mule Barn, Livery Stable and Blacksmith Shop Built	1906	The Fred Harvey Company built a mule barn (Bldg. #0562), livery stable (Bldg. #0563), and a blacksmith shop (Bldg. #0564) south of the railroad tracks in 1906.[75]

69 Carr, *Wilderness By Design*, 117.
70 Anderson, *Living At the Edge*, 86-87.
71 Anderson, *Living at the Edge*, 94-95.
72 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
73 Ibid.
74 Ibid.
75 Ibid.

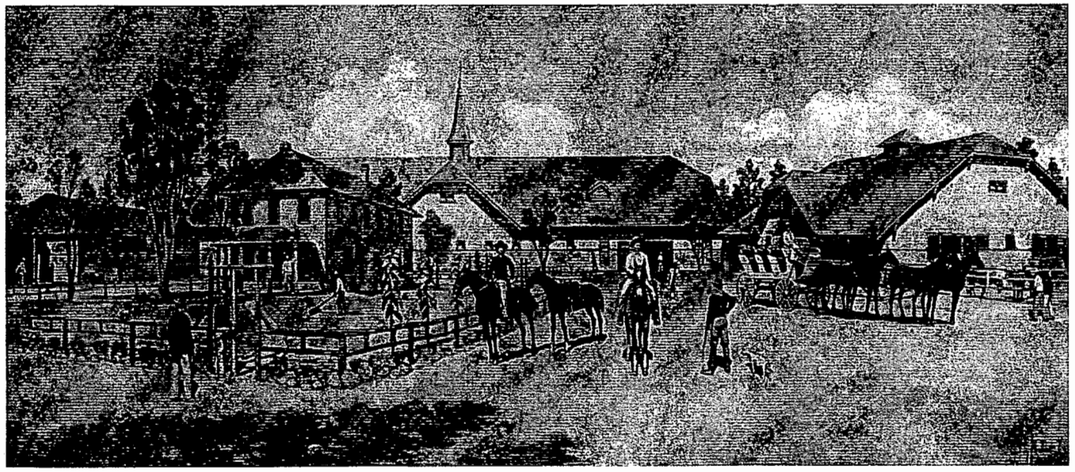


Figure 21. 1905 artist's rendering of the planned El Tovar stables complex, including (from left to right) the Blacksmith Shop, Wranglers' Dormitory, Livery Stable, and Mule Barn, drawn from an imaginary perspective before the buildings were constructed. (from Michael F. Anderson's Along the Rim, 32)



Figure 22. 1910 photograph of the east side of the El Tovar stable complex, including the former Fred Harvey Transportation Department Dormitory (left) and Livery Stable (right). (Northern Arizona University Cline Library, Call # NAU.PH.640.61.)

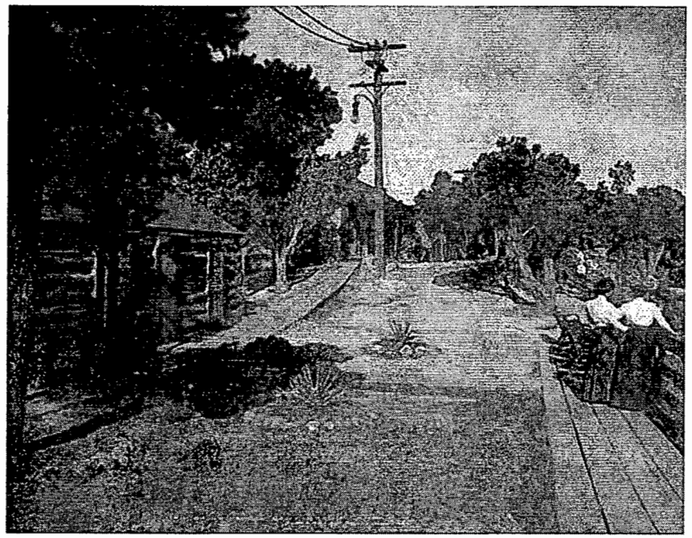


Figure 23. Circa 1905-10 photo of Bright Angel Camp, Grand Canyon. By L.C. McClure, Denver. (Library of Congress American Memory Project On-line, Western History/ Genealogy Department, Denver Public Library. Reproduction #MCC-1198.)

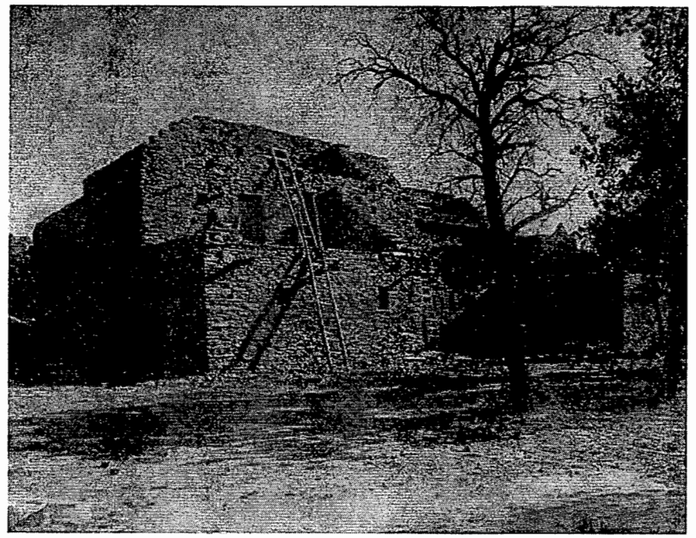


Figure 24. 1905 Photo of Hopi House at Grand Canyon Village (Photo by Detroit Publishing Company). (Grand Canyon Museum Collection Catalog #9845)

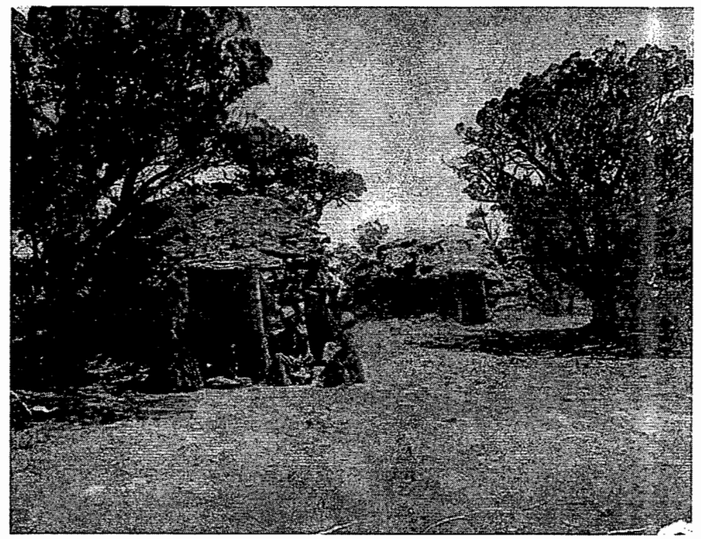


Figure 25. 1905 Photo of Navajo hogans located near Hopi House (Photo by Detroit Publishing Company). (Grand Canyon Archives Photo Collection #9844)

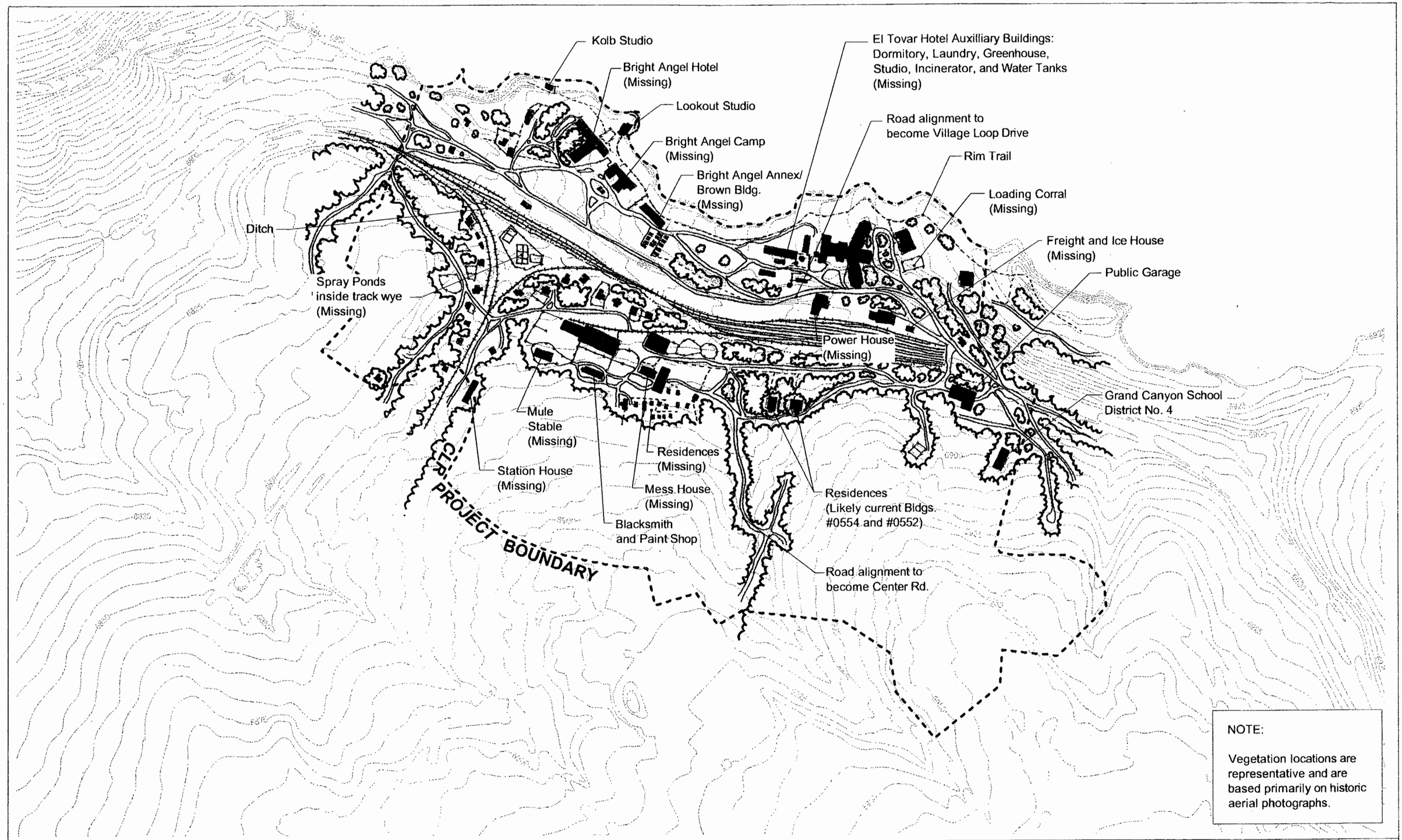
Buildings and Structures (continued)

Depot Built	1910	The Grand Canyon Railway Depot was erected in 1910.[76]
Lookout Studio Built	1914	In 1914, the Fred Harvey Company constructed a sales room and lookout point on the rim west of the Bright Angel Hotel. Known as Lookout Studio, the building was designed by Fred Harvey architect Mary Elizabeth Jane Colter to blend with its surroundings.
Forest Service Ranger Cabin Built	1914	The U.S. Forest Service built a residence for its ranger at Grand Canyon. Located north of the first administration building (Bldg. #0001), the cabin was remodeled and occupied by the Park Superintendent after 1922. In 1931, the building was demolished.[77]
Fred Harvey Garage Erected	circa 1914	Circa 1914, the Santa Fe Railroad built the Fred Harvey Garage (Bldg. #0551) to accommodate its new fleet of touring motorcars. In addition, the railroad erected two residences for its executives (Bldg. #0552 and #0554).
School Erected	circa 1917	The first Grand Canyon School (Bldg. #SRB0208) was built in the Village around 1917.
NPS Construction	1919-1924	Between the time that the NPS began managing the Grand Canyon and the adoption of the 1924 master plan, NPS constructed a number of structures. Included among these was the rustic-style 1921 Administration Building that was designed by NPS landscape architect Daniel Hull. The building was later remodeled for use as the park superintendent's residence (Bldg. #0001). The NPS also built several permanent employee's residences and utility buildings. These included the assistant superintendent's house (Bldg. #SRQ0003, the general foreman's residence (Bldg. #SRQ0002), a rangers' dormitory (Bldg. #SRB0076), and a mess hall for NPS employees (Bldg. #SRQ0024). These residential buildings were erected on the south side of the railroad tracks in what would later be designated the NPS Area. In June 1922, the mess hall was converted into the chief ranger's residence and a new mess hall was authorized for construction. The earliest NPS utility buildings at the Grand Canyon were a carpenter shop (Bldg. #SRB0069) and a blacksmith shop (Bldg. #SRB0074).[78]
Community Building Erected	1924	The NPS erected a community building in 1924. The structure burned in 1933 and was rebuilt in 1935 (Bldg. #SRB0044).



Figure 26. 1906 photo of the Bright Angel Hotel on the South Rim in Grand Canyon Village. The Bright Angel Hotel was originally erected in 1896 by tourist operator James Thurber. Here it is seen after it was acquired and remodeled by the Santa Fe Railway Company in 1905. (Grand Canyon Museum Collection Catalog #9828)

76 Ibid.
77 Ibid.
78 Ibid.



Map Sources: Working Plan Grand Canyon Tusayan Nat. For. Rim Area, Aug. 1917; Water Development Project at Grand Canyon, Arizona, February 1920/Revised 1931; National Historic Landmark nomination, 1997; and historic aerials and photographs.

SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. H

LANDSCAPE FEATURES
circa 1924

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223
PKG. NO. —
SHEET 1
OF 67

Grand Canyon Village Matures: 1924-1932

In 1920, Stephen Mather, Director of the NPS, announced the opening of a "National Park-to-Park Highway" that connected all the western national parks. The loop road extended from Denver, Colorado, along the Rocky Mountains, across to California via the Grand Canyon, up the Sierra Range to the Cascades, across the northern Rockies at Glacier Park and back to Denver. The loop was composed of over 6,000 miles of designated state and county roads, of which about 2,000 miles were paved.

In 1924, President Calvin Coolidge signed a congressional appropriations bill that set aside $7.5 million for road and trail construction in the National Parks. Over the next ten years, the NPS would collaborate with the USDA's Bureau of Public Roads and use the funding to build new roads to GRCA and to improve roads within it. In Grand Canyon Village, Village Loop Drive was surveyed and graded, and Avenues A, B, and C (now Apache, Boulder and Coconino streets), and a section of South Entrance Road from Williams, Arizona to the Village were completed.[79] As intended, the direct result of Mather's highway and the BPR road building projects was greater visitation to the parks in the western United States. During the 1925-1926 travel season, 63,000 visitors arrived at the South Rim in approximately 20,000 automobiles. This number increased to 77,000 visitors in 25,000 cars during the 1926-1927 season. By 1927, travel to the Grand Canyon by automobile exceeded rail travel for the first time in the park's history.[80]

By 1928, GRCA Superintendent Minor R. Tillotson would report to the Director of the NPS concerning automobile travel in the park.

> With a total of 167,226 visitors, travel to the Grand Canyon exceeded that for any previous year in the history of the Park...The extent to which the auto is becoming the popular method of travel to the Park is particularly noteworthy. A total of 32,316 cars carrying 99,303 passengers entered the Park this season as against 28,479 cars carrying 89,681 passengers last year. This represents an increase in 10.73 percent in visitors by auto. Rail travel, on the other hand shows a decrease of 6.51 percent.[81]

In 1929, almost 200,000 people visited GRCA. This was the apex of GRCA visitation for several years as the park began to suffer the effects of the October 1929 stock market crash and the beginning of the Great Depression of the 1930s. By 1933, visitation had dropped to just over 100,000. First rail travel, and then auto travel, dropped precipitously.

Despite this, the Fred Harvey Company, the primary concessionaire at Grand Canyon Village, constructed or upgraded several projects on the South Rim. In Grand Canyon Village, the company constructed several "utility buildings" such as a new auto paint shop and garages for the employee residences (*Figures 27, 28, and 29*).

Road building continued unabated as well. In 1931, the South Approach Highway (Arizona Highway #64) to the park—and by extension to Grand Canyon Village—was completed. Most important was the creation by the Fred Harvey Company of an alternative water source for the Village, which had long been dependent on daily water trains for its water supply. In 1931 and 1932, the company constructed a water pumping plant at Indian Garden, four and one-half miles down the Bright Angel Trail from the Village, within the Canyon. The plant pumped water from Indian Garden Spring to the South Rim and its system included a reservoir with a 70,000 gallon capacity.

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79 United States Department of the Interior, National Register of Historic Places, *National Historic Landmark Nomination: Grand Canyon Village Historic District*, by Michael P. Scott, et. al., nomination form, (Washington, DC: February 8, 1997).

80 Anderson, "South Entrance Road HAER Report," 2-3.

81 Grand Canyon National Park Annual Report, 1928, 1.

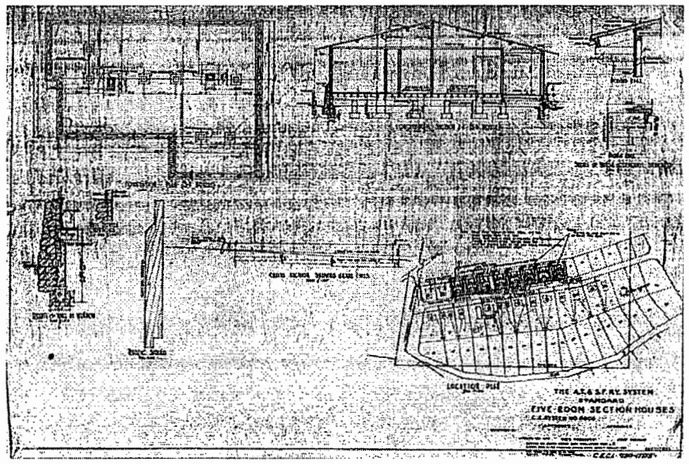


Figure 27 1929 Plan: "A.T.&S.F. Ry. System Standard Five Room Section Houses."(Grand Canyon Museum Collection Catalog #68100)

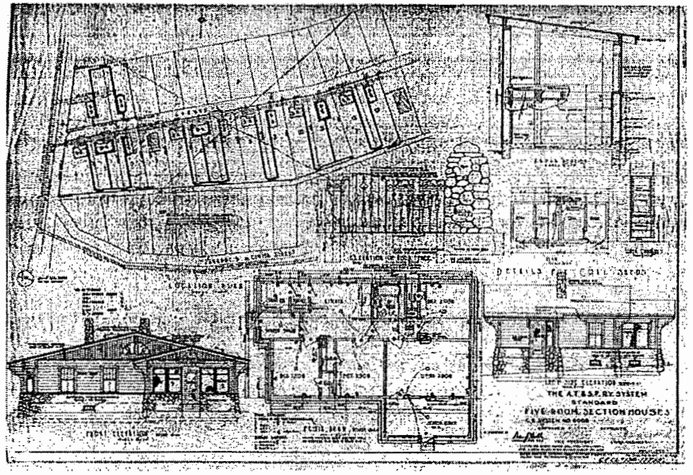


Figure 28. 1929 Plan: "A.T.&S.F. Ry. System Standard Five Room Section Houses." Note stone fence pier near center of plan. (Grand Canyon Museum Collection Catalog #68100)

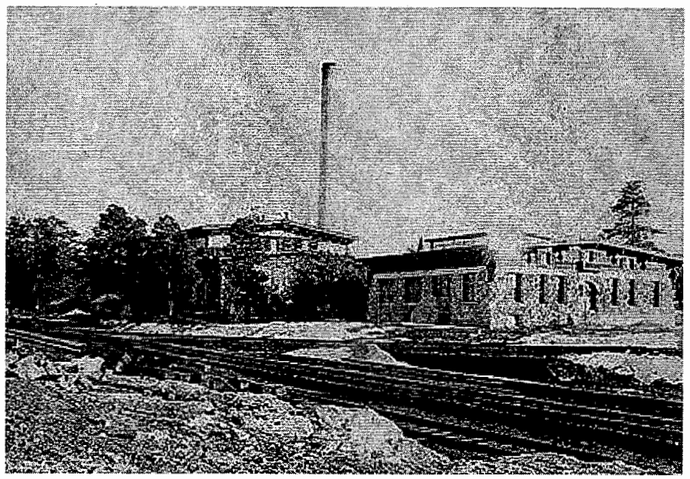


Figure 29. Laundry and Power House, photo undated. (Cline Library, NAU)



Figure 30. Pre-1925 aerial photo of the Village. Note the absence of Center Road and concessionaire utility buildings. (Grand Canyon Museum Collection Catalog #13639-13644)

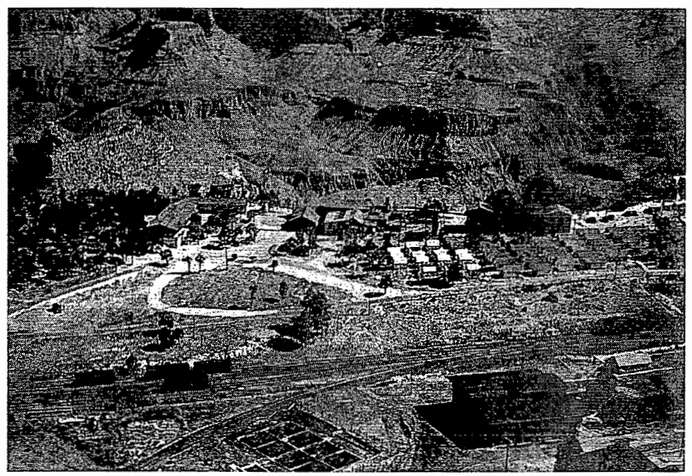


Figure 31. Photograph ca. 1930s showing spray ponds and Bright Angel Camp. (from Michael F. Anderson, Along the Rim, page 11).



Figure 32. 1932 aerial photo of Bright Angel Hotel complex taken prior to development of Mary E.J. Colter's Bright Angel Lodge. (Grand Canyon Museum Collection Catalog #9543)

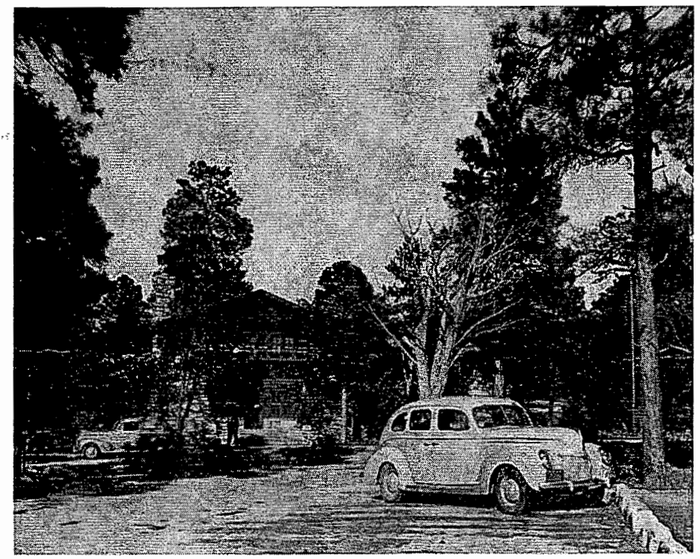


Figure 33. Circa 1930 photo of the west façade of the second NPS Administration Building (built 1929) taken from the parking area in the "public plaza." The plaza, designated as such on the 1924 Master Plan, was used as a parking area from the time it was completed. (Grand Canyon Museum Collection #9504)

Chronology by Landscape Characteristics, 1924-1932:

Land Use and Activities

Park Planning Advocated	1925	In 1925, at the eighth National Parks Conference that was held at Mesa Verde National Park, then assistant and associate NPS directors Horace Albright and Arno Cammerer advocated the creation of "general development plans" for all national parks. The impetus for such plans derived from the massive road building program initiated after the 1924 roads and trails appropriations bill, and from the subsequent establishment of a cooperative agreement with the BPR.[82] (Refer to *Figure 30* for an aerial view of the Village during this era.)
Peak Business Year for Park Operators	1929	In 1929, private operators within GRCA experienced their most profitable year to date. Attendance at the park rose over 14 percent from the previous year.[83]
Stock Market Crash	1929	On October 29, 1929, a record number of shares were traded as investors dumped stocks for whatever value they would bring. The Great Depression of the 1930s had begun.
Decline In Park Attendance	1930-1933	Between 1930 and 1933, visitor numbers at the Grand Canyon dropped over 60 percent, with attendance numbers falling to pre-1925 levels. In addition, park operators sustained significant revenue losses as large as 48 percent below their 1929 peak.[84] (Refer to *Figures 31* and *32* for aerial views of the Village during this era.)

Circulation Networks

Automobile Travel Growth	1925-1927	During the 1925-1926 travel season, 63,000 visitors arrived at the South Rim in approximately 20,000 automobiles. This number increased to 77,000 visitors in 25,000 cars during the 1926-1927 season. In 1926-1927, travel to the Grand Canyon by automobile exceeded rail travel for the first time in the park's history.[85]
BPR Agreement Formalized	1925	In 1924, the NPS entered into an agreement with the Department of Agriculture's BPR. The agreement charged BPR engineers with designing and managing the construction of park-related roads. Both parties formalized it in 1925.[86]
South Entrance Road Surveyed	1925	In the summer of 1925, the BPR completed a survey for the South Entrance Road alignment.[87]

82 Carr, *Wilderness By Design*, 195-197.
83 GRCA Annual Report, 1933, 1.
84 Ibid., 1.
85 Anderson, "South Entrance Road HAER Report," 2-3.
86 Ibid., 4.
87 Ibid., 5.

South Entrance Road Constructed	1927-1928	Between January 1927 and December 1928, the 7.42-mile long South Entrance Road was completed.
South Approach Road Constructed	1928-1932	In 1928, construction began on a permanent, automobile-grade road from Williams to Grand Canyon Village. NPS Director Stephen Mather and Assistant Director Horace Albright had lobbied aggressively for this road since 1924. They argued that the Grand Canyon was not being properly developed as a national park because it was not easily accessible to everyone, due to the lack of adequate highways.[88]
Village Loop Drive Developed	1928-1932	Today's Village Loop Drive developed in separate segments over a seven-year period. The 1924 comprehensive plan, which clearly delineated a loop road to allow for easy circumnavigation of the Village, provided a blueprint for the development of Village Loop Drive. The first segment, built in 1928, consisted of the last 2,000 feet of the 1928 South Entrance Road. As designed, this segment extended two 16-foot wide lanes separated by a 30-foot wide landscaped island from the planned civic plaza east to the terminus of the existing Grand Canyon-to-Grandview/Desert View Highway near the Fred Harvey Garage (Bldg. #0551). The second segment of Village Loop Drive was constructed between 1930 and 1931. The new road extended from the civic plaza to the new public campground and the Fred Harvey Cabin Camp that was located at the southwest edge of the Village. The third segment, completed in 1931-1932, consisted of a segment of the new West Rim Drive that extended west of the Village along the rim. The portion of this road located in the Village began at the Superintendent's Residence (Bldg. #0001) where it connected to the terminus of the South Entrance Road and the Grand Canyon-to-Grandview/Desert View Highway. The segment extended west and connected with the Cabin Camp access road at the west end of the Village. The project also incorporated significant landscaping work. In addition to the 30-foot wide automotive road, a 950-foot long stone retaining wall was erected south of the roadway. The stone retaining wall and stairs located at the head of the railroad tracks was also rebuilt at this time.[89]
Concrete walk and Arch Built	circa 1930	A concrete sidewalk and arch, stone walls, and concrete stairway were erected near the Kolb Studio around 1930.[90]
Plaza Reworked	1932	In 1932, the NPS constructed a large landscaped island at the center of what was designated as the civic plaza on the 1924 plan (*Figure 33*). The island allowed for traffic movement and parking in front of Babbitt's Store without interrupting traffic flow on the (Old) South Entrance Road—now called Center Road.[91]

88 Ibid., 2-3; "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.

89 United States Department of Interior, National Park Service, Historic American Engineering Record, Village Loop Drive, by Michael F. Anderson, (HAER #AZ-41, 1994), 7-11.

90 "Grand Canyon Village Historic District," *National Historic Landmark Nomination*, 1997. Anderson, "South Entrance Road HAER Report," 19.

91 Anderson, "South Entrance Road HAER Report," 19.

Buildings and Structures

NPS Residences Built	1925-1931	Twenty-eight buildings were erected by the NPS between 1925 and 1931. All were located within the NPS residential and utility area, along the newly constructed Tonto, Kaibab, and Juniper Hill streets (Includes: Bldgs. #SRQ0006 and #SRQ0007; Bldgs. #SRQ0011 and #SRQ0013; Bldgs. #SRB0078 and #SRB0075; Bldg. #SRB0103; Bldg. #SRB0100; Bldg. #SRQ0017; also, two garages built in 1925 that were demolished).[92]
Park Concessionaire's Development	1925-1933	"The Santa Fe Railway's construction program between 1925 and 1929 was significant in immediately shaping and defining the basic physical elements of the [1924 comprehensive] plan. The rapid development of those elements by the railway can be attributed to readily available financing for construction, the advantage of close involvement with the creation of the plan (most of which was geared toward park concessionaire's facilities), and well-organized architectural and construction divisions within the Santa Fe Railway organization."[93] Some of the most important construction projects of this period were a new power plant (Bldg. #0567), and the new sanitary sewer treatment plant. Another major Santa Fe construction project was the Fred Harvey Laundry Building (Bldg. #0569), which was completed in 1926.
NPS Utility Buildings Erected	1925-1928	Between 1925 and 1928, five utility buildings were erected near the carpenter and blacksmith shops in Grand Canyon Village. This construction formed the quadrangle that would later be designated as the NPS Utility Area. Construction included Bldgs. #SRB0078, #SRB0075, #SRB0069, and two garages that were demolished.[94]
Babbitt Brothers Store Built	1926	The Babbitt Brothers Trading Company erected its general store on the designated civic plaza in 1925-1926. The store was destroyed by fire in 1994.[95]
Auto Camp Begun	1926	In 1926, seventeen one-room, rustic-style cottages were erected in what was first designated the Fred Harvey Auto Camp, and was later known as the motor lodge or as Grand Canyon Cabin Camp. Still later, the complex was referred to as the Maswik Cabins. Six of the cabins remain today (Bldg. #0610 through Bldg. #0615). In addition to the cabins, the original camp included a central lodge building that contained restrooms, a lunch counter, and a delicatessen. The camp expanded when additional cabins were constructed in 1927 and 1929. The lodge and the majority of the cabins were replaced by the existing Maswik Lodge in the early 1970s.[96]
Water Tanks Relocated	1926-1929	Between 1926 and 1929, the water storage tanks that were originally located near the El Tovar Hotel were moved to a new location west of Avenue C.[97]

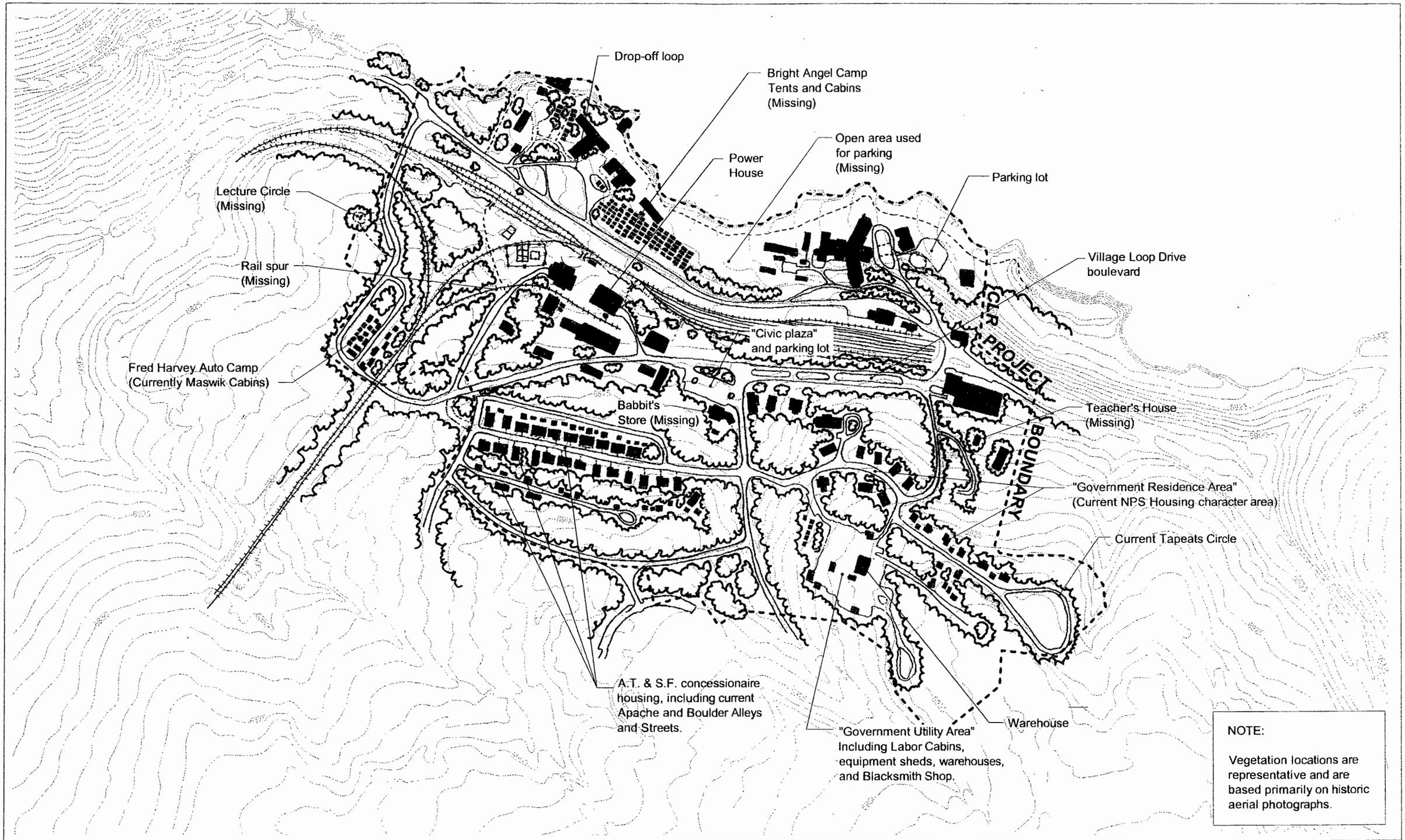
92 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
93 Ibid.
94 Ibid.
95 Ibid.
96 Ibid.
97 Ibid.

Concessionaire Housing Erected	1927-1930	The Santa Fe Railway built 25 residences in the park concessionaire's residential area between April 1927 and September 1930 (Bldgs. #SRQ0799, #SRQ0800, #0812 through #0823, Bldgs. #SRQ0801 through #SRQ0808). The houses were constructed using standard plans. Many were duplexes. One of the houses (Bldg. #8SRQ024) was moved from its original location west of the railroad tracks to Apache Street in September 1929.
2nd Administration Building Completed	1929	The second administration building (Bldg. #SRB0103) was included as one of the key structures on the 1924 comprehensive plan. Located on the east side of the designated civic plaza at the intersection of Center Road and Village Loop Drive, the building was designed in the NPS Rustic style. It was completed in April 1929.[98]
Rangers' Residence Built	1929	The Ranger's Residence (Bldg. #SRQ0017), designed to accommodate up to four unmarried rangers, was completed in 1929.[99]
Mule Corral Built	circa 1930	The Santa Fe Railway built a stone and wood mule corral at the Bright Angel Trailhead circa 1930.[100]
Checking Station House Moved	1930	The 1925 checking station house (Bldg. #SRQ0016) was moved from the park's south entrance to Kaibab Street within the NPS residential area in 1930. The building was remodeled to house a park ranger.[101]
Hospital Erected	1930	A hospital was erected near the NPS Residential Area in 1930. The same year, NPS completed a gas and oil station building (Bldg. #SRB0079) and a warehouse (Bldg. #SRB0078) in the utility area.[102]
NPS Construction	1930	During the year, NPS erected two houses on Kaibab Street (Bldgs. #SRQ0014 and #SRQ0015), along with five laborer's cabins (Bldgs. #SRQ0061 through #SRQ0065) and an adjacent comfort station (Bldg. #SRB0060) near the NPS utility area.[103]
Stone Retaining Wall Built	1928	In 1928, Jesus Morales, Santa Fe Railroad stonemason, constructed a stone retaining wall west of the 1910 railroad depot along the railroad right-of-way.[104]
Dance Platform and Mud Ovens Built	circa 1930	The Hopi House dance platform and mud ovens were built circa 1930.[105]

98 Ibid.
99 Ibid.
100 "Grand Canyon Village" National Historic Landmark Nomination, 1997.
101 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
102 Ibid.
103 Ibid.
104 Ibid.
105 "Grand Canyon Village" *National Historic Landmark Nomination*, 1997.

Amphitheater Built	circa 1930	The Maswik Amphitheater was built circa 1930 on the west end of the Village just southwest of the intersection of Village Loop Drive and the railroad tracks.[106]
Water System Constructed	1931-1932	The Santa Fe Railway Company built a water system to supply water to Grand Canyon Village from the spring located below the rim at Indian Garden. Designed circa 1925, survey and construction on the water line and pump house did not begin until 1931.[107]
NPS Construction	1931	During 1931, five cabins for bachelor laborers (Bldgs. #SRQ0051 through #SRQ0055), two houses on Kaibab Street (Bldgs. #SRQ0019 and #SRQ0021), a comfort station in the public campground (now demolished), and the remodeling of the first Administration Building (Bldg. #0001) for use as the Park Superintendent's residence were completed.[108]
Fred Harvey Paint Shop Built	1931	In 1931, the Santa Fe Railway built a paint shop (#0572) for the Fred Harvey Company in the concessionaire's utility area south of the railroad tracks.[109]
El Tovar Hotel Renovated	1931	In 1931, the Santa Fe Railway installed bathrooms in twenty-five rooms at the El Tovar Hotel and remodeled the rooms. The project was designed and supervised by Fred Harvey architect Mary Elizabeth Jane Colter.[110]
Coal Storage Building Erected	1932	Bldg. #SRB0088, originally used as a coal storage building, was built in the NPS utility area during the summer of 1932.[111]
Small-scale Features		
Concrete Walk and Arch Built	circa 1930	A concrete sidewalk, arch, and stairway were erected near the Kolb Studio circa 1930.[112]
Village Loop Drive Landscaping and Wall Built	1931-1932	Today's Village Loop Drive was developed in separate segments over a seven-year period. The third segment, located between the NPS Superintendent's Residence (Bldg. #0001) and the cabin camp on the western end of the Village, was completed between 1931 and 1932. The project also incorporated significant landscaping work that included the construction of a 950-feet-long stone retaining wall on the south side of the roadway. The stone retaining wall and stairs that are located at the head of the railroad tracks were also rebuilt at this time.[113]

106 Ibid.
107 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
108 Ibid.
109 Ibid.
110 Ibid.
111 Ibid.
112 "Grand Canyon Village" National Historic Landmark Nomination, 1997.
113 Anderson, Village Loop Drive HAER Report, 7-11.



NOTE:

Vegetation locations are representative and are based primarily on historic aerial photographs.

Map Sources: Water Development Project at Grand Canyon, Arizona, February 1920/Revised 1931; A.T. & S.F. RY. System Standard Five Room Section Houses, 1927/1929; National Historic Landmark nomination, 1997; and historic aerials and photographs.

SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. H	LANDSCAPE FEATURES circa 1932 GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113/20223 PKG. NO. — SHEET 2 OF 67

The New Deal and Park Development During the Great Depression: 1933-1942

In 1933, showing a perceptive understanding of the path that the NPS would utilize in the 1930s, GRCA Superintendent Minor R. Tillotson noted that, "from a purely mercenary point of view, the park is in a fair way to gain more in the form of physical improvements by the National Recovery Act than would have transpired for a number of years—in some instances perhaps not at all—under a normal trend of park affairs." [114] Though he cited the June 1933 National Recovery Act in discussing the impact of Federal emergency relief funds on the Grand Canyon, the funds that NPS administrators would use to realize the pent-up demand for infrastructure at the national parks were actually administered by several Federal relief programs during the 1930s. The two programs under which the vast majority of funds expended at GRCA were from the Public Works Administration (PWA) and the Civilian Conservation Corps (CCC).[115]

The availability of PWA funds enabled the construction or improvement of the vast majority of roads in and to the park in the mid-1930s to early 1940s. PWA funds were granted to private contractors to hire workers to build state and Federal infrastructure projects. In addition, the reality engendered by the dire economic conditions of the Great Depression caused fierce competition between road builders. As a result, the NPS and the BPR, the Federal agency responsible for road construction in the national parks, obtained lower prices for their construction projects.

By July 1933, nearly 200 men arrived at the South Rim and established CCC camps in Grand Canyon Village. Company #819 immediately began work. In 1933 and 1934 alone, CCC workers on the South Rim constructed sixteen miles of telephone line, built seventeen miles of boundary fencing, created water reservoirs for game, eliminated fire hazards by removing dead timber, and instituted insect and pest control over 300 acres. During their stay at the GRCA, CCC workers helped clean ditches, maintain roads, and survey and mark park boundaries. They built tennis courts, campgrounds, a new firehouse, and the Grand Canyon Village School. [116] Just three years after Congress initiated funding for the CCC, senior executives at NPS declared that "the CCC had advanced forestry and park development by 10 to 20 years."[117] Tillotson's vision of the future had come to pass (*Figures 34*, *35*, and *36*).

During this same period, the Fred Harvey Company built another Colter-designed building in the Village, the Bright Angel Lodge, and redeveloped the Bright Angel Camp area (*Figures 37* and *38*). By 1937, there were two CCC camps at the South Rim headquarters; Company 819 had been joined by Company 847, which built a second camp near the Santa Fe housing area. Together, the CCC crews at the South Rim built storage tanks and a pump house, helped to revise and rebuild the head of the Bright Angel Trail, laid power line, built drainage systems, and helped to maintain the South Rim's roads, and foot and horse trails.[118] By 1942, the combination of concessionaire and Federally-funded construction had completely transformed Grand Canyon Village.

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114 GRCA Annual Report, 1933, 2.

115 Michael F. Anderson, "Polishing the Jewel: An Administrative History of the Grand Canyon National Park" (Ph.D, diss., Northern Arizona University, 1999), *fn 6*, 221.; When it began in 1933, the CCC program's official name was the Emergency Conservation Work (ECW) program. From the program's beginnings, the national press corps and the general public embraced the "CCC" appellation. Acquiescing to reality, the program's name was formally changed to the CCC in 1937; See John C. Paige, *The Civilian Conservation Corps and the NPS, 1933-1942: An Administrative History* 1985, <http://www.cr.nps.gov/history/online_books/ccc/>.

116 The tennis courts stood within the perimeter of the original athletic track that was built behind the 1939 school building (NPS Building #0227). According to maps, the track was rebuilt in a new configuration between 1966 and 1976. It is not known when the tennis courts were removed, but they once stood in the vicinity of the present Community Recreation Center (NPS Building #1537-built 1996).

117 Paige, *The Civilian Conservation Corps*.

118 GRCA Annual Report, 1938, 12-13.

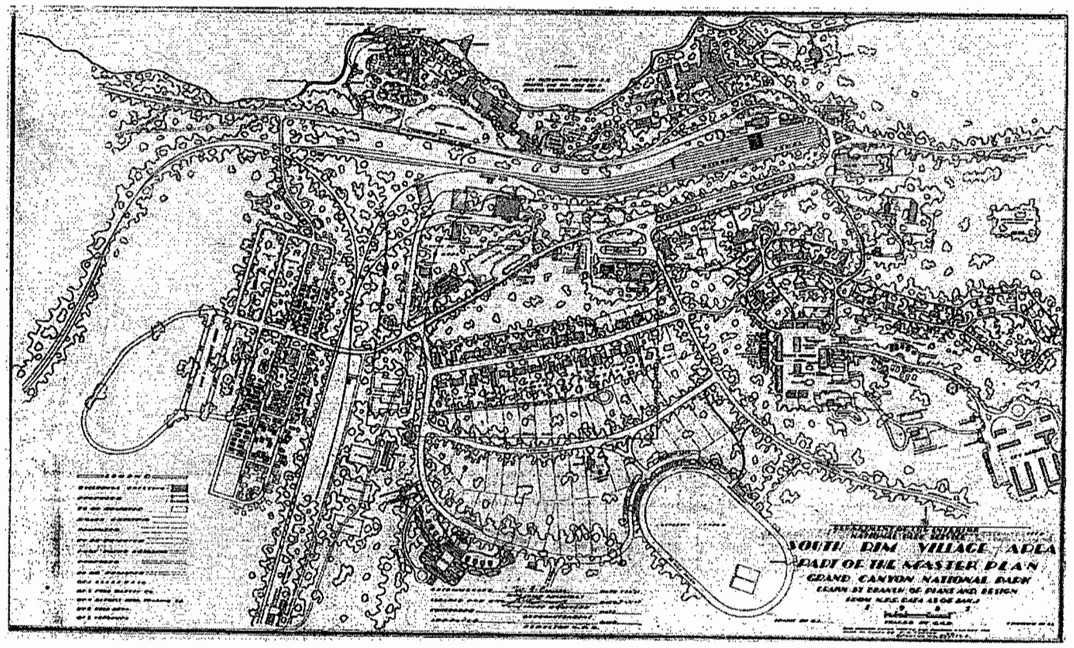


Figure 34. 1935 "South Rim Village Area, Part of the Master Plan." (Grand Canyon Museum Collection Catalog #28342)

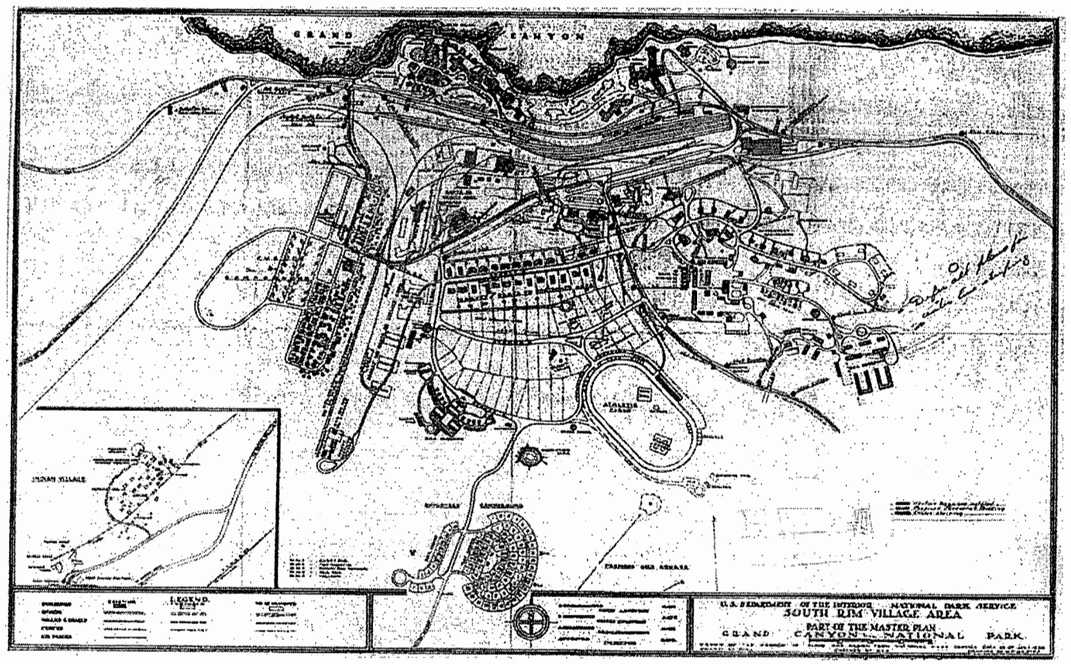


Figure 35. 1938 Master Plan for South Rim Village Area. (Grand Canyon Museum Collection Catalog #26769)

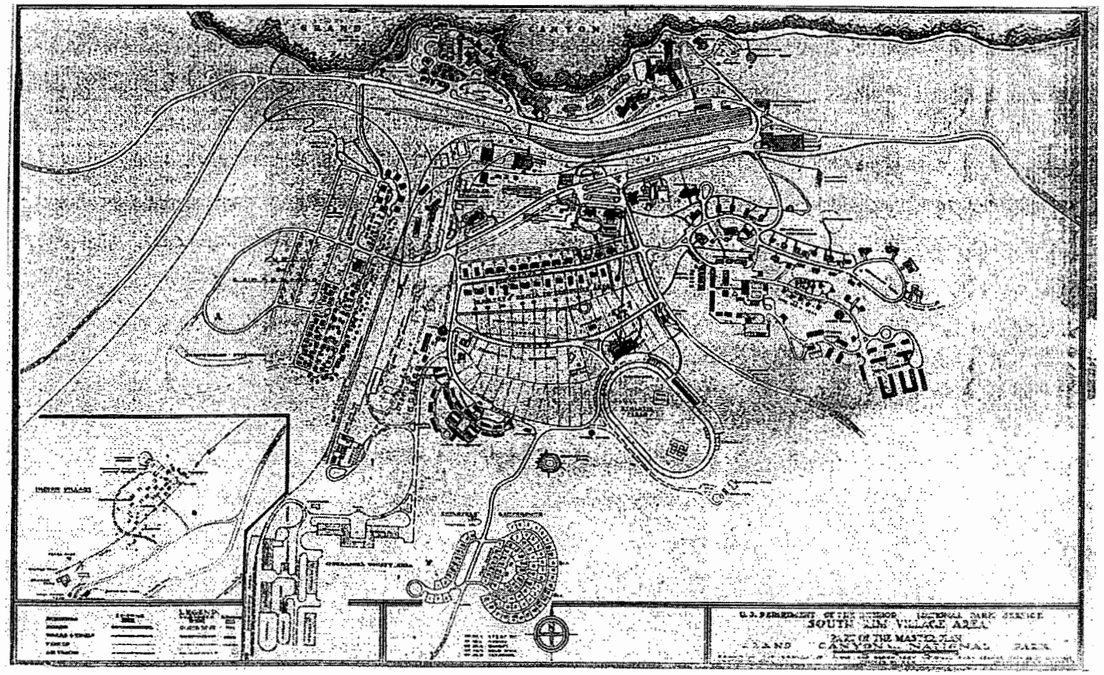


Figure 36. 1941 Master Plan for South Rim Village Area. (Grand Canyon Museum Collection Catalog #74826)

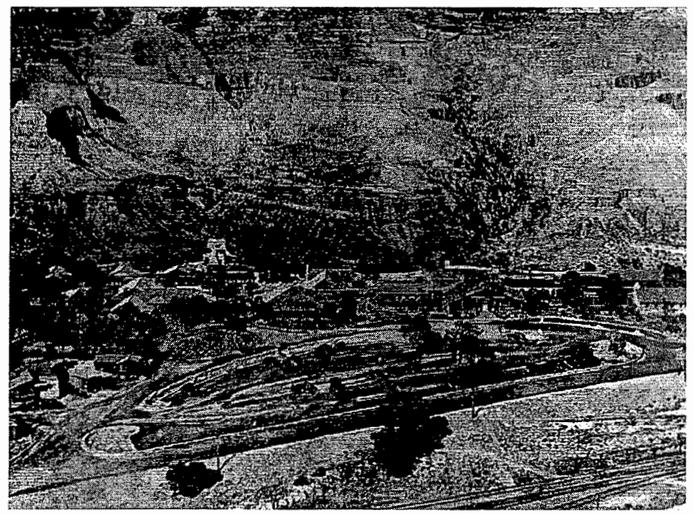


Figure 37. Aerial photo of Mary E.J. Colter's Bright Angel Lodge complex taken shortly after the building's completion in 1935. (Grand Canyon Museum Collection Catalog #9538)

Chronology by Landscape Characteristics, 1933-1942:

Land Use and Activities

Village Development Activities	1933-1942	"The development of the Grand Canyon Village after the comprehensive plan was approved occurred in two distinct phases. The second phase was tied directly to the Emergency Conservation Works (ECW) programs initiated in the National Parks from 1933 through 1942. This phase witnessed substantial development of NPS facilities and Village infrastructure including footpaths, roads and utilities. Park concessionaires' development activities focused primarily on expanded visitor and tourist accommodations. Development during the second phase generally adhered to the 1924 comprehensive plan, however, the NPS made some modifications in order to accommodate new facilities or as a 'refinement of Park Service philosophy concerning aesthetically sensitive development within national parks."[119] (Refer to *Figure 39* for an aerial view of the Village during this era.)
CCC Camp Established	1933	In May 1933, the director of the NPS approved sites for two CCC camps at GRCA. One of these, Camp NP-2, was located at the east end of Juniper Hill.[120] By July 15 of that year, the camp contained its full quota of 200 enrollees consisting primarily of Arizona men.[121]
Staff Added	1933	In 1933, three landscape architects and an engineer were assigned to work at GRCA in support of the Emergency Conservation Works (ECW) program.[122]
CCC Camp Established	1934	In August 1934, another CCC camp was authorized at Grand Canyon Village. Camp NP-4 was built along Avenue C (Coconino Street) on the south edge of the Village.[123]
Cattle Barred From Village	1934	CCC crews completed approximately seventeen miles of drift fencing along the southern boundary of the park in an effort to eliminate from the Village over-grazing by range cattle.[124]

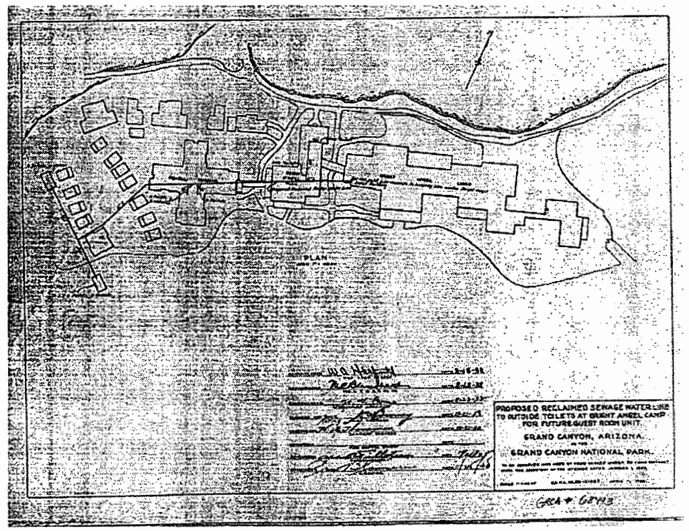


Figure 38. 1938 plan: "Proposed Reclaimed Sewage Water Line to Outside Toilets at Bright Angel Camp for Future Guest Room Unit." (Grand Canyon Museum Collection Catalog #68493)

119 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
120 Ibid.
121 GRCA Annual Report, 1933, 26.
122 Ibid., 5.
123 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
124 GRCA Annual Report, 1934, 1.

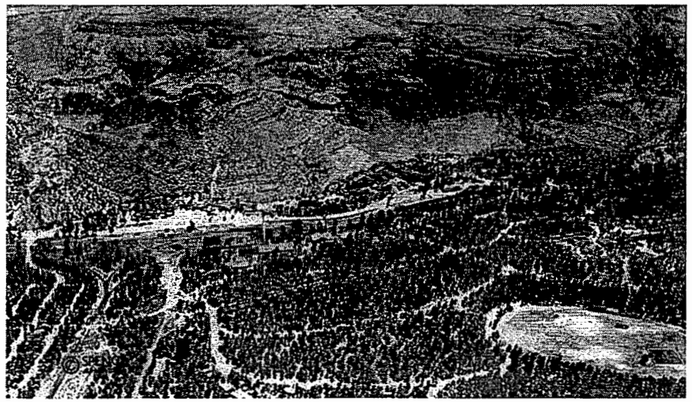


Figure 39. 1935 aerial photo of Grand Canyon Village. By this date, the 1924 Master Plan layout has been realized in the circulation system, and in the general separation of uses. (Grand Canyon Museum Collection Catalog #9539)

Circulation Networks

Boulder Street Paved	1934	Avenue B (Boulder Street) and the Hermit Rim Road were paved in 1934.[125]
Residential Service Road completed	1934	CCC crews completed the upgrading of the service road in the residential area of the Village. The job consisted of grading and draining the unimproved roadways in accordance with approved surveys and the laying of a minimum six-inch layer of heavy rock with a top layer of crushed stone.[126]
Footpaths Built	1934-1935	CCC crews built footpaths through the NPS residential areas in 1934.[127] The work included the completion of 1,000 feet of four-foot-wide, crushed rock footpaths with weathered limestone curbing on either side. The paths connected the residential area with the school and the community building.[128]
Village Loop Drive Section Realigned	1935	In 1935, a segment of the recently completed Village Loop Drive, near the El Tovar Hotel, was realigned. The new alignment passed directly north of the railroad depot at the bottom of the hill that ascended to the hotel. The old alignment was retained as a service road for the rim-side concessions.[129]
Parking Area Constructed	1935	CCC crews constructed a new parking area adjacent to the Community Building (Bldg. #SRB0044).[130]
Campground Improved	1935	CCC crews improved and expanded the public campground at the Southwest corner of the Village by adding two blocks of campsites as proposed on the "Meinecke Plan" that allowed for individual camp plots while protecting much of the existing vegetation. In addition, crews completed the surfacing of approximately one-half mile of service roads in the campground, and the clearing and grading of another one-eighth mile of new roads in the same area. The improvements also included the installation of corrugated iron drainage pipes with headwalls.[131]
Avenues A and B Paved	1935-1936	Avenue A (Apache Street) and Avenue B (Boulder Street) were re-graded and paved in 1935-1936.[132]

125 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.

126 GRCA Annual Report, 1934, n.p.

127 Patricia Mott, *Memorandum to Division Chief, Res. Mgmt.; Historic Architect; Cultural Resource Manager; Res. Mgmt. Files on Historic Structures, Regarding CCC Work Projects in Grand Canyon National Park.* November 28, 1983.

128 Ibid.

129 Anderson, "Village Loop Drive HAER Report," 7-11.

130 Mott, *Memorandum to Division Chief.*

131 GRCA Annual Report, 1935, n.p.

132 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.

Circulation Networks (continued)

Plaza Parking Area Constructed	1935-1936	A formal parking lot was built within the civic plaza area in 1935-1936.[133]
Walks and Steps Built	1936	CCC laborers built a walkway and steps in front of the Administration Building (Bldg. #SRB0103).
Footpath Built	1936	The CCC constructed a footpath from the post office to the community building.[134]
Steps and Path Built	1936	CCC crews built steps and a walkway from the school building to the playground near the school.[135]
Stone path and Steps Built	1936-1937	The stone path and steps behind Kolb Studio (Bldg. #SRB0533) were built by the CCC between 1936 and 1937.[136]
Sidewalks Constructed	1937	In 1937, CCC crews built a concrete sidewalk along the north side of Village Loop Drive between the community building (Bldg. #SRB0044) and the administration building (Bldg. #SRB0103). The path continued north across a CCC-built footbridge over Bright Angel Wash and terminated on the south side of the railroad tracks. The footbridge was rebuilt in 1988.[137]
Footpath Resurfaced	1936-1937	CCC crews resurfaced the path between Verkamp's store (Bldg. #0546) and the Yavapai Observation Station to the east of the Village.[138]
Roads Resurfaced and Culverts Built	1938	The BPR resurfaced 14.6 miles of the South Entrance Road from the south boundary of the park through the Village to Grapevine Canyon on the Desert View Road. The project included the laying down of a bituminous treated, plant-mixed aggregate over the existing asphalt-bound, macadam pavement in order to "secure a uniform riding surface." In addition to this work, CCC crews laid 275 feet of thirty-inch culvert pipe along the west side of the South Entrance Road near the Administration Building (Bldg. #SRB0103) (*Figure 40*).[139]
Paths and Sidewalks Built	1939	CCC crews built paths and sidewalks, including those around the school (Bldg. #SRB0208) and in other unspecified locations in the Village.[140]



Figure 40. View of CCC-built stone culvert at Navajo Street and Village Loop Drive (looking north), circa 1935. (Grand Canyon Museum Collection Catalog #9540)

133 Anderson, "South Entrance Road HAER Report," 2-3.
134 Mott, *Memorandum to Division Chief*, n.p.
135 Ibid., n.p.
136 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
137 Ibid.
138 Mott, *Memorandum*, n.p.
139 GRCA Annual Report, 1938, 9, 13-14.
140 Mott, *Memorandum*, n.p.



Figure 41. CCC crew transplanting trees and shrubs in the NPS residential area, December 31, 1937. (Grand Canyon Museum Collection Catalog #7850)

Traffic Island Built	1939	CCC crews constructed a traffic control island at the intersection north of the Administration Building (Bldg. #SRB0103).[141]
Flagstone Walks Built	1940	The flagstone walks through the Bright Angel Cabin area were completed in 1940.[142]

Vegetation

CCC Projects	1933-1942	During the CCC's tenure at GRCA, the crews accomplished many landscape projects, including erosion control, fire fighting, tree pest control, and the planting of shrubs in residential areas (*Figure 41*). In addition, the crews helped lay sod, plant seeds, and re-vegetate burned or damaged areas. In some cases they obliterated old roads by planting new trees or transplanting existing specimens, and helped to eradicate exotic plant species within the park.[143]
Vegetation Mapping	1935-1936	In 1935 and 1936, under the direction of the Branch of Forestry and funded with Emergency Conservation Work funds, the NPS completed a "Master Plan – Vegetation Type Map" of the entire park. The map indicated that vegetation in the area of Grand Canyon Village consisted mainly of cultivated areas with what it termed "Residential" species. The adjacent areas were dominated by ponderosa and pinyon pine, as well as by Utah juniper.[144]
CCC Plantings	1936-1937	CCC crews planted shrubs and plants in the residential areas and also seeded and laid sod at the recreation field.[145]
Trees Planted	1938	CCC crews planted trees in unspecified areas at the South Rim in order to obliterate old roads. The crews also cut down and treated trees that had been damaged by insect infestations.[146]
Wildflower Seeds Planted	1938-1940	Wildflower seeds were sown along roadsides throughout the park. These were referred to by the superintendent as "demonstration wildflower gardens" in his 1940 annual report.[147]
Gas Station Landscaped	1939	CCC crews completed a landscaping project at the Village gas station.[148]

141 Ibid.
142 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
143 Mott, Memorandum, n.p.
144 GRCA Annual Report, 1936, n.p.
145 Mott, Memorandum, n.p.
146 Ibid.
147 GRCA Annual Report, 1939; 1940, n.p.
148 Mott, Memorandum, n.p.

Vegetation (continued)

Landscaping At New School	1940	In 1940, CCC crews participated in the construction of foot paths and landscaping around the newly constructed school building (Bldg. #0227).[149]
Trees and Shrubs Moved	1939-1940	CCC crews dug up and replanted over 5,000 trees and shrubs around various structures and residences, in open areas, and along roads and trails throughout the park.[150]
Seed Collection and Eradication of Exotic Plants	1939-1940	The CCC took part in NPS programs of ongoing seed collection, exotic plant eradication, and erosion control (including grading of earthen embankments) programs throughout the park.[151]

Buildings and Structures

Sewer and Water Lines Extended	1933	CCC crews extended sewer and water lines within the Grand Canyon Village.[152]
Stone Wall Built	1933-1934	A stone wall was erected along the canyon rim behind the Bright Angel Camp. The wall replaced an earlier wood fence.[153]
Stone Wall Built	1934	In 1934, the CCC built a stone wall along the rim north of El Tovar and Hopi House.[154]
PWA Construction	1934-1935	Public Works Administration (PWA) funds were used to construct six new buildings in the Village between 1934 and 1935. The buildings were the post office (Bldg. #SRB0166), two postal employee's residences (Bldgs. #SRQ0809 and #SRQ0810), a new house for the Chief Ranger (Bldg. #SRQ0012), and a residence for the park doctor (Bldg. #SRQ0009), and a fire equipment storage building (Bldg. #0097).[155]
New Community Building Erected	1934-1935	The current community building (Bldg. #SRB0044) was built in 1934-1935 using CCC labor and PWA funds (*Figures 42* and *43*). The location of this structure was the first major deviation from the 1924 comprehensive plan. The site west of the "civic center" was chosen as a more central location than the original site at the east edge of the Village.[156]



Figure 42. The newly completed Community Building, ca. 1935. (Cline Library, NAU)

149 GRCA Annual Report, 1940, 8.
150 Ibid., 8.
151 Ibid., 8.
152 Mott, Memorandum, n.p.
153 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
154 Ibid.
155 Ibid.
156 Ibid.

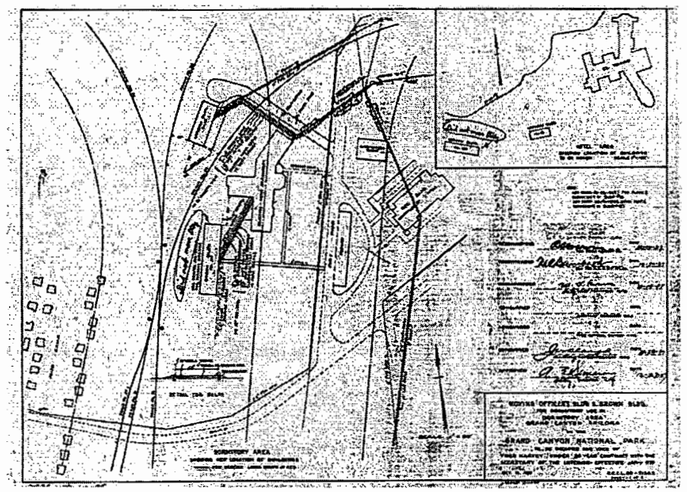


Figure 43. 1937 plan: "Moving Officer's Bldg. & Brown Bldg. for Dormitory Use in Dormitory Area, Grand Canyon, Arizona." (Grand Canyon Museum Collection Catalog #68095)

Athletic Field Improved	1934-1935	The CCC completed leveling the community baseball field, the grading of the racetrack, and the reconstruction of the grandstand and fence that surrounded the field.[157]
Bright Angel Lodge Built	1935	The Santa Fe's new Bright Angel Lodge, replacing the late-nineteenth-century Bright Angel Hotel and camp, was completed in June 1935. The lodge complex was designed by Mary E.J. Colter, and incorporated the historic Buckey O'Neill Cabin (Bldg. #0508), Powell Lodge (Bldg. #0509), the original Cameron Hotel (Bldg. #0526, also known as Red Horse cabin), along with a main lodge building (Bldg. #0507), and nine smaller guest cabins (Bldgs. #0517 through #0525). Later in 1935 and 1936, an additional ten cabins were erected at Bright Angel Lodge (Bldgs. #0510 through #0514 and Bldgs. #0527 through #0531).[158]
Wall Rebuilt	1935	Crews reconstructed a section of the rim-side wall and footpath that ran between Bright Angel Lodge and the El Tovar Hotel. The new, stone retaining wall was eighteen inches wide, twenty-seven inches high and extended 648 feet.[159]
Fred Harvey Auto Camp Expanded	1935	The Santa Fe moved approximately forty cabins from the Bright Angel Lodge site to the Fred Harvey Auto Camp in 1935. In addition, they built eight more Colter-designed cabins there in 1935. By 1936, there were a total of 101 cabins, laundry rooms, lavatories, and the main lodge building at the Auto Camp complex.[160]
Three Buildings Razed	1935	Three "undesirable" structures near the old Post Office building were demolished by CCC crews.[161]
Mess Hall Remodeled	1935	The former mess hall in the NPS residential area was remodeled into a duplex residence by CCC crews. (Bldg. #SRQ0024).[162]
CCC Construction	1935-1936	During the 1935-1936 construction season, CCC crews built a bathroom addition to the park administration building (Bldg. #SRB0103), expanded the grandstands at the recreation field, and landscaped the area around the postal employee houses on Avenue A (Apache Street) (Bldgs. #SRQ0809 and #SRQ0810).. The CCC also began construction on a service road behind the post office (Bldg. #SRB0166) and built footpaths at an unidentified location in the Village.[163]

157 GRCA Annual Report, 1934, n.p.
158 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
159 GRCA Annual Report, 1935, n.p.
160 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
161 Mott, *Memorandum*, n.p.
162 Ibid.
163 Ibid.; "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.

Buildings and Structures (continued)

NPS Utility Buildings Erected	1935-1936	During 1935 and 1936, the CCC erected a plumbing shop (Bldg. #SRB0080), an ECW warehouse (Bldg. #SRB0090), a jail and watchman's office (Bldg. #SRB0087), and four multi-bay garages in the NPS residential area (Bldgs. #SRB0099, #SRB0183 through #SRB0185) (Figure 44).[164]
Employee Cabins Built	1936	The CCC erected ten NPS employee residences and a four-car garage (Bldg. #SRB0043) on Juniper Hill in 1936.[165]
Wading Pool Built	1936	CCC crews built a wading pool at the school's playground area, along with steps and a walkway from the school building to the play area.[166]
Telephone Building Constructed	1936-1937	The Mountain States Telephone Building (Bldg. #0500) was erected behind the post office in 1936.[167]
Men's and Women's Dormitories Built	1937	In 1937, the Santa Fe Railway erected the Fred Harvey men's dormitory (Bldg. #0576, later known as Victor Hall) west of the community building near the railroad wye. The same year, the company erected a women's dormitory (Bldg. #0539, later known as Colter Hall) just Southwest of the El Tovar Hotel. At the same time, the "Brown Building" or Fred Harvey Officer's Dormitory (Bldg. #0578) building was moved from its original located behind the El Tovar Hotel to a site just west of the Fred Harvey Men's Dormitory. The building was remodeled to house Mexican employees, who were segregated from white employees. The building was renamed "Victor Hall Annex." [168]
Service Station Built	1937	The Fred Harvey Service Station (Bldg. #0862), located on Center Road, just south of Avenue B, was erected in 1937 (*Figure 45*).[169]
Lookout Studio Remodeled	1937	In 1937, the Santa Fe Railway remodeled the Lookout building to serve as the Fred Harvey photo studio.[170]
Freight Platform Built	1938	CCC crews erected a freight platform at the railroad depot and a truck route that connected the depot and the platform.[171]



Figure 44. Aerial photo of NPS residential area, looking northwest, February 23, 1938. (Grand Canyon Museum Collection Catalog #8036)

164 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
165 Ibid.
166 Mott, *Memorandum*, n.p.
167 Ibid.
168 Ibid.
169 Ibid.
170 Ibid.
171 Ibid.

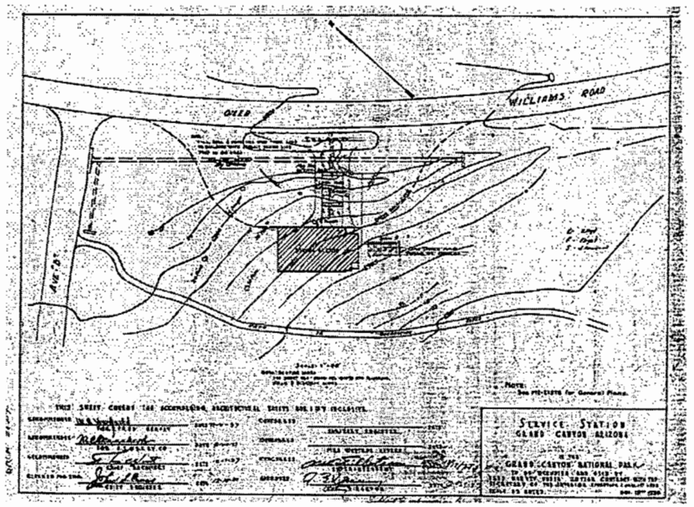


Figure 45. 1936 plan for Fred Harvey Service Station at Grand Canyon. (Grand Canyon Museum Collection Catalog #68517)

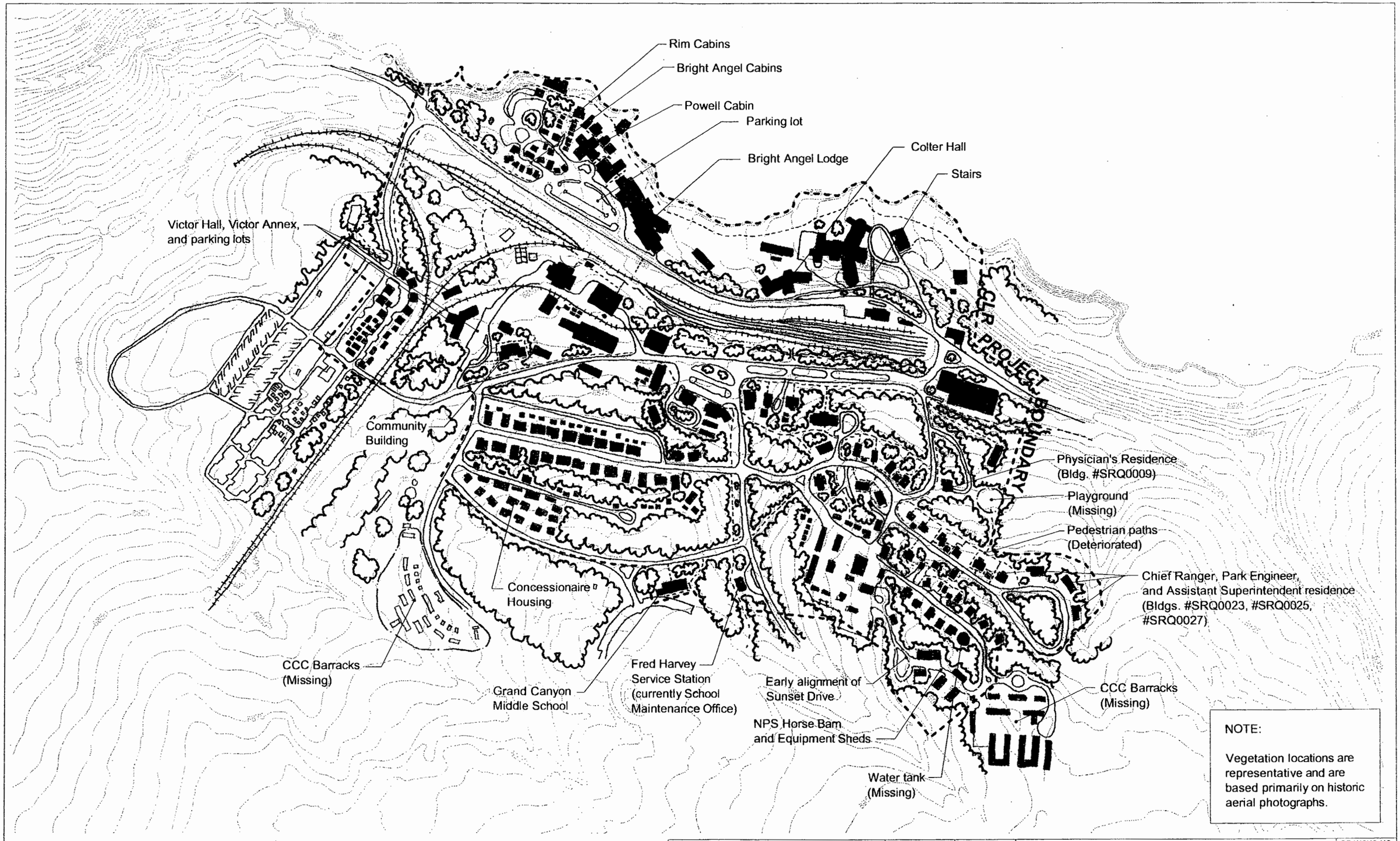
Grand Canyon School Erected	1938-1939	Financed with $35,000 in PWA funds, and built with CCC labor, the Grand Canyon School was erected on Avenue B in 1938-1939.[172]
CCC Work	1938-1939	The original "teacherage" (Bldg. #SRQ0066) was moved from its location west of the first school building to a site on Juniper Hill in 1938. A new, three-room, postal employee's residence was built on the same street in 1939.[173]
Steps Rebuilt	1939	CCC crews rebuilt the steps at the Administration Building (Bldg. #SRB0103) and at the Hospital (Bldg. #SRB0100).[174]
Sewer Line Built	1939	CCC crews laid 870 linear feet of six-inch, tile sewer line with manholes in the NPS residential area. This work consisted of revisions to the old sewer line that ran below residences #2 through #5.[175]
Auto Camp Cabins Built	1939-1940	Eight auto camp cabins designed by Mary E.J. Colter (Bldgs. #0581 through #0589) were completed in 1940.[176]
El Tovar Remodeled	1940	A dining room addition was made to the El Tovar in 1940, and its music room was converted into additional guest rooms.[177]
First School Remodeled	1940	The original Grand Canyon School building was remodeled for use as a temporary museum and workroom for the park naturalist in 1940.[178]
CCC Projects	1940-1942	The last two years of the CCC construction program at Grand Canyon Village were highlighted by the construction of three NPS employee houses (Bldgs. #SRQ0023, #SRQ0025, #SRQ0027) on Tapeats Circle in the NPS residential area.[179]

172 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
173 Ibid.; GRCA Annual Report, 1939, 11.
174 Mott, *Memorandum*, n.p.
175 GRCA Annual Report, 1939, 11-12.
176 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.
177 Ibid.
178 Ibid.
179 Mott, *Memorandum*, n.p.

Small-scale Features

Log Footbridge Built	1938	CCC crews erected a log footbridge over the drainage ditch along the path that led to the Santa Fe Depot.[180]
Patio Built	1939	The flagstone patio just north of Bright Angel Lodge was constructed in 1939.[181]
Handrails	1939	CCC crews completed handrails at the steps that led to Kolb Studio (Bldg. #SRB0533) on the rim.[182]

180 GRCA Annual Report, 1938, 8.
181 "Grand Canyon Village" National Historic Landmark Nomination, 1997.
182 Mott, Memorandum, n.p.



NOTE:

Vegetation locations are representative and are based primarily on historic aerial photographs.

Map Sources: South Rim Village Master Plans for 1935, 1938, and 1941; Moving Officers Bld'g & Brown Bld'g, 1937; National Historic Landmark nomination, 1997; and historic aerials and photographs.

SCALE: 1" = 400'

0 200 400 800 1200

N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. H

LANDSCAPE FEATURES
circa 1942

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO.

SHEET 3 OF 67

World War II and Post-War Recovery: 1943-1955

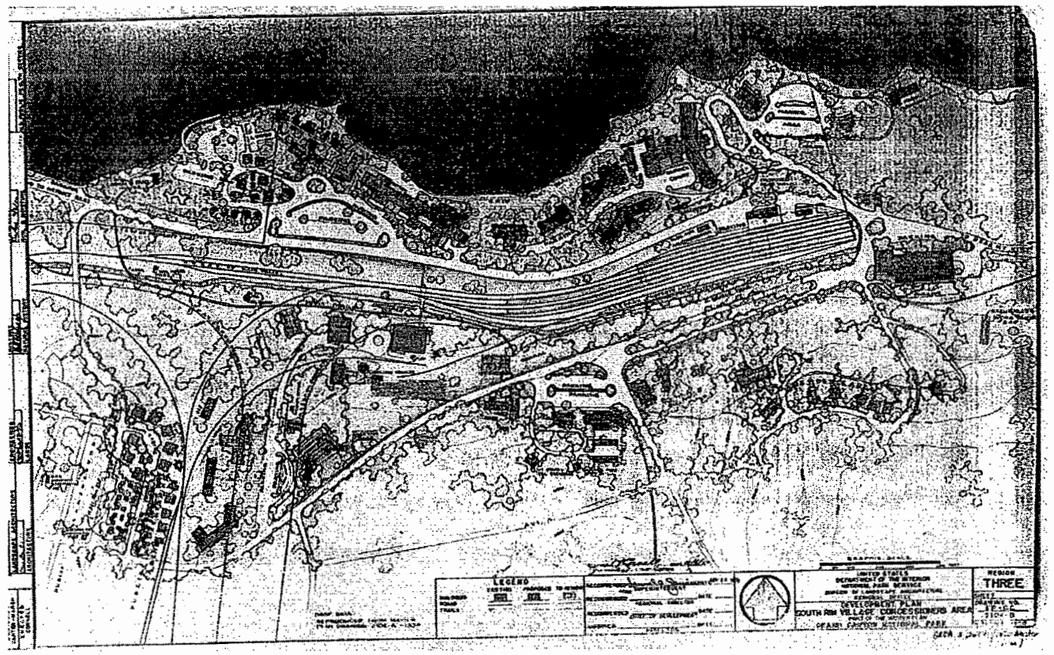


Figure 46. 1950 Master Plan for South Rim Village Area. (Grand Canyon Museum Collection Catalog #26771)

In December 1941, the United States was attacked by Japan and began its participation in World War II. Most NPS and private employees left the Grand Canyon to join the war effort. Visitation to GRCA dropped to below 100,000 people and the Bright Angel Lodge and public campgrounds were closed for the duration of the war. The last CCC company left the South Rim in 1942. What historian Michael Anderson has termed the "ironical golden years" in the park's history had come to an end.[183]

After World War II ended in 1945, tourists began to return to the Grand Canyon. In 1950, almost twice as many people visited the Grand Canyon as had visited the park in 1940. For many years, despite this increase, and despite official planning efforts, the park remained grossly underfunded and unable to handle its growing deluge of visitors.

In 1950s, GRCA planners completed comprehensive master plans for the park that called for substantial development of new tourist facilities on the South Rim (*Figures 46* through *49*). In addition to proposing that three new lodges be built, the plans proposed construction of two additions to the Bright Angel Lodge complex, although the planners called for little redevelopment within the original Grand Canyon Village. Instead, they proposed a new alignment for South Entrance Road that would create an expansive loop road east of Grand Canyon Village, touch the rim near Mather Point, and continue east and south to the Village where it would intersect with Village Loop Drive at the Fred Harvey Garage. It was hoped that this new entrance road would divert traffic from Grand Canyon Village's congested roads and provide visitors with a new approach to the rim. In 1954, when the new South Entrance Road was built, the former entrance road was redesignated as "Center Road," or the Grand Canyon Village Commercial Access Road.[184]

In 1954, NPS conducted an official visitor survey for the park that revealed that the demand for GRCA accommodations was almost 20 percent higher than the park's available capacity.[185] Such overcrowding eclipsed the positive scenic and recreational aspects of the park; this was a problem shared throughout the park system. To combat the crisis, NPS Director Conrad Wirth proposed an ambitious, agency-wide effort that he named Mission 66.

183 Anderson, *Polishing the Jewel*, 173-233.

184 Anderson, *South Entrance Road Historic American Engineering Record*, 11.

185 United States Department of the Interior, National Park Service, "Mission 66 For Grand Canyon National Park and Monument," 1956, 5.

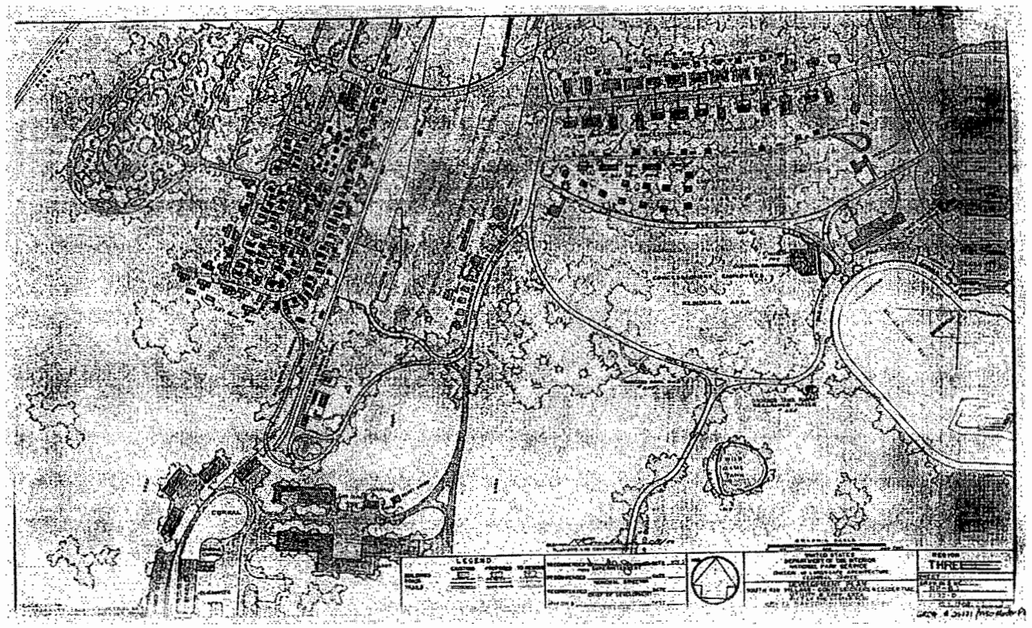


Figure 47. 1950 plan for concessionaire housing area. (Grand Canyon Museum Collection Catalog #26771)

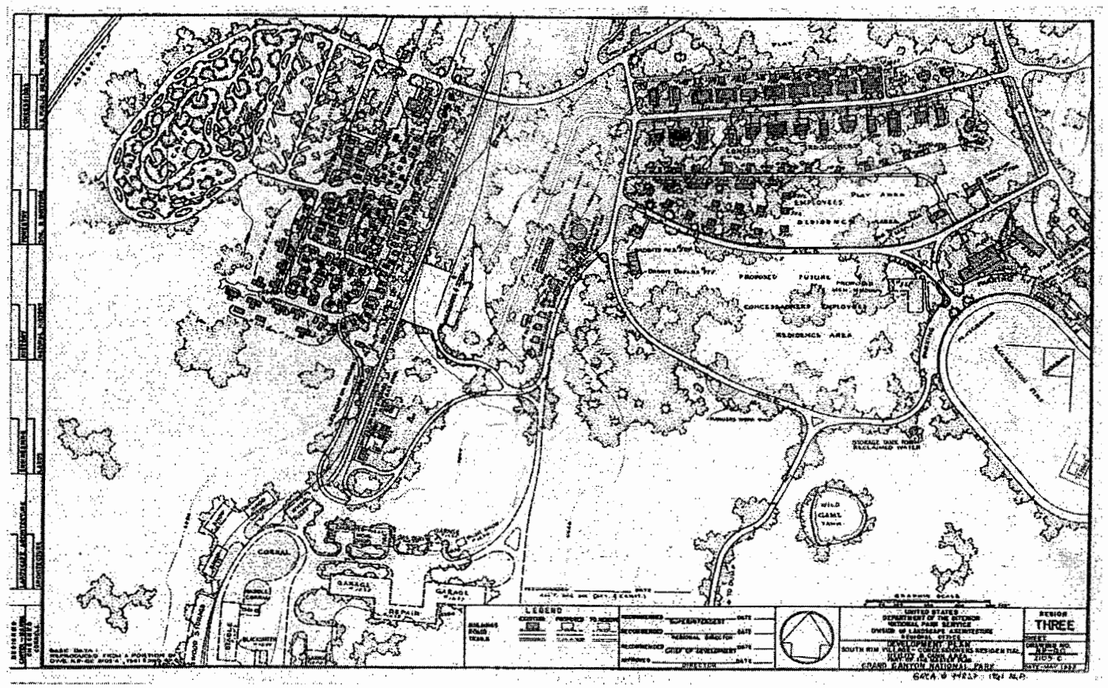


Figure 48. 1952 Development Plan for South Rim Village. (Denver Service Center TIC Drawing # GRCA 113-2105C)

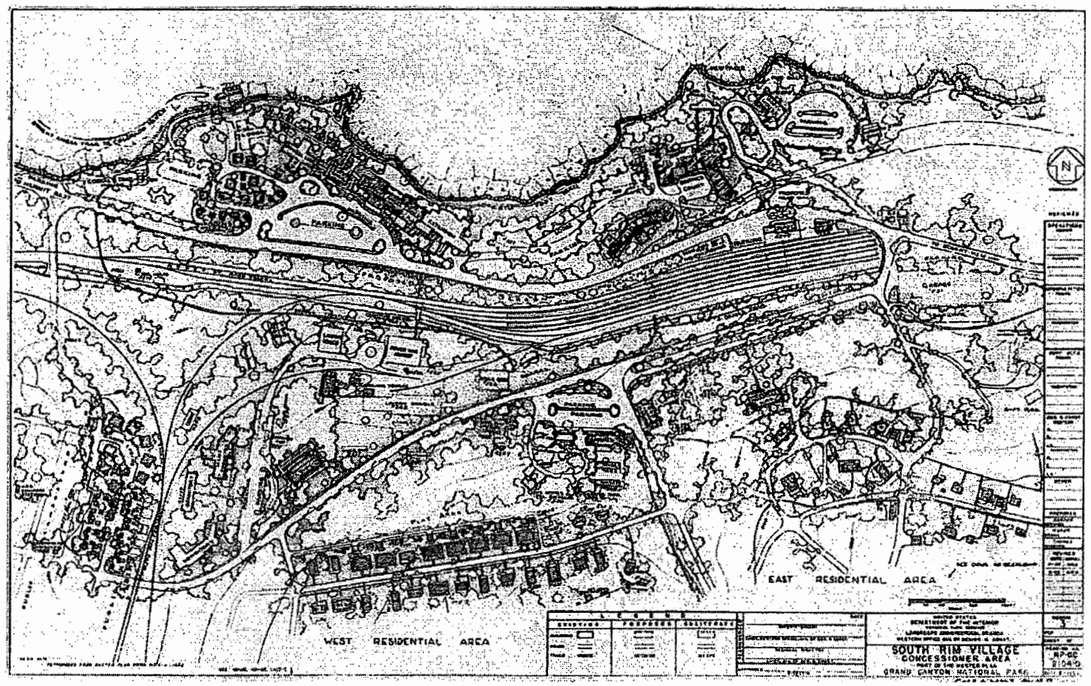


Figure 49. 1955 Development Plan for South Rim Village, Concessionaire Area.(Grand Canyon Museum Collection Catalog #74227)

Chronology by Landscape Characteristics, 1943-1955:

World War II	1941-1945	In December 1941, the United States was attacked by Japan and began its participation in World War II. Most NPS and private employees left the Grand Canyon to join the war effort. Visitation to GRCA dropped to below 100,000 and the Bright Angel Lodge and public campgrounds at the South Rim were closed for the duration of the war.
CCC Work Ceased	1942	In 1942, the last CCC company was disbanded at the Grand Canyon and the national program ceased.
Army Presence	1943-1946	Between 1943 and 1946, numerous military groups came to the park for training exercises. While there, they occupied one of the two former CCC camps. During 1943, over 12,000 men in units of up to 800 men each, made the trip to Grand Canyon Village. In addition, between 1942 and 1943, seventeen employees of the U.S. Army Signal Corps were stationed at Grand Canyon Village to "collect weather data of a confidential nature."[186]
Expansion Study Completed	1946	In 1946, park superintendent Harold Bryant completed a study of park needs that related to the expansion of accommodations in Grand Canyon Village and made several policy decisions as a result of the study. Among these were plans to limit expansion to the west to the base of Hopi Hill; devote the canyon rim to public use; require employee housing to be located south of the railroad tracks; and re-route the park's main South Entrance Road in order to "bypass the present confusion of roads in the Village and reach the rim more easily." Bryant also emphasized the need for an additional water source for the Village.[187]
Former CCC Camp Occupied	1947	The return of a full complement of park staff and concessionaire employees necessitated the remodeling and use of several buildings in the former CCC camp as temporary staff quarters.[188]
Meeting on Development Proposals	1948	On February 26 and 27, 1948, Superintendent Harold Bryant met with Thomas Vint, the chief of development for the NPS to discuss park development. They determined that a proposed new museum would not be located at Yavapai Point, but instead be built a quarter-mile east of the Fred Harvey Garage on East Rim Drive. They also decided that the high cost of extending utilities prohibited the construction of a new entrance station at the park's southern boundary.[189]

186 GRCA Annual Reports, 1943-1946.
187 GRCA Annual Report, 1946, 1.
188 GRCA Annual Report, 1947.
189 GRCA Annual Report, 1948, 5.

Land Use and Activities

Post-WWII Development Plans	1950	In 1950, GRCA planners completed an all-encompassing Master Plan for the park. The new plan called for substantial development of new tourist facilities on the South Rim. In addition to including proposals for three new lodges on the rim, the plan proposed construction of two additions to the Bright Angel Lodge complex. The plan called for very little clearing and reconstruction within the original Village. Alternatively, the plan proposed a new alignment for the South Entrance Road. The new alignment would create an expansive loop road east of the established Village that touched the rim near Mather Point and then continued east and south to the Village where it intersected with Village Loop Drive at its easternmost point near the Fred Harvey Garage (Bldg. #0551). This new entrance road was intended to divert traffic from the congested roads within the Village and provide visitors with a new approach to the rim. Also included in the 1950 plan was the construction of substantial visitor facilities within the loop of the new South Entrance Road. These planned facilities included a proposed concessionaire's cabin area, a trailer court, a public campground, and a central commercial core that included shops, a lunchroom, an information center, and a grocery store.[190]
Scenic Protection Bill Passed	1951	On July 12, 1951, President Truman signed Senate Bill 109 that provided for scenic protection for the South Approach Road (AZ Route 64) south of the National Park.[191]
Visitor Survey Conducted	1954	A visitor survey was conducted at Grand Canyon in 1954. The survey revealed, among other things, that on average the demand for accommodations was 19 percent higher than actual available capacity at the park.[192]

Circulation Networks

New South Entrance Road Envisioned	1946-1947	As early as 1946, park planners and park Superintendent Harold Bryant acknowledged the need for an alternative approach road to the rim. In his 1946 annual report, Bryant stated that planners were studying whether to "re-route the incoming road from the south so that visitors will bypass the present confusion of roads in the Village and reach the rim more easily."193 In 1947, the NPS regional office of the Division of Plans and Design prepared a drawing that proposed a new entrance route from the south. The proposed route included a broad loop that extended northeast and turned gradually west to enter the Village on its east end.[194]
Train Service Re-established	1947	In 1947, train service to the Grand Canyon was resumed after travel restrictions imposed during WWII were lifted.[195]

190 1950 Master Plan, drawings.
191 GRCA Annual Report, 1952.
192 "Mission 66 For Grand Canyon National Park and Monument," 5.
193 GRCA Annual Report, 1946, 1.
194 Anderson, South Entrance Road HAER Report, 22-23.
195 GRCA Annual Report, 1947, 1.

Circulation Networks (continued)

Footpaths Resurfaced	1951	In 1951, park staff accomplished the resurfacing of several miles of footpaths along the canyon rim and through the Village. The work consisted of seal coating and chipping the existing surface of the paths.[196]
New South Entrance Road Built	1953-1954	Reacting to a post-war boom in visitation, and the related congestion at Grand Canyon Village, park administrators planned and built a new southern entrance road that bypassed the heart of the Village and approached the rim east of the densely built town. After the completion of the new South Entrance Road in 1954, the old entrance road was redesignated "Center Road" or Route 32, the Grand Canyon Village Commercial Access Road.[197]

Vegetation

Mistletoe Control Program	1951-1952	NPS staff felled, pruned, and removed trees infected with mistletoe. A total of 3,397 trees were treated.[198]

Buildings and Structures

CCC Camp Dismantled	1944	The buildings and tent platforms that comprised CCC camp number NP4-A at the Grand Canyon Village were dismantled, salvaged, and moved to Phoenix by the Army Corps of Engineers.[199]
CCC Buildings Remodeled	1947	In 1947, the NPS remodeled three former CCC barracks near the NPS residential area into eight apartments for seasonal temporary NPS personnel. Two other CCC buildings were remodeled as permanent living quarters for park staff.[200]
Auto Camp Additions	1947	In 1947, Fred Harvey began adding to its Auto Camp at the west end of the Village (*Figure 50*). They planned to move twenty-two old cabins from the Bright Angel Hotel area to the auto camp, build forty prefabricated cabins, redecorate the existing cabins, erect a twenty-foot square linen storage building, and install a new soda fountain and cafeteria equipment.[201]



Figure 50. 1950s photo of Fred Harvey Auto Camp (later known as the motor lodge). (Grand Canyon Museum Collection Catalog #9966)

196 GRCA Annual Report, 1951.

197 Anderson, South Entrance Road HAER Report, 11.

198 GRCA Annual Report, 1952.

199 GRCA Annual Report, 1944; Based on 1950 Master Plan drawings, it is likely that camp NP4-A was located south of the Santa Fe residential area off Avenue C, and camp NP1-A was located just southeast of the NPS residential area. The 1950 plans show that at least three buildings from the latter CCC camp still remained at that date.

200 GRCA Annual Report, 1947, 1.

201 Ibid., 5

Verkamp's Residence Erected	1948	The Verkamp's concession erected a residence on Avenue B (Boulder Street) for its employee in 1948 (Bldg. #506). The building was later remodeled circa 1960.[202]
Railroad Utility Building Erected	1950	In 1950, the Santa Fe Railway erected a utility building (Bldg. #548) on Village Loop Drive west of the 1910 railway depot (Bldg. #549).[203]
Checking Station Destroyed, Rebuilt	1952	The south entrance checking station was destroyed when it was accidentally struck by a car. The building was rebuilt using insurance funds.[204]
Elementary School Constructed	1953	In 1953, a new elementary school building (Bldg. #323) was constructed just east of the 1939 school (Bldg. #SRB0227).[205]
Teacherage Built	1953-1955	Three residences for teachers were built on Boulder Street between 1953 and 1955 (Bldg. #322, #325 and #326).[206]

Small-scale Features

Tables Installed	1947	In 1947, approximately fifty tables were built and installed in the campground area at Grand Canyon Village, replacing a number of deteriorated tables.[207]

202 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
203 Ibid.
204 GRCA Annual Report, 1952.
205 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.
206 "Grand Canyon Village" National Historic Landmark Nomination, 1997.
207 GRCA Annual Report, 1947, 2.

The Mission 66 Era to the Present Day: 1956-2003

Mission 66 was an intensive, ten-year planning and construction program undertaken by the NPS to address the extraordinary demands being made on the nation's parks. The program, begun in 1956, aimed to upgrade and extend the national parks' infrastructure, visitor services, and building stock in order to accommodate the projected boom in visitors predicted for the park system by the NPS's fiftieth anniversary in 1966 (*Figure 51*). The program came on the heels of a long period of congressional under-funding of the parks, and during a period in which the number of national park visitors increased exponentially.

Some of the design and planning philosophies that informed the Mission 66 program included the use of modern design principals and materials to create functional and economical buildings, the decentralization of services and park destinations in order to diminish overcrowding, and the democratic accommodation of large numbers of visitors. At the Grand Canyon, Mission 66 planning focused on how to address overcrowding in the visitor accommodation areas. The park's initial Mission 66 report summarized problems that GRCA administrators had struggled with since the beginning of the NPS management of the Grand Canyon. For example, "the problem of Grand Canyon National Park is compounded by expanded automobile travel in an area tailored to the needs of railroad travel, with developed areas over centralized because of limited sources of water supply, [and] all tied to a situation made unalterable due to deficient operating funds."[208]

The original Mission 66 program for GRCA called for decentralization of the developed areas in order to "disperse anticipated visitor impact on the park." However, the plan to decentralize by building more visitor facilities on the east end of the park, namely at Desert View, was stymied by the meager existing water supply there. Therefore, the plan stated that if no new sources of water were identified, that decentralization plans would have to be abandoned. If decentralization proved to be impossible, the Mission 66 plan recommended that visitor accommodations be limited, and that the park be reoriented for mainly daytime usage.[209]

At the Grand Canyon Village, most of the Mission 66 development occurred outside the boundaries of the Village Historic District (*Figures 52*, *53*, and *54*). Major developments included the construction of a new visitor services center to be located eastern end of Grand Canyon Village at the Mather Service Area. By 1961, this newly developed area included a visitor center, an amphitheater, the ninety-six-room Yavapai Lodge, a campground, a trailer village, and a new camper services building. Mission 66 construction in or near Grand Canyon Village included the building of a new south entrance station in 1958, new employee residences in 1957-1958 and 1961, road and parking improvements such as South Approach Road, South Entrance Road, Mather Parking Area, Yavapai Spur Road and Parking Area, and 16.4 miles of East Rim Drive, 1954-1961, and the Trailview Overlook in 1961 at Bright Angel Trailhead.[210] The NPS also used Mission 66 funds to expand its residential area, to create a new NPS maintenance area south of Grand Canyon Village, and completed several other projects by the end of the 1960s.[211]

Another major planning effort was undertaken in the mid-1970s as the NPS continued to struggle with overcrowding and ever-increasing automobile traffic (*Figures 55* and *56*). This new development was facilitated by the construction of a more consistent and sustainable water supply system in the late 1960s. By the early 1950s, the water provided from Garden Creek at Indian Garden was insufficient to meet the needs of the South Rim developed area and the Santa Fe Company concessionaire had to pay to have supplemental water shipped in by train from Flagstaff. Planning for a new water source began as early as the 1940s, but did not become a NPS priority until 1965 when the Union Pacific Railroad, and its subsidiary the Utah Parks Company, donated the North Rim water system to the NPS. Construction on the cross-canyon water line commenced in 1965, was delayed by a massive flood in December 1966, and was finally completed in 1970.

Upon completion, the new pipeline was capable of carrying 190 million gallons of water annually from Roaring Springs on the North Rim across the canyon to the South Rim in a pipe that ranges from six to eight inches in diameter.[212] In the 1970s, the increased water supply allowed for the development of additional visitor facilities that included overnight lodging accommodations. The largest of the lodging developments occurred at Maswik Lodge, Yavapai Lodge, and at the fifty-four-room Kachina Lodge, all of which were completed between 1971 and 1979.

As visitation increased exponentially in the 1980s, finding alternative means of travel for visitors became the focus of the NPS and private operators. In 1989, a year where almost four million people visited the park, a privately-owned company rehabilitated the Grand Canyon Railway, whose passenger rail service ended in 1968, and began new rail service to Grand Canyon Village. With park visitation nearing the five million mark in the twenty-first century, similar efforts to create alternative means to enjoy the Grand Canyon will continue.

208 Ibid., 3-4.

209 Ibid., 3-4.

210 *The Frontiersman, A Newsletter Associated with the Mission 66 Frontiers Conference* (Grand Canyon National Park, April 24-28, 1961), n.p.

211 Greg Robinson and Zehra Osman, *Rehabilitation Plan and Cultural Landscape Recommendations for NPS Housing in Grand Canyon Village Historic District*, (Grand Canyon National Park, Arizona: NPS, 1993), 13-14.

212 Anderson, *Polishing the Jewel*, 314-316.

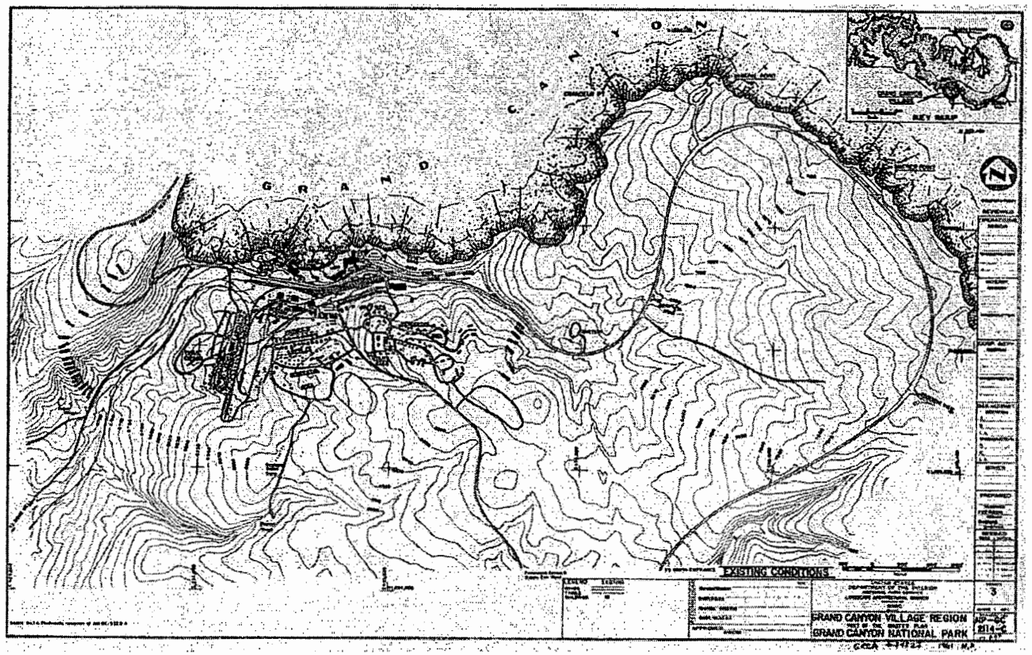


Figure 51. 1957 Existing Conditions, Grand Canyon Village Region.(Grand Canyon Museum Collection Catalog #74827)

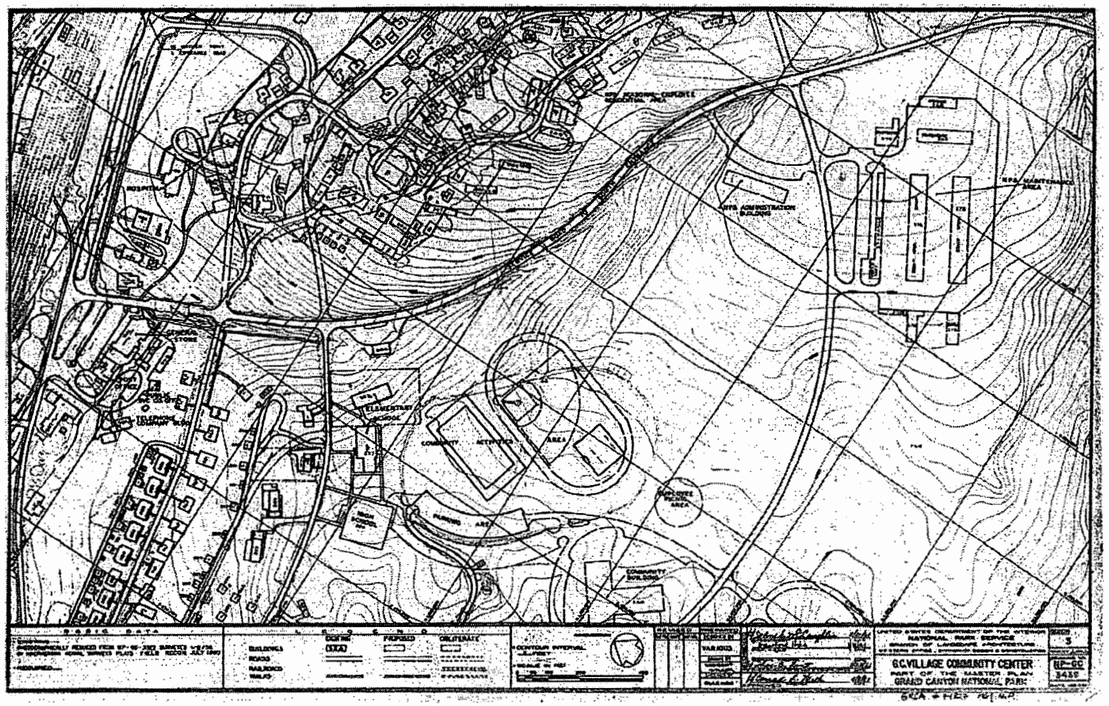


Figure 52. 1961 plan: "G.C. Village Community Center." (Grand Canyon Museum Collection Catalog #74827)

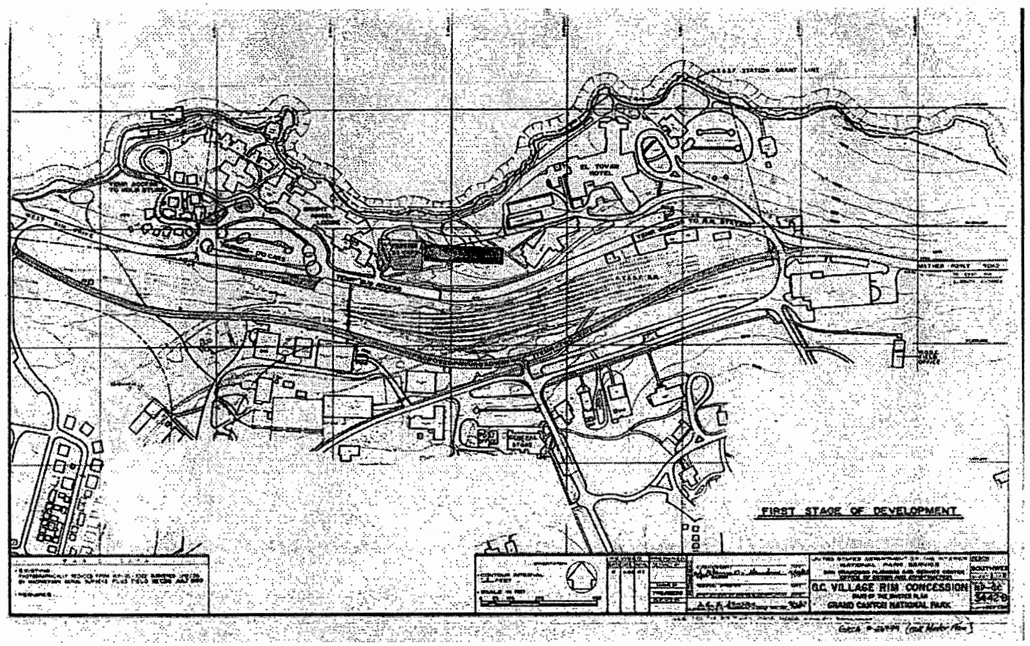


Figure 53. 1966 plan: "G.C. Village Rim Concession, First Stage of Development."(Grand Canyon Museum Collection Catalog #26779)

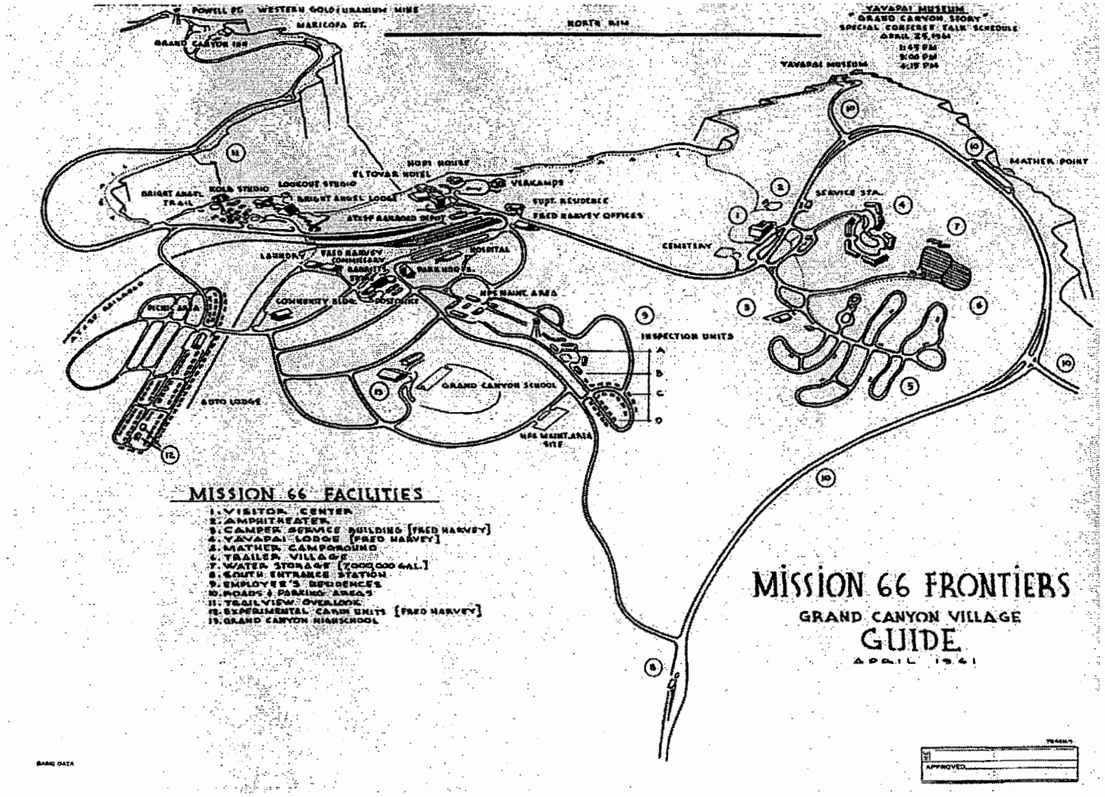


Figure 54. 1961 map depicting Mission 66 construction projects at Grand Canyon National Park. This map accompanied a tour conducted in connection with the National Park Service's "Mission 66 Frontiers Conference" held at the Grand Canyon in April 1961. (Grand Canyon Museum Collection Catalog #57838)

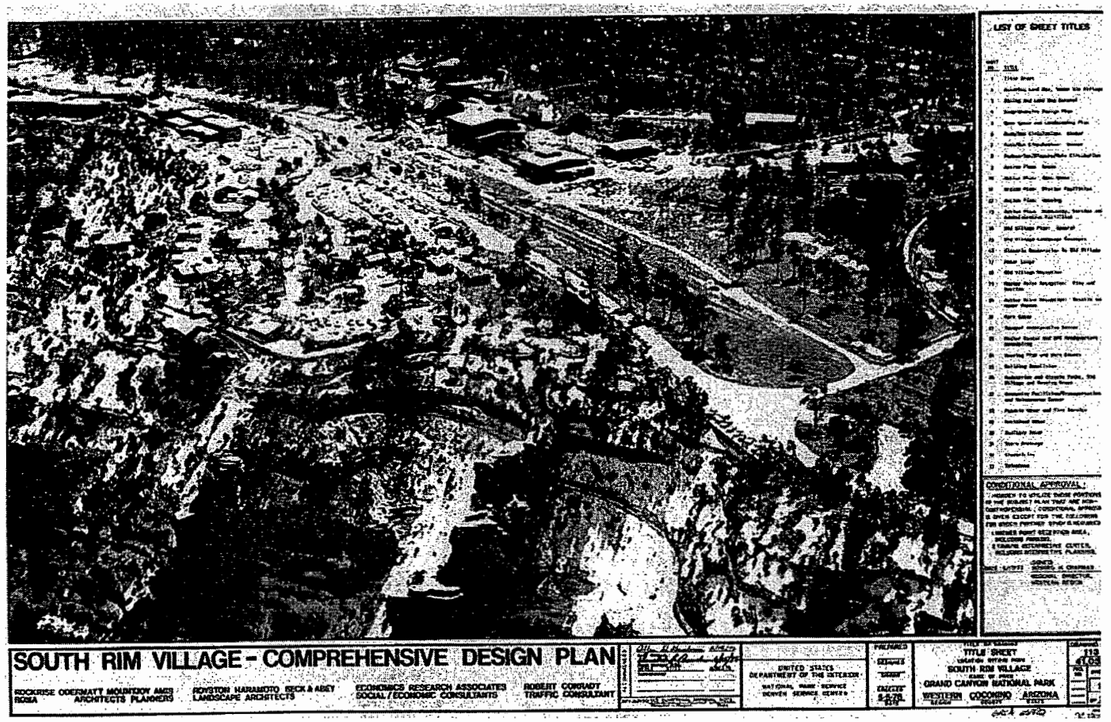


Figure 55. 1976 South Rim Village - Comprehensive Design Plan. (Grand Canyon Museum Collection Catalog #26782)

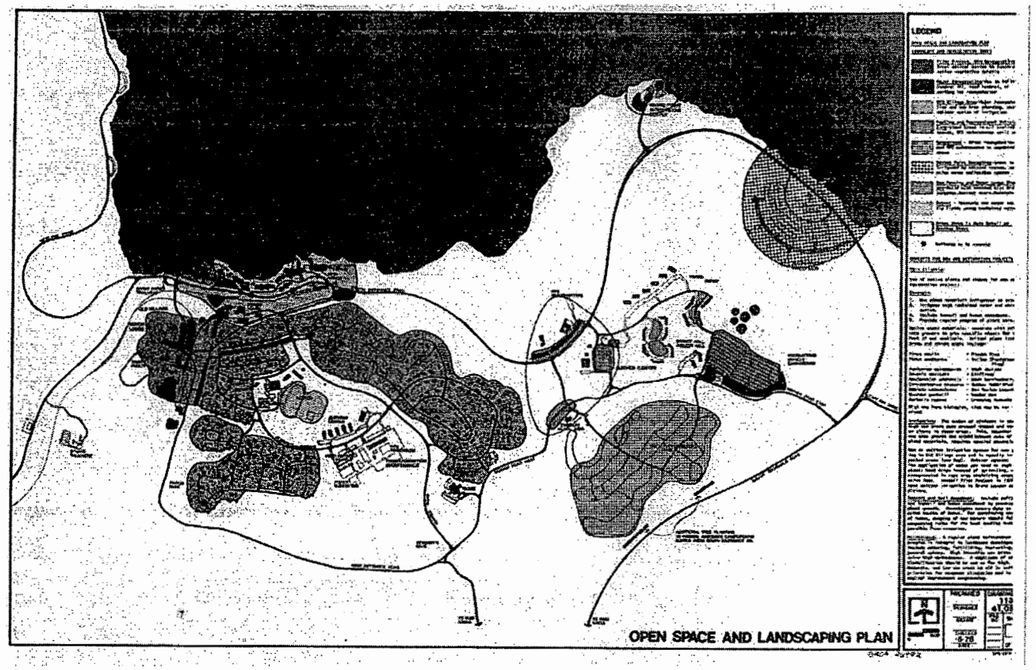


Figure 56. 1976 Open Space and Landscaping Plan for Grand Canyon Village. (Grand Canyon Museum Collection Catalog #26982)

Chronology by Landscape Characteristics, 1956-2003:

Land Use and Activities

Mission 66 Plans	1956-1966	At the Grand Canyon, Mission 66 planning focused on addressing overcrowding in the visitor accommodation areas. The dilemma facing park managers was how to accommodate the throngs of visitors to the canyon without adversely affecting the natural setting. A limited water supply, an "outmoded" early-twentieth-century physical layout, and an extended period of underfunding added to the challenges faced by GRCA. At the Grand Canyon Village, most of the Mission 66 development occurred outside the boundaries of the Village Historic District. Developments included the construction of a new visitor services center located east of the Village at the Mather Service Area. By 1961, this newly developed area included a new visitor center (1957), amphitheater behind the visitor center (1961), new ninety-six-room lodge (Yavapai Lodge, 1958, expanded 1962, 1972), Mather Campground (1960), Mather Trailer Village (1961), and Fred Harvey camper service building (1961). Additionally, Mission 66 resulted in the substantial expansion of the NPS residential area, the creation of a new NPS maintenance area south of the Village, the construction of the Albright Training Center, Grand Canyon High School (#324, 1958), and many trail and road improvements. In the late 1960s, the Mather Business Center, located within the new visitor services center, was built. It included a medical clinic, Babbitt's General Store, a bank, and a post office.[213] Other Mission 66 projects included a water storage facility located near the trailer village (1957, 1961), a new south entrance station (1958), new employee residences (1957-58, 1961), road and parking area improvements (South Approach Road, South Entrance Road, Mather Parking Area, Yavapai Spur Road and parking area, and 16.4 miles of East Rim Drive, 1954-1961), the Trailview Overlook (1961) at Bright Angel Trailhead, two experimental pre-fabricated cabin units built by Fred Harvey in the Auto Camp area, and Grand Canyon High School (1958).[214]
Mission 66 Conference Held	1961	The Mission 66 Frontiers Conference, sponsored by the NPS, was held at GRCA between April 24 and April 28, 1961. The conference, attended by NPS Director Conrad Wirth, examined the accomplishments and future direction of the Mission 66 program. In addition, GRCA staff offered a guided tour of the park's Mission 66 projects.[215]

213 Robinson and Osman, 13-14.

214 *The Frontiersman*, n.p.

215 *The Frontiersman*, n.p.

Circulation Networks

Mission 66 Plans	1956-1966	Mission 66 projects that impacted the circulation systems at the Village included mainly trail and road improvements.[216] These included the construction of a new south entrance station (1958), the completion of the Trailview Overlook (1961) at Bright Angel Trailhead, and a number of road and parking area improvements, namely to the South Approach Road, the South Entrance Road, the Mather Parking Area, the Yavapai Spur Road and parking area, and 16.4 miles of East Rim Drive (1954-1961).[217]
Grand Canyon Railway Service Halted	1968-1969	The Grand Canyon Railway ended its passenger service to Grand Canyon in 1968. In 1969, freight service was halted.[218]
Steel Stair Installed	circa 1980	A steel stairway that connects the railroad tracks to Village Loop Drive in the vicinity of Bright Angel Lodge was installed.[219]
Center Road-Apache Street Intersection Reconstructed	1984	The intersection of Center Road (Old South Entrance Road) with Apache Street (Avenue A) was reconstructed and curbed in 1984.[220]
Railway Reopened	1989	The Grand Canyon Railway was reorganized and rehabilitated under a new, privately owned company. Service along the original track was initiated in September 1989. A new depot was eventually built on the west end of the Village at Maswik Transportation Center.[221]
Center Road Widened and Redesigned	1994	Center Road, the remaining original segment of the 1928 South Entrance Road, was widened and resurfaced in early 1994. In addition, masonry curbing was installed, and most of the CCC-built culvert headwalls along the road were replaced.[222]
Greenway extended	2002	The Grand Canyon Greenway was extended into the Village Historic District from east to Navajo Street, linking the Canyon View Information Plaza with the Village.

216 Robinson and Osman, 13-14.
217 Ibid.
218 "Grand Canyon Depot," *National Register of Historic Places Nomination Form*," 1986.
219 "Grand Canyon Village" *National Historic Landmark Nomination*, 1997
220 Anderson, *South Entrance Road HAER Report*, 11.
221 Ibid.
222 Ibid.

Vegetation

Vegetation Study	1984	The limited evidence included in a photographic comparison of vegetation from 1935 and 1984 showed that, in general, vegetative patterns at Grand Canyon Village changed little over the period. The only discernible changes were the presence of additional grass undergrowth, which the author attributed to the removal of livestock grazing in the area.[223]

Buildings and Structures

Grand Canyon High School Built	1958	Grand Canyon High School (Bldg. #324) was erected Southwest of the 1939 school building.[224]
Trailers Erected	circa 1960	Three pre-fabricated trailers (Bldgs. #TH-01 through #TH-03) were erected in the NPS utility area circa 1960. The building currently used as Boy Scout facilities (Bldg. #241) behind the former Post Office (Bldg. #166) was erected around the same time. A 1948 residence on Boulder Street was remodeled circa 1960 (Bldg. #506).[225]
Thunderbird Lodge Built	1968	The motel-like Thunderbird Lodge (Bldg. #1300) was erected on the rim between Bright Angel Lodge and the El Tovar Hotel.[226]
Cross-Canyon Water line Complete	1970	NPS finished construction of the new cross-canyon water line that brought water from Roaring Springs on the North Rim to the Grand Canyon Village.[227]
Bus Shelters Built	circa 1970	Four bus shelters were erected on Village Loop Drive circa 1970.[228]
Transformers and Fence Built	circa 1970	The transformer structure and surrounding chain link fence west of the Power House were erected circa 1970.[229]
Radio Antenna Erected	circa 1970	A radio antenna was erected behind the Mountain States Telephone Building circa 1970.[230]

223 Jean Armstrong, *Vegetative Trends in Grand Canyon From 1935-1984-Photographs*, Grand Canyon National Park: Division of Resource Management, 1984, n.p.

224 U.S. Department of the Interior, National Park Service, Grand Canyon National Park, "Existing Structures List," 2003.

225 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995; "Grand Canyon Village" *National Historic Landmark Nomination*, 1997.

226 "Grand Canyon Village" National Register of Historic Places Nomination Form, 1995.

227 Anderson, Polishing the Jewel, 316.

228 "Grand Canyon Village" National Historic Landmark Nomination, 1997.

229 Ibid.

230 Ibid.

Verkamp's Storage Building Altered	1970	The Verkamp family concession altered a building just south of their curio shop for use as a storage building (Bldg. #547).[231] Maps indicate that the building was originally erected prior to 1935. It is now occupied as a three-room residence.
Maswik Lodge Developed	early 1970s	The Maswik Lodge was developed on a portion of the site of the original Fred Harvey Auto Camp in the early 1970s. The construction required the demolition of significant portions of the original auto camp.[232]
Kachina Lodge Built	1971	Construction on the Kachina Lodge (Bldg. #1301) was completed. The new visitor lodge was built between the new Thunderbird Lodge and the El Tovar Hotel along the rim.
Modular House Erected	1972	The NPS erected a modular NPS residence on Juniper Hill (Bldg. #472).[233]
Library Built	1974	Coconino County erected a school library building (Bldg. #471) adjacent to the school in 1974.[234]
Buildings Remodeled	circa 1980	A 1936 NPS employee residence on Juniper Hill (Bldg. #169) was extensively remodeled. Other buildings that underwent remodeling or reconstruction included the former Fred Harvey Transportation dormitory (Bldg. #558), the 1906 Fred Harvey Carpenter Shop (Bldg. #575), twelve circa-1930 Santa Fe employee residences on Boulder Street (Bldgs. #845 through #856), and three Santa Fe Coal Sheds on Boulder Street alley (circa 1930, Bldgs. #859 through #861).[235]
NPS Employee Cabins Remodeled	1986	Two, 1936 NPS employee cabins on Juniper Hill (Bldgs. #46, #48) were extensively remodeled.[236]
Babbitt Store Burned	1994	The historic Babbitt store that faced onto the central plaza burned.[237]

231 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995.

232 Robinson and Osman, 14.

233 "Grand Canyon Village" *National Register of Historic Places Nomination Form*, 1995

234 Rockrise, Odermatt, Mountjoy, and Amis, Concessionaire Building Study: Grand Canyon National Park, (January 1975).

235 "Grand Canyon Village" National Historic Landmark Nomination, 1997.

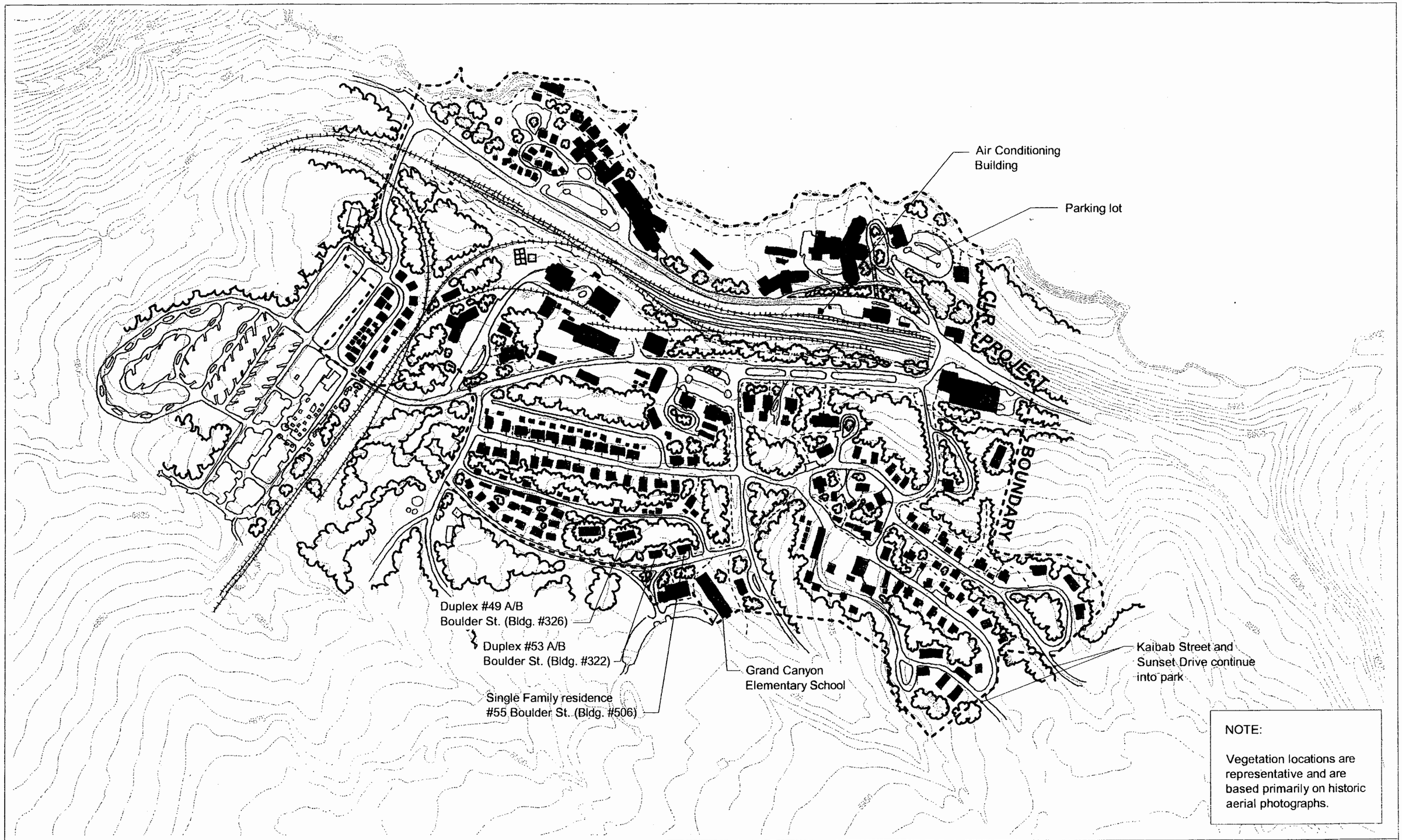
236 Ibid.

237 Anderson, South Entrance Road HAER Report, 19.

Small-scale Features

Headwalls and Culverts Built	1960	The headwalls and culverts at Village Loop Drive at its western crossing of Bright Angel Wash were constructed circa 1960.[238]
Footbridge Built	circa 1970	A footbridge over Bright Angel Wash north of the powerhouse was built circa 1970.[239]
Concrete Stair Built	circa 1970	A concrete stairway that connects the hospital loop to Village Loop Drive was erected circa 1970.[240]
Wayside Exhibit Erected	circa 1980	A wayside exhibit structure was erected near the Bright Angel Trailhead.[241]
Stone Curb Installed	1994	A new stone curb was installed at the "plaza" bus stop.[242]

238 Ibid.
239 Ibid.
240 Ibid.
241 Ibid.
242 Ibid.



NOTE:

Vegetation locations are representative and are based primarily on historic aerial photographs.

Map Sources: South Rim Village Concessioner Area, 1961; South Rim Village-Concessioners Residential, Utility, & Cabin Area, 1961; National Historic Landmark nomination, 1997; and aerial and ground photographs.

SCALE: 1" = 400'

0 200 400 800 1200 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

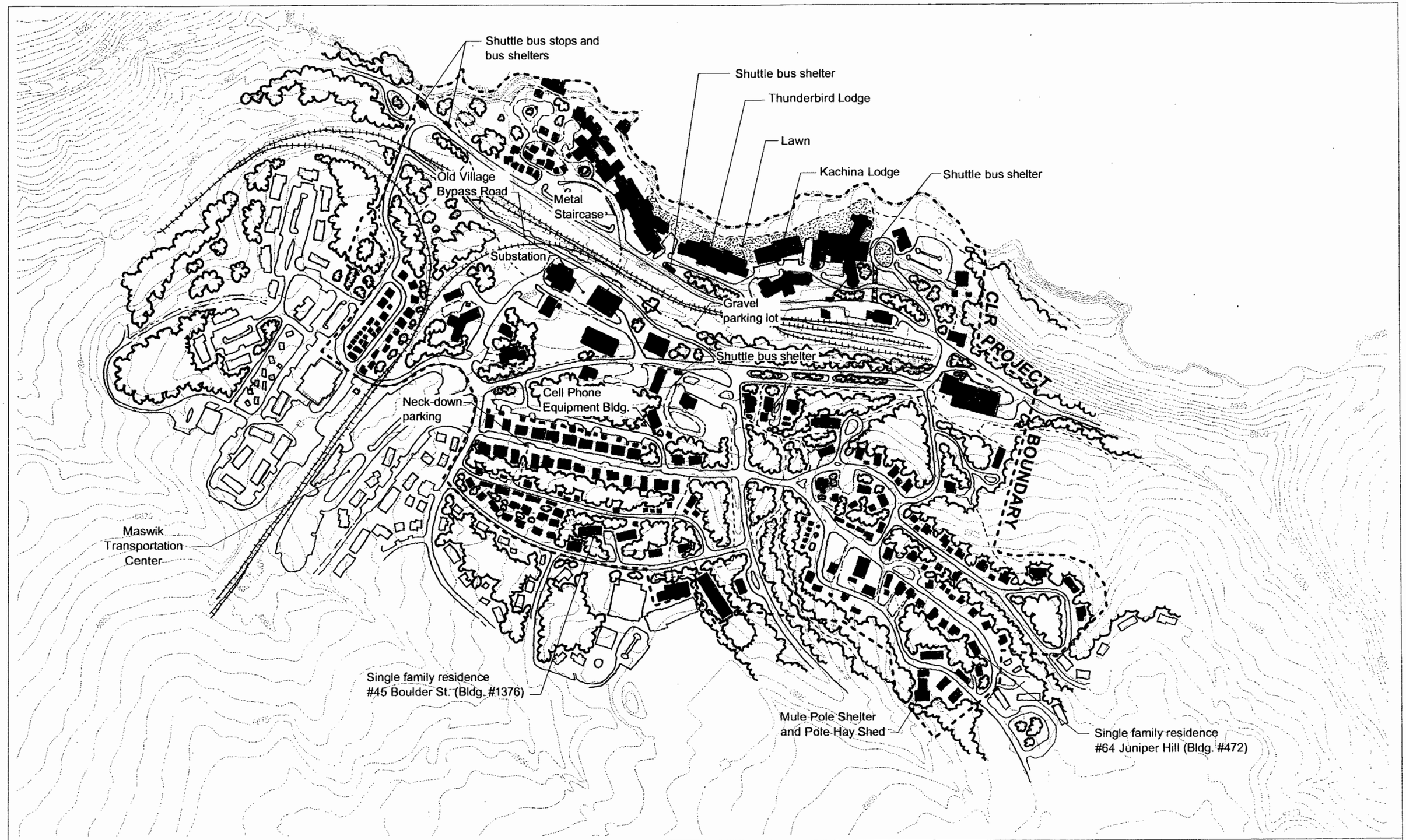
DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. H

LANDSCAPE FEATURES
circa 1966

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223
PKG. NO.
SHEET 4 OF 67



Map Sources: Existing conditions base map and field verification.

SCALE: 1" = 400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. H	LANDSCAPE FEATURES circa 2002 GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. SHEET 5 OF 67

Chapter Three
Landscape Existing Conditions Documentation

Chapter III: Landscape Existing Conditions Documentation

Introduction

This chapter includes written, graphic, and photographic documentation of 2001 existing landscape conditions within the Cultural Landscape Report (CLR) project area, which follows the 1997 Grand Canyon Village National Historic Landmark District (Village Historic District) boundary, and its associated landscape character areas. This information is based upon review of available documentation, base maps, and a May 2001 site visit conducted at the Village Historic District.

JMA mapped existing conditions for the Village Historic District using a CAD survey provided by the National Park Service's Denver Service Center. Field verification of the available base maps was undertaken as part of the May 2001 site visit. The resultant drawings provided the basis for diagrams and maps appearing in this report.

The existing conditions documentation in this chapter provides an overview of landscape features and systems presented for the entirety of the Grand Canyon National Park (GRCA) and within the Village Historic District as a whole, while more detailed documentation is organized by landscape character areas.

The Village Historic District is divided into nine unique landscape character areas, each which exhibiting a coherent identity within the park:

- Rim Area;
- Utility Area;
- Railroad Area;
- Visitor and Community Services Area;
- NPS Housing Area;
- NPS Service Area;
- Concessionaire Housing Area;
- Community School Area; and
- Camp Area.

Existing conditions for these character areas are addressed in this chapter through narrative descriptions and existing conditions photographs. The following landscape feature categories were used, where applicable, to describe existing conditions:

- Natural systems and features;
- Spatial organization;
- Land use;
- Circulation;
- Vegetation;
- Buildings and structures;
- Views and vistas;
- Small-scale features; and
- Archeological sites.

All photographs used to illustrate written information in this chapter are numbered sequentially in the text and located within the appropriate character area section. The photographs are coordinated with photographic station-point maps located at the end of this chapter.

Each individual landscape feature is highlighted once in bold text and listed in the Inventory of Landscape Features located in Appendix A of this report. The inventory identifies each feature's contributing or non-contributing status, condition assessment, Cultural Landscape Report (CLR)-assigned inventory number, and any additional pertinent information. Each feature is located, using its CLR number, on the relevant existing conditions inventory map; the maps are found at the end of each character area section. All attempts were made to accurately locate each feature on the maps, although the locations should be considered representative and approximate.

To aid in the location and cross-referencing of buildings, and where applicable, building identification numbers were placed in parentheses behind building names. Identification numbers for historic buildings were derived from the park's List of Classified Structures—an official inventory of historic buildings and structures. Non-historic building numbers were taken from the Denver Service Center's Building Numbers Database. All building names were derived from the Denver Service Center's database, which offered the most contemporary and commonly-used nomenclature for historic and non-historic Village Historic District buildings.

Overview of the Grand Canyon National Park Landscape

The Grand Canyon National Park is an immense, complex ecosystem encompassing over one million acres and 277 miles of the Colorado River in northern Arizona. Situated on the southern end of the Colorado plateau, the park is internationally known for views into the canyon created by the Colorado River and its tributaries. Approximately 8,000 feet of exposed geologic strata, from an elevation of 9,200 feet at the canyon's highest point at the North Rim to 1,200 feet near Lake Mead, provide one of the most complete records of geologic history visible to the four to five million visitors who arrive at the park every year. Surrounding the park are vast lands comprising Navajo, Havasupai, and Hualapai Indian reservations, and the Kaibab National Forest.

Thousands of miles of exposed cliff faces, often broken by plateaus, plunge to the canyon base from either rim. Smaller side canyons incise the mesas, buttes, and pinnacles of the upper portions of the canyon, exposing the multiple layers of rock including Kaibab Limestone, Toroweep Formation, Coconino Sandstone, Hermit Shale, Supai Formation, Redwall Limestone, Muav Limestone and Dolomite, Bright Angel Shale, Tapeats Sandstone, and the precambrian rock below.

The varying levels of light, elevation, temperature, and precipitation in the canyon have created multiple ecosystems that include: boreal forest community, ponderosa pine community, pinyon-juniper woodland, inner canyon scrub communities, and riparian communities. The boreal forest community is usually found in the colder, higher elevations along the North Rim of the canyon, and includes a mix of conifers such as fir, spruce, and aspen interspersed with meadows. The ponderosa pine community is dominated by ponderosa pines and is found on both rims of the canyon. It is a community historically shaped by fire and the activity of the tassel-eared squirrel. The pinyon-juniper woodland occurs on or below the rims and includes extremely drought- resistant dwarf evergreens such as the pinyon pine that produces nuts for the multiple bird and animal species. The Tonto Platform is the primary home of the inner canyon desert scrub community characterized by low-growing shrubs such as blackbrush, Mormon tea, turpentine broom, and prickly pear cactus. Riparian communities surround the Colorado River and other water sources in low areas of the canyon, such as Thunder Spring, Roaring Spring, Bright Angel Creek, and Clear Creek. Plants and animals requiring constant access to water, such as mosses, ferns, and canyon tree frogs, thrive in this environment.

Sites of active human occupation and visitation related to park activities are scattered throughout this vast and complex natural system. The main areas of development, as outlined in the 1995 GRCA General Management Plan (GMP), are the South Rim, the North Rim, and Tuweep. South Rim development is concentrated at Grand Canyon Village, but also includes Desert View and many other overlooks such as Grandview Point, Yaki Point, and Hermit's Rest. Direct access to the rim's south side draws visitors from around the world to view the enormous panoramas at the canyon. Trails and roads provide access to the park's developed and wild areas. The East and West Rim Drives, the South Entrance Road, Tonto Trail, Bright Angel Trail, and Hermit Trail, for example, are all part of a complex circulation system available along or from the South Rim. Development at the North Rim is minimal and includes Bright Angel Point and trails such as the North Kaibab Trail. Trails from both rims connect at Phantom Ranch along the Colorado River. Tuweep is the most remote of the developed areas and is located in the northwestern section of the park, not far from its border.

Overview of the Grand Canyon Village Historic Landmark District

Site Description

The Village Historic District, which encompasses the same property as the CLR project area, is an assemblage of different landscapes with distinctive characters that remain from their original planned uses in the early twentieth century. The Village Historic District forms the center of the greater Grand Canyon Village, containing many visitor services and recreational opportunities as well as NPS staff and concessionaire housing, maintenance facilities, and visitor accommodations.

The existing Village Historic District layout and form owes much to the NPS planning efforts of the 1920s. Around this date, NPS landscape architects and planners laid the foundation for land-use zones which can still be detected today. The separation of housing areas, utility areas, maintenance areas, and rim areas, as well as the layout of roads and spatial organization, in evidence today is a direct reflection of Daniel Hull's 1924 Master Plan for the Village.

Natural Systems and Features

Natural systems and features are generally part of broader patterns found on the rest of the South Rim. Ponderosa pine communities and pinyon-juniper associations are located throughout the South Rim.

The larger Village landscape is part of the Coconino Plateau which, in geological terms, is the same formation as the Kaibab Plateau of the North Rim. The Coconino and Kaibab Plateaus are generally rolling landforms covering 1,152 square miles and lying between 6,000 and 9,200 feet above sea level.[1] The South Rim and Village Historic District lie approximately 6,900 feet above sea level.

The Coconino and Kaibab Plateaus are underlain by porous Kaibab limestone. In some places, this limestone bedrock lies only inches below the soil surface. Precipitation falling on the plateau drains quickly down into this subterranean karst complex, resulting in very little standing surface water.[2] Slopes on these plateaus do not exceed 4 percent. In contrast, the plateaus give way to steep cliffs and are deeply etched in many places by rugged ravines and tributary canyons running into the Grand Canyon.

The topographic conditions at the canyon's South Rim helped shape early Village plans. The canyon rim and its plateau create a shelf of buildable ground for some of the largest buildings in the Village. This shelf drops precipitously, however, to the north into the canyon where trails connect the developed areas of the rim to the Colorado River below. South of the canyon rim is the Bright Angel Wash, a drainage depression that drops nearly fifty feet in elevation from the canyon edge plateau in some places. The Bright Angel Wash is a low-lying area used as a railroad transportation corridor within the Village Historic District. Gently sloping land south of the Wash provides the location for utility and service areas that also require room for large-footprint buildings. Entering the Bright Angel Wash from the south is a natural ravine dividing two small hills to the east and west. Center Road occupies the bottom of this ravine and was created as part of early park master-planning efforts that took advantage of natural topography. The two hills provide the location for residential neighborhoods.

Minor, human-made topographic modifications—ditches, culverts, and swales—are present throughout the Village Historic District, typically built in response to the need to control water flow.

Spatial Organization

Spatial organization in the Village Historic District is defined by circulation patterns, topography, vegetation, and building relationships. Spaces range in scale and use from large community gathering spaces and parking lots to smaller, private, residential yards.

Spatial organization for the Village took shape with Daniel Hull's 1924 Master Plan. Hull designed spaces in relation to existing landform and vegetation, as well as according to use. Much of this spatial organization is still evident in 2001.

The Rim Area has many public spaces due to its heavy usage by visitors. Gathering spaces, circulation corridors, and vehicle parking lots are typical of this area. The Utility Area is a loose collection of informal parking and utilitarian work spaces along with a massing of woods. The Railroad Area is a linear space occupying the Bright Angel Wash with nodes of development containing the Railroad Depot and wye space.[3]

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1 Jeremy Schmidt, *A Natural History Guide: Grand Canyon National Park* (New York: Houghton Mifflin, 1993), 81-83.

2 Ibid.

3 In this CLR, the term "node" represents a center or concentration of activity. The term has been adapted for use in this report from urban planner Kevin Lynch in his book *Image of the City*.

The Visitor and Community Services Area contains woodland masses and nodes of development such as building clusters and vehicular corridors. The NPS Housing Area also has masses of trees surrounding vehicular corridors. Houses line the streets to create a neighborhood scale while reinforcing the street corridor. The NPS Service Area consists of a vehicular corridor connecting two buildings clusters. Masses of vegetation help to define these nodes and corridors.

The Concessionaire Housing Area consists of vehicular corridors with houses that line the streets, similar to the NPS Housing Area. Woodland masses help to define nodes of space within the area. The Community School Area consists mainly of small gathering spaces located in front of and between the two school buildings. The Camp Area essentially consists of two vehicular corridors fronted with cabins. Private or community spaces are located between the cabins.

Land Use

Land uses in the Village Historic District are comparable to those proposed in the original zoning plan of the community. The first zoning plans suggested areas for visitor accommodation, service and maintenance, railroad access, camping, and residential areas for both NPS personnel and employees of the Fred Harvey concessions and Santa Fe Railroad. These land uses organize the site today. Current land uses include visitor services and accommodations, transportation, maintenance, administration, residential use, education, community services, and agriculture/livestock.

Circulation

The district can be entered via two roads: the more recent South Entrance Road located at the east edge of the Village Historic District; and Center Road—the historic entrance road. Currently, Center Road serves as a secondary entrance while the majority of visitor traffic is routed along South Entrance Road.

Once in the district, Village Loop Drive serves as the primary vehicular circulation route. The road creates a loop that accesses most locations within the Village Historic District. Visitor parking opportunities are scattered throughout the Village Historic District, although they are concentrated in the Rim Area.

Within the district, a network of secondary roads, sidewalks, and paths provides vehicular and pedestrian access to accommodations, housing, attractions, and other facilities. Paved sidewalks and trails, the most prominent of which is the Rim Trail, connect visitors and residents to different places within the district. In many cases, sidewalks and paths follow the primary and secondary roads. Unpaved, informal trails, commonly called "desire paths" and created by random visitor and resident use, also connect many paths, roads, and parking areas.

Shuttle buses offer an alternative to driving and walking. The historic Grand Canyon Railway also provides alternative transportation into the Village Historic District.

Vegetation

As part of the Upper Sonoran Zone and on the edge of the Transition Zone, the South Rim of the Grand Canyon, including Grand Canyon Village, contains pinyon-juniper woodlands as well as ponderosa pines. "On the South Rim, which is about 1,000 feet lower [than the Kaibab Plateau on the North Rim], ponderosas are frequently mixed with pinyon-juniper trees..."[4]

Most of the vegetation found within the Village Historic District is native to the region, and includes naturally occurring, planted, and transplanted trees and shrubs. The ponderosa pine and pinyon-juniper communities are the dominant form of vegetation throughout the Village Historic District; relatively few non-native ornamental plants exist in the Village landscape.

Three main types of vegetated areas exist throughout the Village Historic District: native woodland (ponderosa pine or pinyon-juniper communities); ornamental or transplanted plantings of native vegetation; and ornamental and invasive non-native vegetation. These vegetation categories are described in greater detail for each character area in which they are located.

Typical native plant species observed at Grand Canyon Village include:

Ponderosa pine	*Pinus ponderosa*
Pinyon pine	*Pinus edulis*
Juniper	*Juniperus monosperma*
Utah juniper	*Juniperus osteosperma*
Mormon Tea	*Ephedra viridis*
Century Plant	*Agave utahensis*
Banana yucca	*Yucca baccata*
Phlox	*Phlox sp.*
Lupine	*Lupine sp.*
Big sagebrush	*Artemisia tridentata*

Non-native plant species observed at Village Historic District include:

Lilac	*Syringa vulgaris*
Peach	*Prunus sp.*
Iris	*Iris sp.*
Non-native turf grasses	

Buildings and Structures

Buildings and structures within the Village Historic District vary in design from high style to utilitarian. They include large resort hotels, cabins, administrative offices and residences, garages, and sheds.

Buildings and structures tend to differ according to the area in which they are located. High-style and larger hotel buildings are sited in the Rim Area and take advantage of scenic views. The train depot and associated structures are located in the Railroad Area. The Utility Area has the highest number of large maintenance buildings. NPS Park-Rustic style administrative buildings are located in the Visitor and Community Services Area. Residential housing units and their sheds, coal sheds, and garages are located in the NPS Housing and Concessionaire Housing Areas. These two residential areas have distinct housing due to differing ownership and dates of construction. The Community School Area contains educational buildings. Finally, the Camp Area has three types of cabins to accommodate the varying needs of visitor lodging and staff housing.

Views and Vistas

Scenic views and vistas from the Village Historic District are predominantly found along the canyon rim, where visitors gather to enjoy panoramic views of the canyon. Other areas of the Village Historic District are set back from the rim and often covered by dense or patchy vegetation which blocks or foreshortens views.

Small-scale Features

Small-scale features are numerous and located in every landscape character area within the Village Historic District. The features tend to support uses found in the area within which they are located. For example, benches and telescopes in the Rim Area support visitor services and recreational uses while dumpsters, fences, and propane tanks support residential uses in the two housing areas.

4 Schmidt, *A Natural History Guide*, 76.

Archeological Sites

Based on archeological surveys to date, it has been estimated that there may be as many as 61,000 sites in the park. Only 3 percent of these sites, however, have been formally recorded. Only two archeological sites in the GRCA are individually listed on the National Register of Historic Places: the Tusayan Ruins archeological site on the East Rim, and the Little Jug archeological site west of the Toroweap Valley. Determinations of eligibility from the Arizona State Historic Preservation Office exist for all historic and prehistoric archeological sites as part of a National Register of Historic Places multiple property nomination prepared in the 1980s, as well as from a second nomination for the Colorado River corridor comprised of 323 sites.

Grand Canyon Village and Village Historic District

According to the GMP, "some of the densest concentrations of sites are in the Grand Canyon Village area, but few of these are large extensive sites."[5] The first comprehensive archeological survey of the Grand Canyon Village area was conducted in 1973 by the Museum of Northern Arizona's Department of Anthropology. Prior to the survey, only three archeological sites were recorded: GC483, GC601, and GC263. The 1973 survey was carried out to assess the impact of development upon archeological resources in the area. A total of fifty-three archeological sites were found, the majority of which were lithic scatters. A total of twenty-three sites were assigned formal site numbers by the Museum of Northern Arizona.

Only one site, a lithic scatter affiliated with the "Sinagua" culture, appears to be within the Village Historic District and CLR project boundary, in the vicinity of the NPS Housing Area. The apparent lack of archeological sites within the CLR study boundary may possibly be explained by the extensive development that took place at this point from the early twentieth-century on.

A substantial number of sites, however, were identified just south and east of the CLR study boundary. These sites are briefly discussed because of their proximity to the project area. Of the fifty-three sites identified, a majority were assigned a cultural affiliation that dated to the Puebloan (10) and Cohonina (15) periods of occupation, ca. 1,300-1,000 BP. Of the Puebloan sites, NA 11,802, NA 11,922, NA 11,923, and NA 11,934 contained above-ground architectural remains, mostly one-room masonry structures. Most of the Puebloan sites were located just south of the Village Historic District. Of the Cohonina sites, NA 11,804 and NA 11,935 also contained architectural remains. Most of the Cohonina sites were located east and northeast of the Village Historic District. Only a handful were identified as dating to the Navajo and Anglo occupation periods. Two sites, NA 11,803 and NA 11,929 were identified as stone sweat houses, most likely of Navajo origin. Several dump sites, including NA 11,921; animal pens; and historic road traces were identified as dating to European occupation and use.[6]

Since the late 1970s, a large number of mitigation and clearance projects have been undertaken prior to construction projects in and near the Village Historic District. For more information on these archeological surveys and investigations, please refer to the following texts:

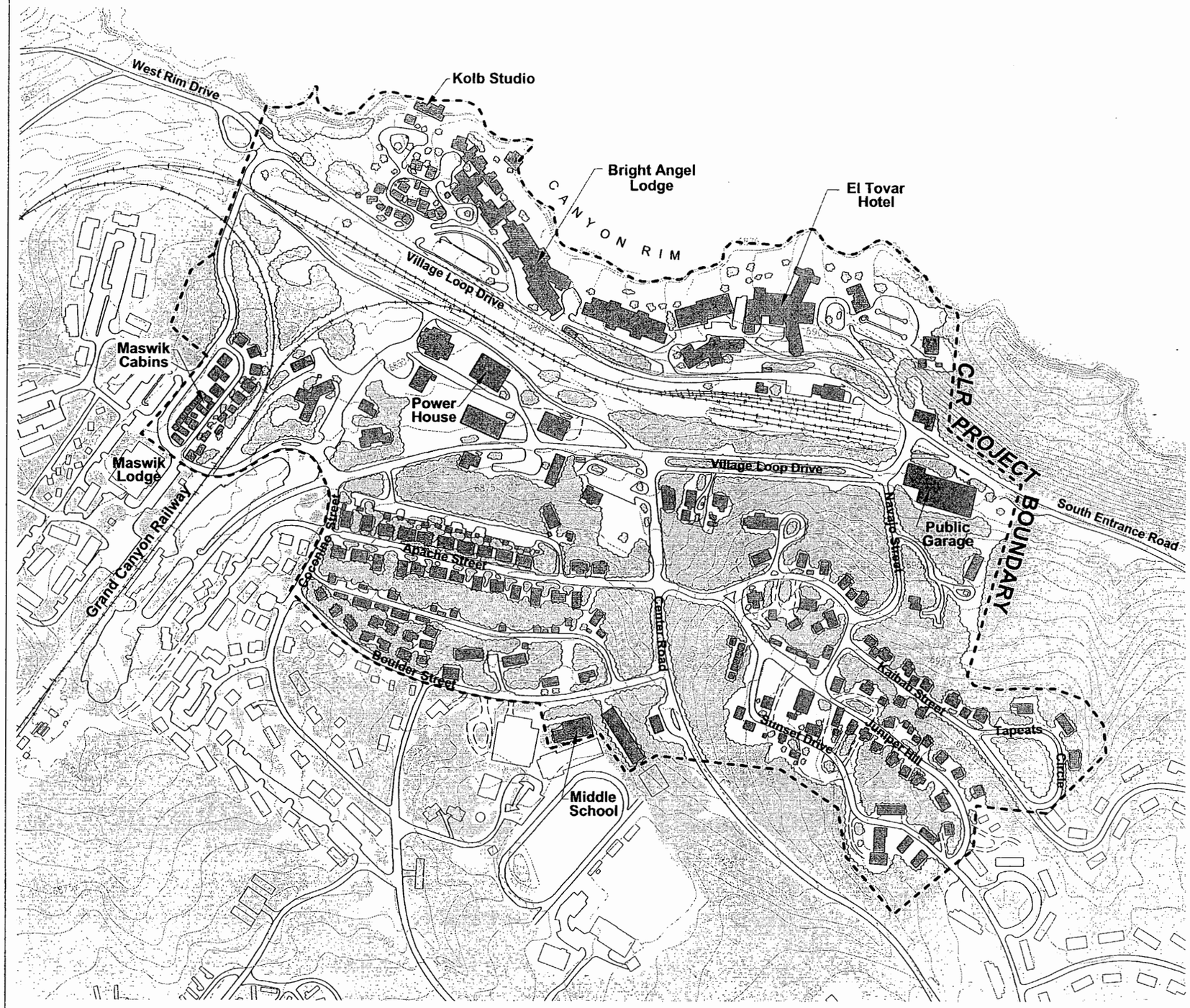
- Balsom, Janet R. "A Little Knowledge Goes a Long Way: A History of Archaeological Research at Grand Canyon" paper presented at the Grand Canyon History Symposium, January 2002, Grand Canyon South Rim; papers from the symposium are in press by the Grand Canyon Association, Grand Canyon, Arizona.

- Fairley, Helen C. "Archaeological Survey of the Mather Point Orientation Center." MS on file, Grand Canyon National Park Science Center, Grand Canyon, Arizona.

- Schroeder, Melissa R., Amy Horn-Wilson and Helen C. Fairley. "Archaeological Test Investigations and Mitigation Plan for the Mather Point Orientation Center." MS on file, Grand Canyon National Park Science Center, Grand Canyon, Arizona.

5 NPS, "Draft General Management Plan," 141.

6 Pilles, "Cultural Resources of Grand Canyon Village," 28-50.



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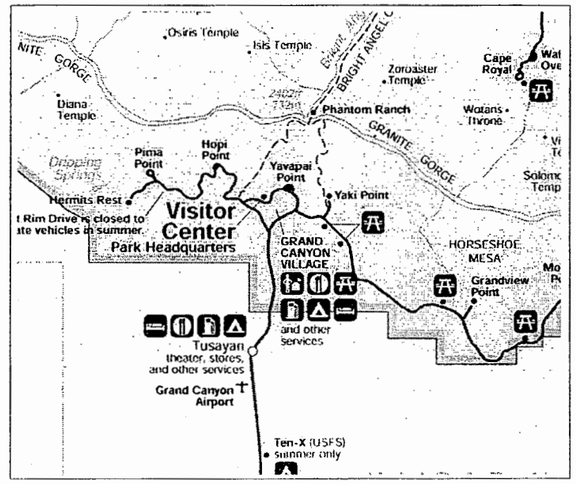
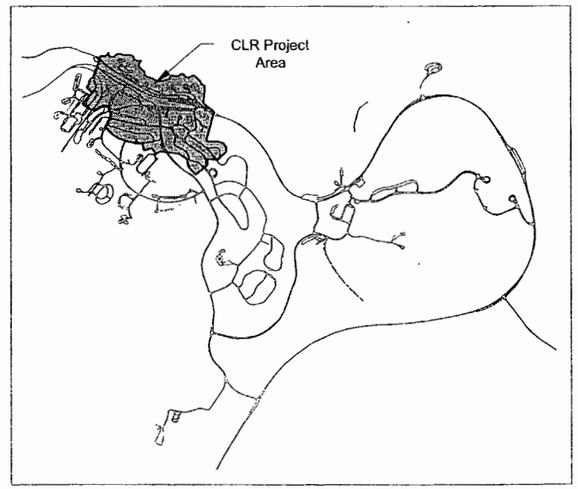
NOTES:

The CLR Project Boundary follows the Grand Canyon Village National Historic Landmark District Boundary created in 1997.

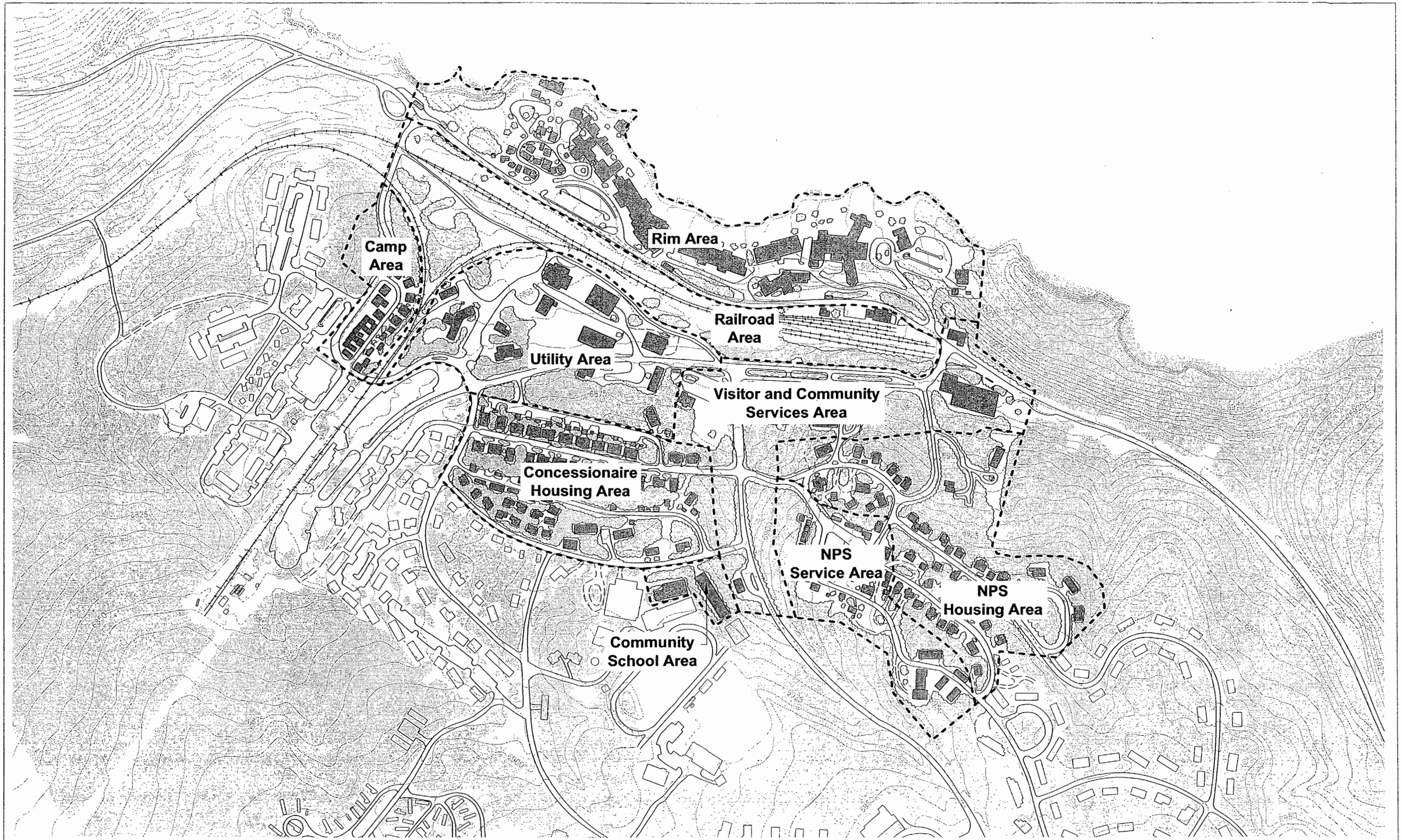
South Rim/ Grand Canyon Village Region



Overall Grand Canyon Village



A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. 1	LOCATION AND PROJECT AREA MAPS GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 6 OF 67



SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM

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VAN DIJK WESTLAKE REED LESKOSKY
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CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
1

LANDSCAPE CHARACTER AREAS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

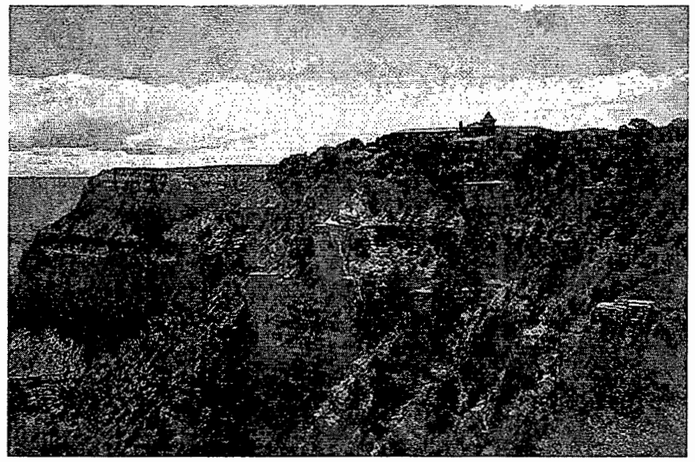
DRAWING NO.
113
20223

PKG. NO.

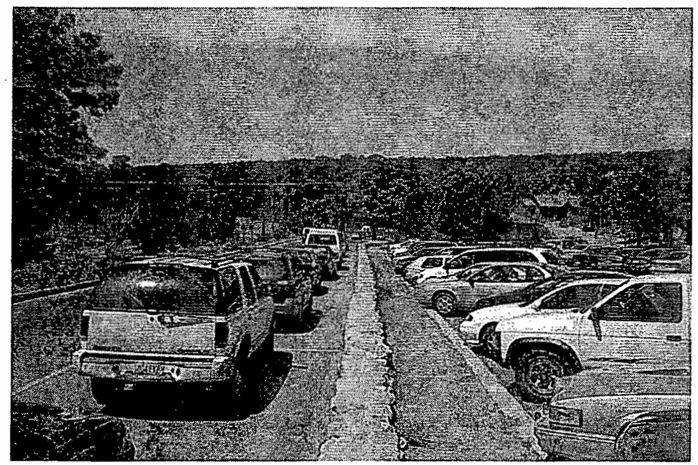
SHEET
7
OF 67

Landscape Character Areas

Rim Area



Photograph 1. Canyon edge viewed to east from near Bright Angel Lodge. El Tovar Hotel is visible in center. (JMA, 2001)



Photograph 2. Village Loop Drive along its northern stretch. (JMA, 2001)

The Rim Area is a linear site located at the edge of the Grand Canyon to take advantage of the spectacular views. The canyon edge determines the linear organization of the buildings and circulation systems throughout the area and provides a visual focus. The Rim Area is bordered to the north by the canyon; to the west by the Bright Angel Trailhead; to the south by the Grand Canyon Railroad; and to the east by Verkamp's Store, which forms the eastern boundary.

The Rim Area is used for lodging, visitor services, and recreation, circulation, and parking. Visitor lodging is located throughout the character area, beginning at the western edge with the Rim Cabins, Bright Angel Lodge, Bright Angel Cabins, Thunderbird Lodge, Kachina Lodge, and ending with the El Tovar Hotel. Visitor services include retail gift shops, food services, accommodations, and art galleries. These services are housed in the Kolb Studio, Lookout Studio, Bright Angel Lodge, El Tovar Hotel, Hopi House, and Verkamp's Store.

Of architectural note are architect Mary Jane Colter's Hopi House (1905), Lookout Studio (1914), and Bright Angel Lodge (1935), and Charles Whittlesey's El Tovar (1905).

Natural Systems and Features

Geologic features and landforms constitute the natural systems and features in the Rim Area. The **canyon edge** drops steeply from the developed area into the inner canyon (*Photograph 1*). The Rim Area occupies a limestone and sandstone plateau upon which buildings, structures, and other features are built. The southern edge of the plateau slopes steeply into the Bright Angel Wash toward the Railroad Area.

Spatial Organization

In the Rim Area, spatial organization is determined by the relationship between buildings, the canyon edge, and the southern plateau edge. The linear arrangement of buildings along the canyon rim creates a long **corridor of space** between the two. The corridor is used as a passageway between Bright Angel Trailhead and Verkamp's Store, as well as to all points in between. Within this corridor, **smaller spaces in front of buildings**, such as Bright Angel Lodge and El Tovar Lodge, act as gathering places or plazas. These spaces are usually near building entrances and are defined by building edges, retaining walls, and/or changes in pavement material or pattern.

A node of space exists at the western edge of the Rim Area and is defined by vegetation and the presence of the concessionaire **mule corral**. The node acts as a gathering space for mule riders and wranglers as they prepare to ride down the Bright Angel Trail.

Several **interstitial spaces** are created by the clustering of Bright Angel Cabins, west of Bright Angel Lodge. The tight building relationships, similar building characteristics, and connected circulation network within the cluster create a unique space.

South of the line of Rim Area buildings, space is organized by the relationship between the buildings and Village Loop Drive, both of which act as space-defining edges. Much of the **corridor space** created by this relationship is filled with parking lots and access drives.

Land Use

Current uses in the Rim Area revolve around visitor services. These uses include recreation, such as mule rides, pedestrian trails, and scenic viewing opportunities; food service in the lodges and snack bars; commercial retail opportunities in the gift shops and galleries; and accommodations in the lodges, hotels, and cabins.

Circulation

In general, pedestrian and vehicular circulation remain separated in the Rim Area. Primary pedestrian paths are located along the rim edge and north of the buildings. Vehicular circulation, such as roads, parking lots, and turn-arounds, are typically located along Village Loop Drive.

The northern section of **Village Loop Drive**, which runs through the Rim Area, is a one-way asphalt road with parallel parking along the north edge (*Photograph 2*). Curb cuts along the Drive lead north into parking lots and access drives.

Along Village Loop Drive, four **shuttle bus stops** are located close to the road's edge. Each stop consists of a similarly-patterned concrete plaza, peeled-log bus shelter, and stone retaining wall. The two western stops, found near the intersection of Village Loop Drive and West Rim Drive, have larger plazas and more signage.

At the eastern edge of the Rim Area, an **access drive** leads north and west from Village Loop Drive (*Photograph 3*). The asphalt access drive splits into two drives. The first drive heads north to the circular, asphalt **El Tovar Hotel turn-around** (*Photograph 4*). A large, **six-bay asphalt parking lot** with two parking islands is accessed from the eastern edge of the turn-around and extends to the Verkamp's Store (*Photograph 5*). The **Verkamp's service area** consists of an asphalt parking lot south of the store. The second access drive (*Photograph 6*) leads west toward the **Kachina Lodge and Colter Hall parking lots**. These double-bay asphalt parking lots are edged in low, rectangular masonry curbing. The **El Tovar Hotel asphalt parking**, west of the hotel, and **El Tovar gravel parking and service area**, south of the hotel, are also located along this drive. The access drive dead-ends into the **Thunderbird Lodge access loop** (*Photographs 7, 8*). The asphalt loop is entered from Village Loop Drive toward the eastern end of Thunderbird Lodge, heads west, and then returns to Village Loop Drive at the western edge of Thunderbird Lodge. Vehicles parallel-park along the north edge of the road.

The **Bright Angel Lodge parking and service area** is located east of the Lodge and consists of a rectangular asphalt area, edged in rectangular masonry curbing, and ringed with concrete sidewalks. The **Bright Angel Lodge parking lot** is located south of Bright Angel Lodge (*Photograph 9*). Accessed from Village Loop Drive, the asphalt parking lot consists of two bays of angled parking with a **bus drop-off lane** to the north of the parking spaces. A curb cut from Village Loop Drive leads into an entry drive which accesses the western edge of the Bright Angel Lodge parking lot and the **circular road within the Bright Angel Cabins** (*Photograph 10*). The circular asphalt road with rough stone edging encompasses most of the Rim Cabins, while several cabins are located outside the southern edge. **Rim Cabin parking** is accessed from the western edge of the circular drive (*Photograph 11*). These gravel parking lots are very loose in form. A **circular drop-off** accesses the west wing of the Bright Angel Lodge.

Pedestrian trails and paths weave through the Rim Area. The **Rim Trail** is a stone-edged asphalt path that hugs the canyon edge, leading from Mather Point, west through the Rim Area, and ending at Hermit's Rest (*Photographs 12, 13*). The **Bright Angel Trailhead** is located at the western edge of the Rim Area, just beyond the mule corral (*Photograph 14*). The trailhead is a gravel area with a wayside that marks the entrance and exit of Bright Angel Trail.

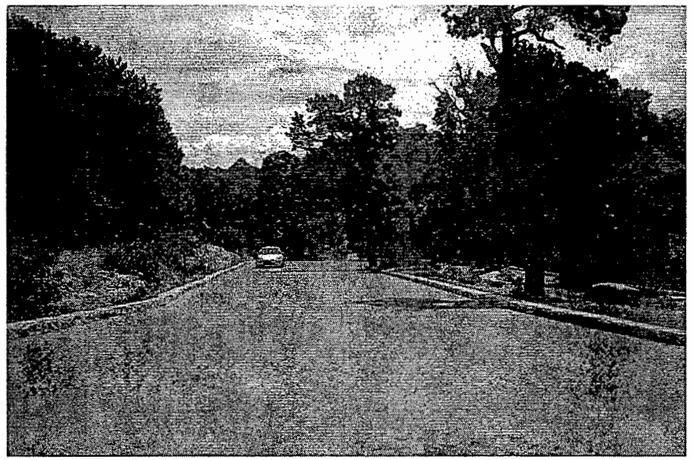
An **asphalt path** leads from the Rim Trail to the Kolb Studio terrace, east of the Kolb Studio (*Photograph 15*). Currently, the path is chained off, prohibiting visitor access.

A **concrete sidewalk** follows the curve of the Bright Angel Lodge bus drop-off, south of Bright Angel Lodge (*Photograph 16*). The sidewalk runs along the edge of Bright Angel Lodge, ending at its eastern edge. Concrete sidewalks are also located along the north edge of the Thunderbird Lodge access loop, between the Thunderbird Lodge, Kachina Lodge, and Colter Hall, and around the El Tovar Hotel circular drive.

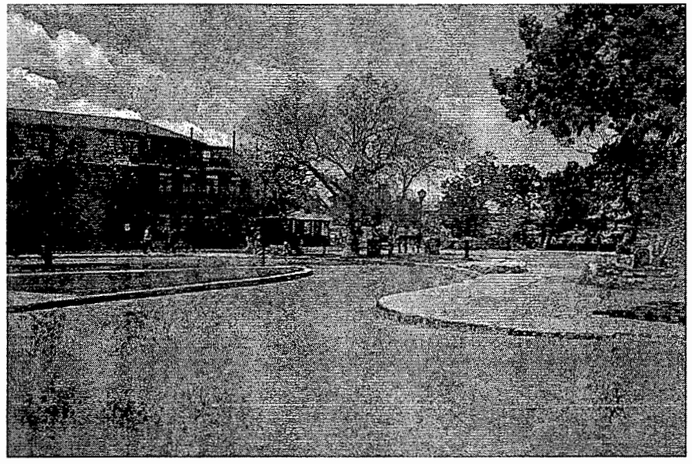
In the Bright Angel Cabin cluster, **mortared flagstone walks** lead to and from cabins. Flagstone walks are also present around the west edge of Bright Angel Lodge and between Buckey O'Neill Cabin and Powell Lodge.

Several **earthen paths** lead to and from features throughout the Rim Area. A gravel path with wood plank treads and stone edging leads from the mule corral to the bus shelter on Village Loop Drive. Loose, informal gravel paths run throughout the Bright Angel Cabin area and adjacent parking areas.

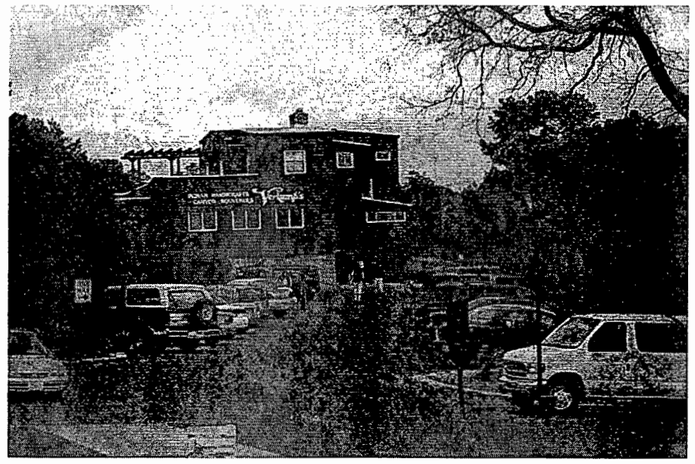
The **mule path** leads from the Livery Stable in the Utility Area to the oval mule corral in the western portion of the Rim Area. In the Rim Area, the wide earthen path is edged with small stones and follows the slope from Village Loop Drive to the mule corral.



Photograph 3. Access drive to El Tovar Hotel. (JMA, 2001)



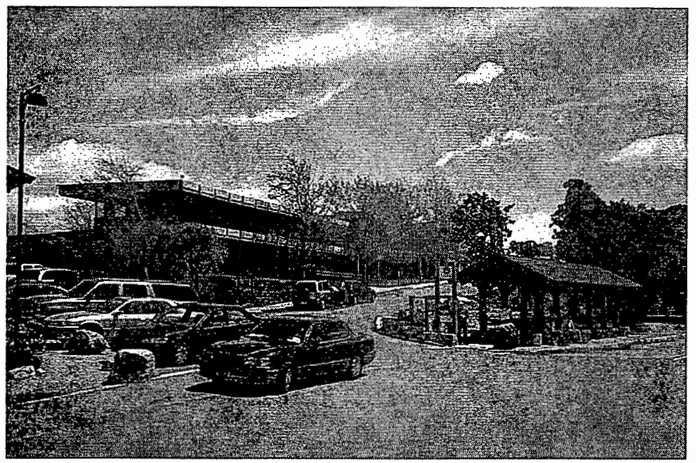
Photograph 4. El Tovar loop. (JMA, 2001)



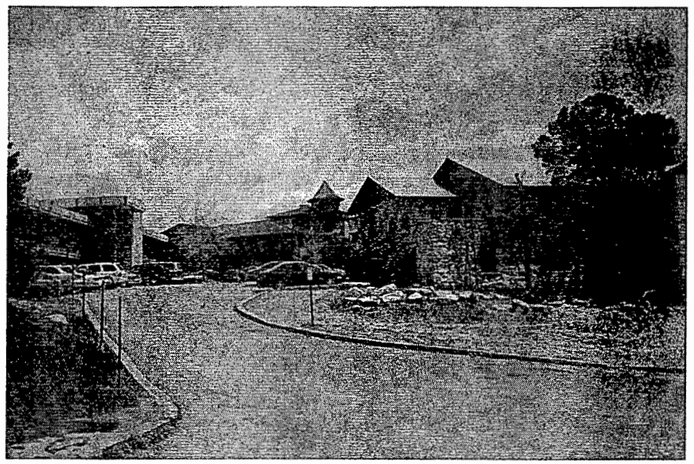
Photograph 5. Parking area and Verkamp's Gift Shop. (JMA, 2001)



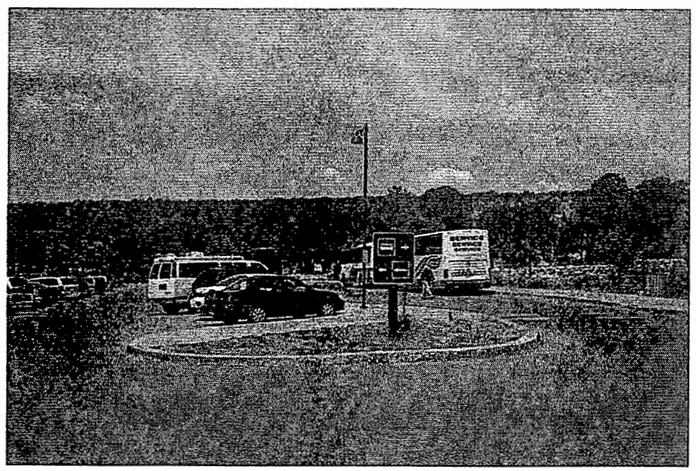
Photograph 6. Access road south of El Tovar, with Colter Hall on left. (JMA, 2001)



Photograph 7. West end of Thunderbird Lodge access loop with bus shelter. Note planting of maple trees in front of lodge. (JMA, 2001)



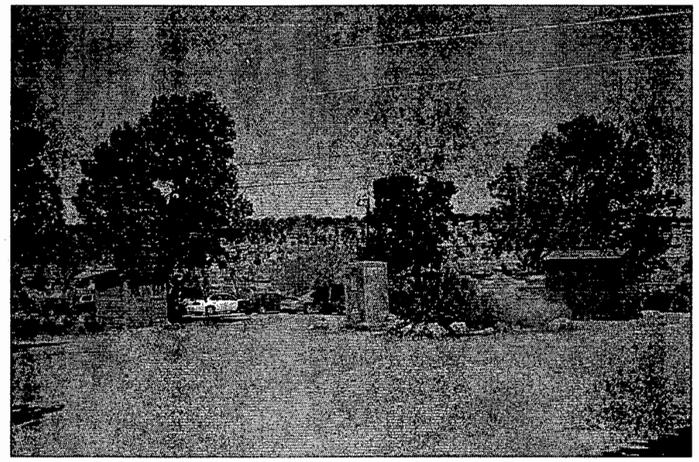
Photograph 8. East end of Thunderbird Lodge access loop. Kachina Lodge on left, El Tovar in center, Colter Hall on right. (JMA, 2001)



Photograph 9. Bright Angel Lodge parking, with ca. 1920 light fixture, curbing, brown and white NPS sign. (JMA, 2001)



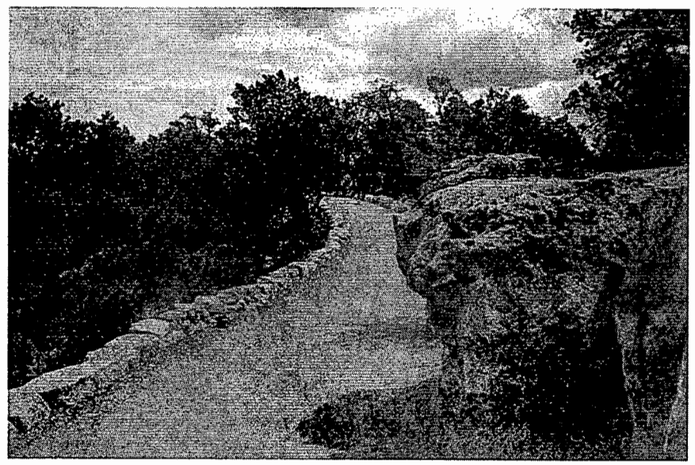
Photograph 10. Circular road within Bright Angel Cabins, with ca. 1920 light fixture, stone edging. (JMA, 2001)



Photograph 11. Rim Cabin parking lot with portable toilet in center. (JMA, 2001)



Photograph 12. Western section of Rim Trail with stone edging, metal pipe railing. (JMA, 2001)



Photograph 13. Eastern section of Rim Trail. (JMA, 2001)



Photograph 14. Bright Angel Trailhead with signage. (JMA, 2001)



Photograph 15. Asphalt path at Kolb Studio with stone retaining walls, stone and concrete arch, and metal gate. (JMA, 2001)



Photograph 16. Concrete sidewalk with boulder edging along Bright Angel Lodge parking. (JMA, 2001)

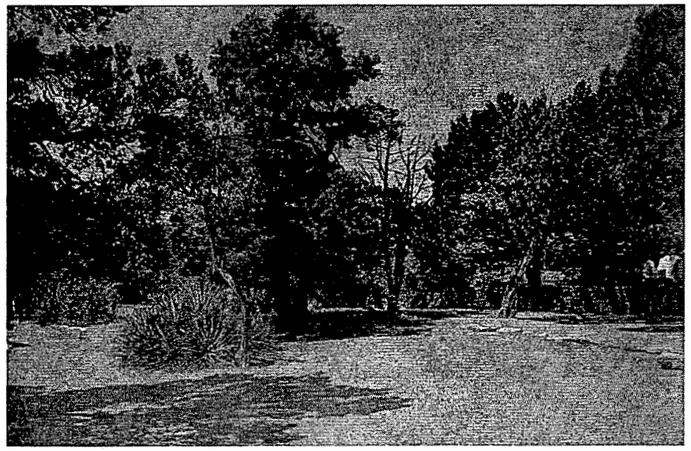
Vegetation

In the Rim Area, vegetation takes multiple forms: transplanted native plants used to revegetate disturbed sites or enhance various locations; naturally-occurring native vegetation; and exotic plants arranged around certain buildings. Due to the high concentration of development in the Rim Area, vegetation appears only in small clusters. Larger massings of vegetation are located at the eastern and western edges of the area where development is less dense.

Native vegetation found in the Rim Area includes plants associated with the pinyon-juniper plant community—such as Pinyon pine, juniper, yucca, cat-claw acacia, and sagebrush. Examples of native vegetation can be found east of the Hopi House (*Photograph 17*). Revegetation has occurred over time to enhance and protect disturbed areas. The extent to which revegetation takes place at present is unknown. Some of the vegetation on the rim edge may be naturally-occurring, **native plants** resulting from the "Canyon rim-effect" of warm air rising from the canyon, favoring vegetation that thrives in lower altitudes and warmer areas. In addition, **ornamental native vegetation** occurs in several areas including the planting beds along the Rim Trail and around the Bright Angel Cabins (*Photograph 18*).

Irrigated **turf grass lawn** is maintained around the El Tovar Hotel and Kachina and Thunderbird Lodges (*Photograph 19*). The grass draws wildlife, such as mule deer, which enjoy grazing on the lawn.

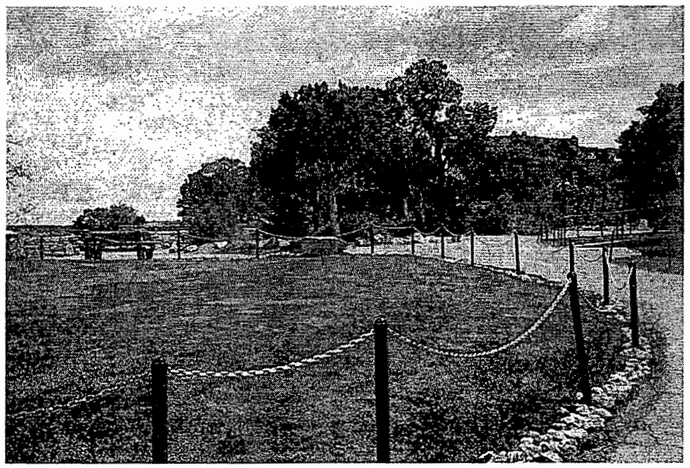
Ornamental exotic plantings, such as manicured hedges (*Photograph 20*) and low shrubs (*Photograph 21*) are found around the bases of Thunderbird and Kachina Lodges. Maple trees are located in front of Thunderbird Lodge (*Photograph 7*).



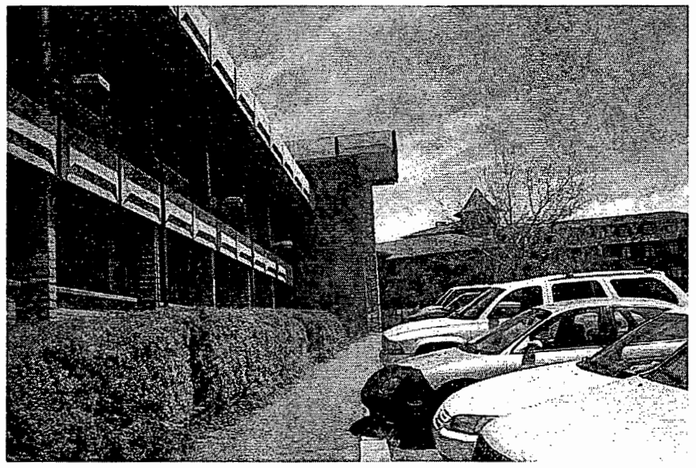
Photograph 17. Vegetation near Hopi House. (JMA, 2001)



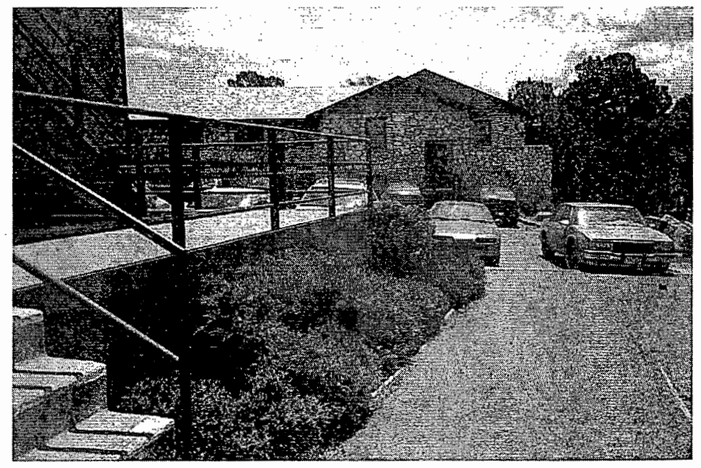
Photograph 18. Planted native vegetation among Bright Angel Cabins. (JMA, 2001)



Photograph 19. Lawn at El Tovar Hotel, with stone edging, bollard-and-chain fence. (JMA, 2001)



Photograph 20. Hedge at Kachina Lodge. (JMA, 2001)



Photograph 21. Ornamental foundation planting of juniper shrubs. (JMA, 2001)

Buildings and Structures

To facilitate the organization of this section, buildings and structures are described generally from west to east.

The four **bus shelters** in the Rim Area are constructed in a similar fashion. The shelters have long, rectangular, wood-shingled gabled roofs with log rafters. The roofs are supported by round, peeled-log framing and six peeled-log posts on either side of the shelters. The posts rest on flat-topped benches while one flat wood board runs between each set of posts, creating a seat back. The logs are painted brown. The bench seating is constructed of sandstone. The four shelters are located as follows: Bldg. #445 is found at a bus pull-off at the western edge of the Village Historic District; Bldg. #446 sits approximately 200 feet east of the first shelter (*Photograph 22*); Bldg. #0507 is located east of Bright Angel Lodge (*Photograph 7*); and Bldg. #0542 is found south of El Tovar Hotel.

A **wayside exhibit structure** is located near the Bright Angel Trailhead (*Photograph 23*). The exhibit has a coursed, rectangular stone foundation with square wood posts supporting a gabled roof structure with wood shingles. An NPS exhibit describing the Bright Angel Trail and mule concessions is located between the posts.

The Bright Angel Cabins are located south and west of Bright Angel Lodge, near the western edge of the Rim Area. This cluster of sixteen residential and utilitarian buildings is defined by its grouping of terra-cotta-colored, peeled-log buildings organized around a circular drive.

The **Red Horse Cabin** (Bldg. #0526) was originally built in 1890 as a Ralph Cameron-era cabin (*Photograph 24*). In 1907, it was used as a post office and currently is used for visitor lodging. The terra-cotta colored building is constructed of square logs and chinking atop an uncoursed rubble foundation. The gabled roof has wood shingles and exposed rafter tails and most of the windows are two-over-two double hung. A coursed, rough-cut exterior stone chimney is located on the west façade, as is the main entrance.

Residential **Bright Angel Cabins** (Bldg. #'s 0517-0525, 0527-0531) serve as visitor accommodations and are similar in construction and design (*Photographs 10, 18, 25*). All cabins are of terra-cotta colored wood construction, either board-and-batten siding, clapboard, or chinked log, with wood-shingled gabled roofs. The gable ends are typically shingled with wood shakes and painted terra-cotta to match the cabins. The multi-light square and rectangular windows have brightly-colored blue or green trim. The cabins rest on uncoursed stone foundations.

The **Laundry Building** (Bldg. #0520.1) shares construction and design principles with the cabins. The terra-cotta colored building has clapboard siding on its southern portion and upright board-and-batten siding on the remaining sections. The southern portion has a wood-shingled gabled roof, with exposed rafter tails, which abuts the tall end of a shed roof to the north. The ends and sides of the shed roof section are shingled with wood shakes painted to match the building. Windows are multi-light in construction with red wood trim. An entrance, with blue-painted door, is located beneath the gabled roof on the southern section of the building and on the west façade.

The **Utility Shed** (Bldg. #0541) is a small, square, terra-cotta-color painted wood building with board-and-batten siding, a wood-shingled hipped roof and blue-painted wood double doors on the southern elevation (*Photograph 26*). A tall, round, rusted metal pipe, secured by wires, rises out of the roof.

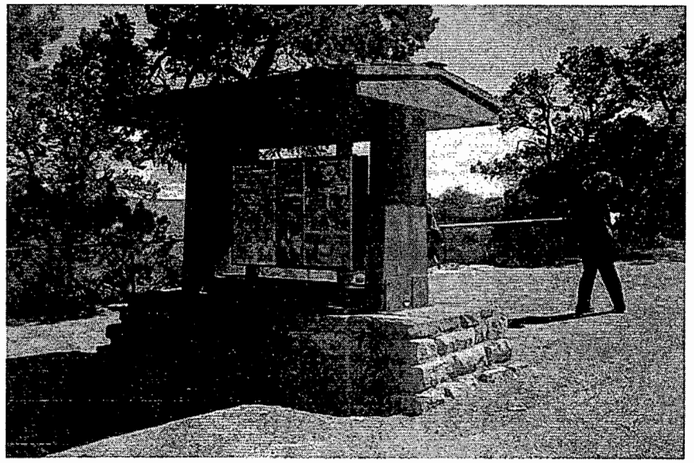
An **Equipment Shed** (Bldg. #0536) is located northwest of the Bright Angel Cabin cluster, yet is of similar construction (*Photograph 27*). The equipment shed, once used as a telephone booth, is a one-room, terra-cotta colored wood shed with clapboard siding and a shed roof supported by six log rafters. Two narrow doors, whose upper halves consist of screen windows, are located on the eastern elevation. The shed rests on a masonry pad. A second equipment shed (Bldg. #483) could not be located during field work, but according to the Denver Service Center's building database description, is likely similar in design and size to Building #0536.[7]

One of the cabins is used as a **Comfort Station** (Bldg. #0524). Built in 1935, the comfort station is 785 square feet in size; its design is similar to other cabins in the Bright Angel Cabin cluster.

The Bright Angel Lodge complex consists of Bright Angel Lodge, Powell Lodge, Buckey O'Neill Cabin/Lodge, and five Rim Cabins. These buildings are attached by breezeways or covered walks, and generally serve the purposes of visitor housing and food service.



Photograph 22. Bus shelter. (JMA, 2001)



Photograph 23. Wayside exhibit structure. (JMA, 2001)

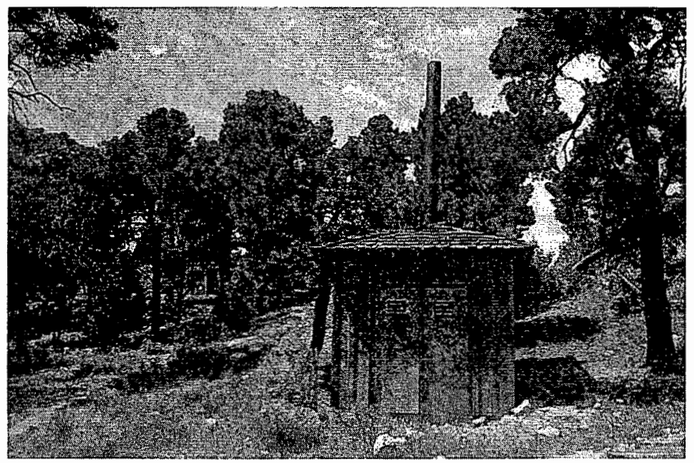
7 The May 7, 2003 print-out of the Denver Service Center's Building Number Database describes both buildings as Equipment Sheds, formerly used as phone booths, consisting of one room that is thirty-five square feet in size.



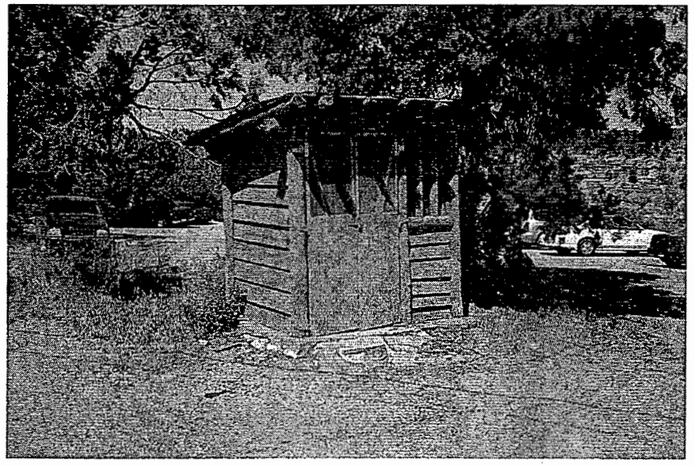
Photograph 24. Red Horse Cabin. (JMA, 2001)



Photograph 25. Bright Angel Cabins. Note stone edging along road. (JMA, 2001)



Photograph 26. Utility shed. (JMA, 2001)



Photograph 27. Equipment shed northwest of Bright Angel Cabins. (JMA, 2001)



Photograph 28. Covered walkway along Rim Cabins with painted log railing on left. (JMA, 2001)



Photograph 29. Buckey O'Neill Cabin. (JMA, 2001)

The **Rim Cabins** (Bldg. #'s 0510-0514) are of similar construction and connected through a series of adjoining porches and walkways (*Photograph 28*). Located north of Powell Lodge, the cabins are painted the same terra-cotta color as the Bright Angel Cabins and have similar siding types of log, clapboard, and board-and batten siding. Window trim, doors, and door trim are painted bright blues and greens. The interconnected porches and walkways consist of wood plank flooring and wood plank and log-beam roofs supported by log posts. Wood railings extend between each post and a contemporary metal handrail, attached to the inside of the posts, as an extra safety measure.

Powell Lodge (Bldg. #0509), built in 1935, serves as visitor lodging, and loosely resembles an adobe American Indian dwelling. The building has four attached wings, forming a cross-pattern floor plan. The walls are constructed of mortared stone; log vigas extend from the top of the wall. The multi-light windows, whose trim is painted blue, have wood lintels and sills.

An **Electrical Storage** building (Bldg. #0535) is located directly south of the Powell Lodge. The small, square building is constructed of dry-laid stone and has a hipped, wood-shingled roof with exposed rafter tails.

The **Buckey O'Neill Cabin** (Bldg. #0508) was originally built in the 1890s and remodeled over time to become part of the Bright Angel Lodge complex (*Photograph 29*). The cabin is made of round logs that are saddle-notched at the ends. The roof is complex in design, consisting of hipped sections, shed overhangs, and gables. Gable ends have board-and-batten siding. A stone chimney is located on the cabin's west elevation. Most of the multi-light window trim and doors are painted bright green while the remaining wood elements are blue. The cabin measures approximately thirty-five feet by twenty feet.

Bright Angel Lodge (Bldg. #0507), designed by Mary Colter, was completed in 1936 and has become a complex of visitor accommodations, gift shops, museums, and a restaurant (*Photograph 30*). Bright Angel Lodge exhibits numerous types, styles, and dates of construction. The building façades are constructed of multiple materials including coursed stone, vertical wood siding, adobe, and log. Because so many additions and alterations have occurred, the roof is very complex with gabled, flat, and hipped sections, all clad with a variety of shingles. The main entrance faces Village Loop Drive and is located beneath a long, gabled overhang supported by log posts and beams. A secondary entrance faces the canyon rim and is located near the gift shop portion of the lodge beneath a flat roof overhang, also supported by log beams and posts.

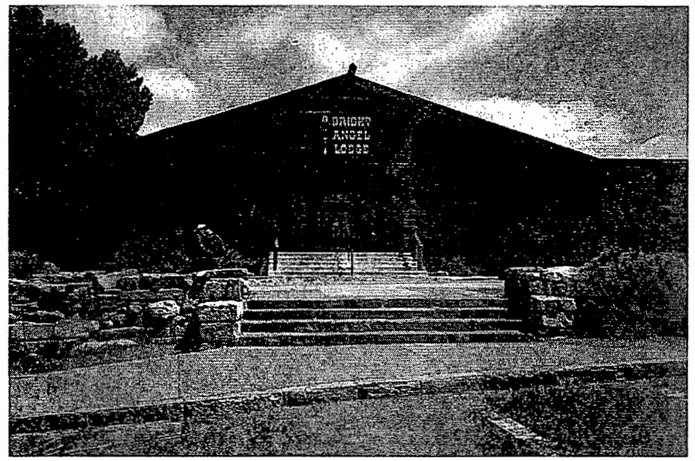
Northwest of the Bright Angel Lodge complex, the **Kolb Studio** (Bldg. #SRB0533) overlooks the canyon edge (*Photograph 31*). The Kolb Studio, completed in 1914, currently houses a gift shop and art gallery. The building is of wood frame and log construction designed in the Craftsman architectural style. The upper-story exterior walls are covered in brown-painted wood shingles. The roof has multiple gables with exposed rafter tails and is covered in wood shingles. The windows are Craftsman-style, with smaller multi-light windows over large panes of glass. The window trim is painted white. A rough stone chimney is located on the front, or southern, façade. The **Kolb Studio Garage** (Bldg. # SRB0617) is located south of, and across the sidewalk from, the Kolb Studio (*Photograph 32*). Built in 1927, the garage is a small, rectangular building with a shed roof and brown clapboard siding. Small, square windows are located on the northern elevation.

Mary Jane Colter's 1914 **Lookout Studio** (Bldg. #0532) is located directly on the canyon rim and north of the Rim Cabins (*Photograph 33*). The Lookout Studio is constructed of coursed rubble native stone and is generally rectangular in plan. Parapet rooflines and stone chimneys mimic the irregular shapes of surrounding bedrock. An uneven parapet on the roof steps up to incorporate the chimney and a small observation room. The observation room has a small balcony with a jigsaw-pattern railing. Low stone walls lead up to the building thereby protecting visitors from the precipice. Multi-light, Craftsman-style windows are located throughout the building. Although originally constructed for viewing the canyon, the building now houses a gift shop.

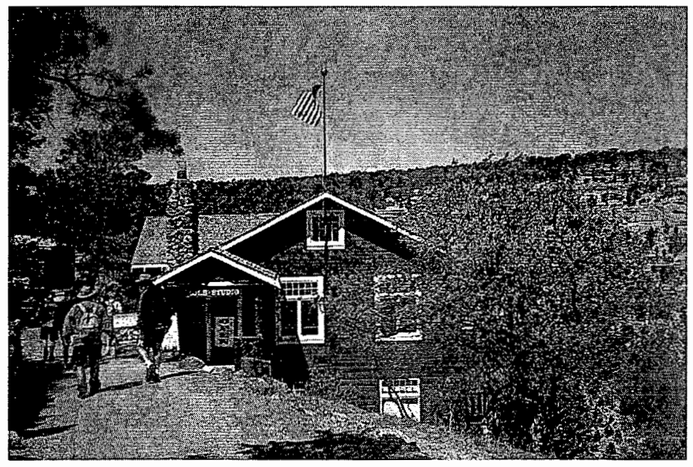
Built in 1968, **Thunderbird Lodge** (Bldg. #1300) is located east of Bright Angel Lodge and between Village Loop Drive and the canyon rim edge (*Photograph 7*). Thunderbird Lodge is constructed with the low, flat, and rectangular lines of the 1960s-era International style. The lodge façades are constructed of beige, manufactured brick with wide, rectangular glass windows. Multiple levels of guest rooms create several layers of slightly overhanging rooflines, all with decorative concrete panels along their edges. Built in 1971, **Kachina Lodge** (Bldg. #1320) is located north of Thunderbird Lodge and is constructed with the same materials and in a similar style as Thunderbird Lodge, although with a smaller footprint (*Photograph 20*).

Colter Hall (Bldg. # 0539), was built in 1937 as a women's dormitory and is located south of Kachina Lodge and east of Thunderbird Lodge (*Photograph 8*). Colter Hall's building footprint resembles a wide V-shape, with loosely-coursed rubble masonry walls. The roof is gabled with clapboard gable ends. Windows are two-over-two double-hung with brown-painted wood trim.

Built in 1905, the **El Tovar Hotel** (Bldg. #0542) is a large hotel built in close proximity to the edge of the Grand Canyon (*Photograph 34*). According to the 1985 El Tovar Hotel National Register Nomination, the building's foundation is rubble masonry and concrete. The superstructure is of wood frame construction. The first floor is sheathed with log slab siding complete with finely-honed corner notching that gives the appearance of log construction. The upper stories have rough



Photograph 30. Bright Angel Lodge south entrance. (JMA, 2001)



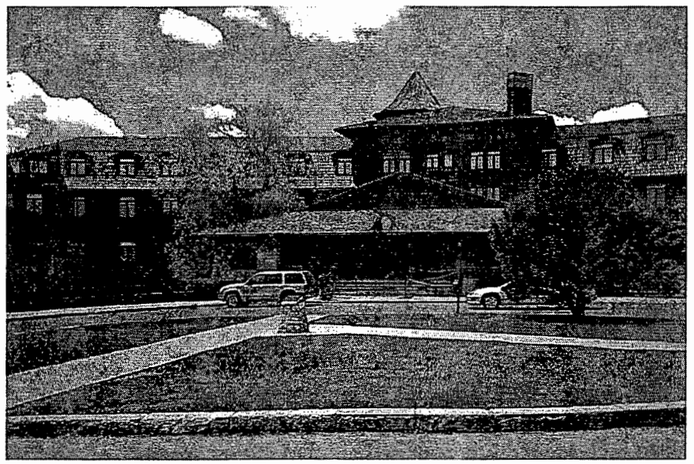
Photograph 31. Kolb Studio. (JMA, 2001)



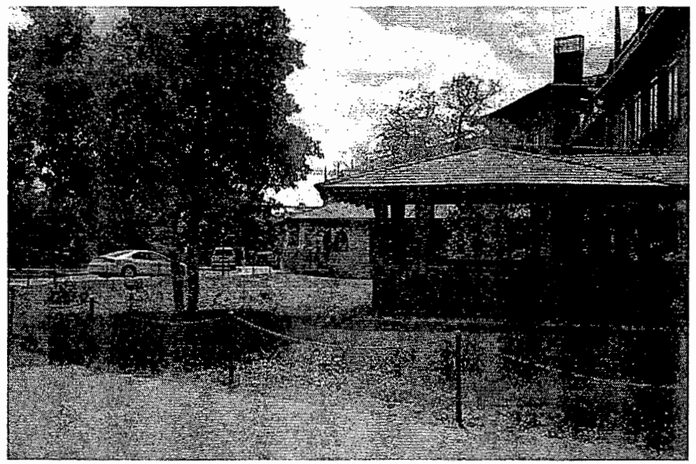
Photograph 32. Kolb Studio Garage with stone wall. (JMA, 2001)



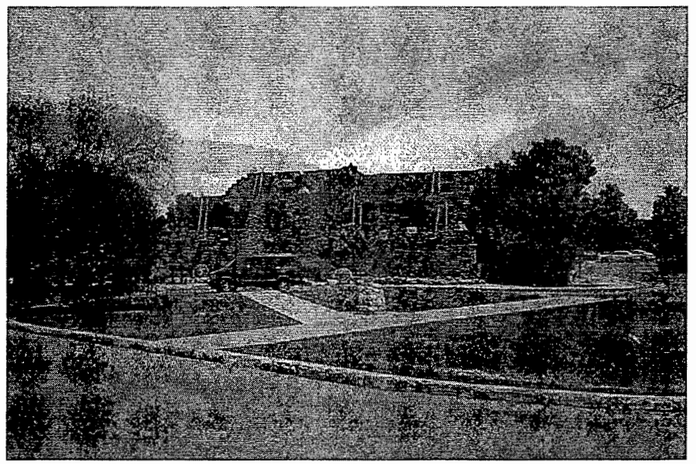
Photograph 33. Lookout Studio. (JMA, 2001)



Photograph 34. El Tovar Hotel front entrance, with historical marker in foreground. (JMA, 2001)



Photograph 35. El Tovar Hotel porch gazebo area. (JMA, 2001)



Photograph 36. Hopi House. (JMA, 2001)

weatherboards. Log-slab moldings surround the windows on the first floor while those on the upper stories have heavy, milled moldings. The building has multiple roofs at several different levels. The uppermost level is the wood turret which is wrapped in shingles and serves as the most important element of the El Tovar silhouette. Directly below the turret is a hip roof with bracketed eaves that shelters the central portion of the building. The three-story wings to the north and south, flanking the central portion, have mansard roofs pierced by dormers. On the north and south ends, the roofs step down to second- and first-floor terraces. The main entrance is located on the east side of the building and has a gabled roof with hipped ends covering the large entrance porch. Porches facing the canyon have peeled log posts. The railings along all terraces and porches have jigsawn balusters cut in patterns reminiscent of Swiss-Rustic detailing. The large porch on the north end of the building has two attached gazebos to the east and west (*Photograph 35*). An access ramp for wheelchairs was added to this north end of the building. At the southernmost end of the building, the surrounding grade drops down to the hotel's basement level. Here, the coursed rubble masonry walls contain arched openings similar to those in the stone corner wall of the entrance porch.

The **Hopi House** (Bldg. # 0545) was built in 1905 and designed by Mary Jane Colter (*Photograph 36*). The Hopi House is a large multi-story structure of stone masonry, shaped and built like a Hopi pueblo building. The building is rectangular in plan. The multiple roofs are stepped at various levels giving the impression of pueblo architecture. The sandstone walls are reddish in color. Tiny windows, like those of true Hopi structures, allow a small amount of light into the building.

Verkamp's Gift Shop (Bldg. #0546) was built in 1905 and is located at the easternmost end of the Rim Area boundary and on the edge of the Village Historic District boundary (*Photograph 5*). The building has stepped levels that create a balcony above the first floor entrance. A wood trellis structure sits on the roof of the first floor. Several additions have been attached to the rear, or east, elevation of the building. The multi-level roof is a combination of shed, flat, and slightly gabled construction. The building is sheathed in brown wood shingles. An entry porch on the west elevation has arched openings and a seat wall. Rectangular and square windows of all sizes, with white trim, dot all four elevations.

A small residential building, the **Verkamp's Residence** (Bldg. #0547) is located south of the Gift Shop (*Photograph 37*). Built in 1906, the residence consists of a rectangular core with perpendicular ell attached to the northern elevation. The roofs are gabled with wood shingles while the walls are sheathed in brown wood shingle siding. Windows are one-by-one rectangles with white trim. An entrance is located on the eastern end of the ell.

Verkamp's Residence shed is located east of, and adjacent to, the Verkamp's Residence. The shed is of wood construction with a gambrel roof and is used for storage. A small **storage shed**, approximately three to four feet wide and five to six feet tall, is located along the south edge of the El Tovar/Verkamp's parking lot (*Photograph 38*). Of unknown purpose, the small structure has a shed roof, wood clapboard siding, and has a rectangular opening on the east side.

In addition to buildings and sheltering structures, the Rim Area contains various types of steps and walls. Stone walls are found throughout the area. These stone walls are of varied height, serving as seating and/or to retain earth along a grade. A low **stone wall** defines the bus shelter areas in the Rim Area. The **Mule Corral wall** consists of an oval rubble stone wall with rubble piers supporting a metal pipe rail (*Photograph 39*). The corral is located west of the Bright Angel Cabins.

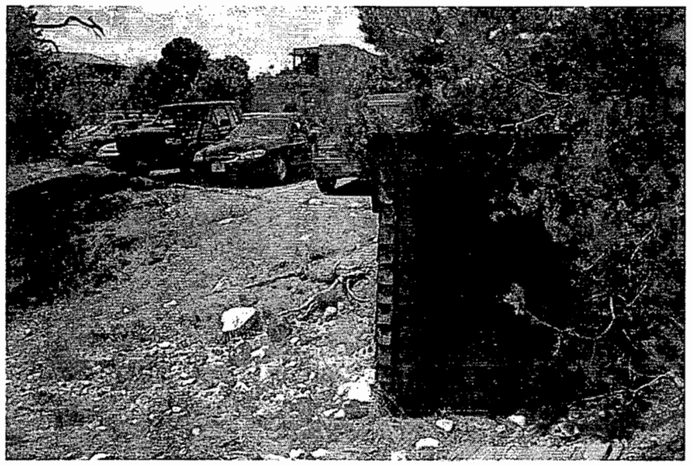
The **Kolb Studio retaining walls** are located east of the Kolb Studio and help to retain earth around the path to the studio's lower level (*Photograph 15*). The wall consists of mortared rubble stone whose height increases from two feet to approximately four or five feet as the path cuts deeper into the grade. The **Kolb Garage retaining wall** is located east of the garage and retains earth from the Rim Trail (*Photograph 32*). The wall consists of dry-laid native stone and is approximately three to four feet in height. The wall extends from the garage east, to hug the trail. **Lookout Studio stone walls** are located below the studio, along the terraces (*Photograph 40*). The walls consist of mortared rubble masonry approximately five feet in height. The **Rim Trail wall** consists of flat, coursed, dry-laid stone, approximately three feet in height, that runs along the canyon side of the Rim Trail (*Photograph 41*). The **Bright Angel Lodge parking lot wall** follows the edge of the parking lot and consists of coursed stone laid approximately three feet in height. The **Bright Angel Lodge seat walls** are low, stone walls, approximately twelve to eighteen inches in height, that encompass planting beds and serve as visitor seating (*Photograph 42*). Some have flat, upright stones affixed to the rear of the wall to serve as seat backs.

Several types of steps aid circulation throughout the Rim Area. **Stone steps** lead from the Mule Corral to the western bus shelters. Stone steps also lead from Lookout Studio to the lower terraces (*Photograph 43*). A set of wide stone steps interrupts the parking lot wall and leads from the Bright Angel Lodge parking lot to the lodge entrance. Flagstone steps take up the grade within the Bright Angel Cabin cluster. **Concrete steps** lead from the El Tovar Hotel to the Railroad Depot on Village Loop Drive (*Photograph 44*). Concrete steps are also located along the eastern edge of Colter Hall. Both sets of steps have black metal pipe railing. **Wood steps** are located in the service area south of El Tovar.

The **Hopi House Dance Platform** is located northwest of the Hopi House (*Photograph 45*). The square platform consists of a mortared stone retaining wall, approximately two feet in height, that supports a concrete and gravel floor. Three stone treads lead up to the platform.



Photograph 37. Verkamp's Residence in center (small building). (JMA, 2001)



Photograph 38. Storage shed near Verkamp's. (JMA, 2001)



Photograph 39. Mule Corral wall. (JMA, 2001)



Photograph 40. Lookout Studio walls. (JMA, 2001)



Photograph 41. Rim Trail wall, boulder edging along path. (JMA, 2001)



Photograph 42. Bright Angel Lodge seat walls. (JMA, 2001)



Photograph 43. Stone steps at Lookout Studio terraces. (JMA, 2001)



Photograph 44. Concrete steps from El Tovar Hotel to Depot at railroad below. (JMA, 2001)

Views and Vistas

Views and vistas are essential, character-defining features of the Rim Area. Buildings, trails, and other features on the rim are sited primarily to take advantage of the spectacular views of the Grand Canyon available from the edge.

Sweeping **panoramic views toward the canyon** are available along the Rim Trail (*Photograph 46*) and from the north-facing sides of the Rim Area buildings—most notably the area around the flagpole at the El Tovar Hotel (*Photograph 47*) and the Bright Angel Lodge plaza. At the western edge of the Rim Area is a recently constructed shuttle bus stop in a location which offers excellent views of the canyon (*Photograph 48*).

Buildings located directly on the rim, including Kolb Studio (*Photograph 49*) and Lookout Studio (*Photograph 50*), offer **panoramic vistas of the canyon** from their windows, balconies, and exterior areas that were constructed specifically to take advantage of the scenery.

Looking south, across Bright Angel Wash and the railroad tracks, from the western portion of the Rim Area, **the Utility Area** presents a marked contrast to the rim views on the north side of the character area (*Photograph 51*).

Small-scale Features

Many small-scale features enforce visitor safety and facilitate enjoyment of the views along the canyon rim. East of and adjacent to the Kolb Studio is a path that descends between two mortared stone retaining walls and passes under a **concrete and stone arch with a metal gate** (*Photograph 15*).

Telescopes along the rim wall make it possible for visitors to see distant features of the canyon. Certain telescopes, such as the ones located just east of the Lookout Studio, rest on metal bases that swivel (*Photograph 52*). One **sculptural telescope** is located near the El Tovar Hotel along the Rim Trail. The telescope sits on a stone base with a bronze telescope rest that fixes the scope vertically and horizontally on oriented views (*Photograph 47*). The views are named on the bronze sculptural element.

Railings are found along stairs and ramps as well as at some points along the Rim Trail. Rustic-style **painted log railings** are located around the Bright Angel Rim Cabins and Lodge. **Metal railings** in the Rim Area are painted green, brown, or black (*Photograph 12*). An extensive black metal railing runs along the concrete stair leading from the El Tovar Hotel down to the Railroad Depot (*Photograph 44*); another is found at the Lookout Studio—along the stairs down to the adjacent overlook (*Photograph 53*).

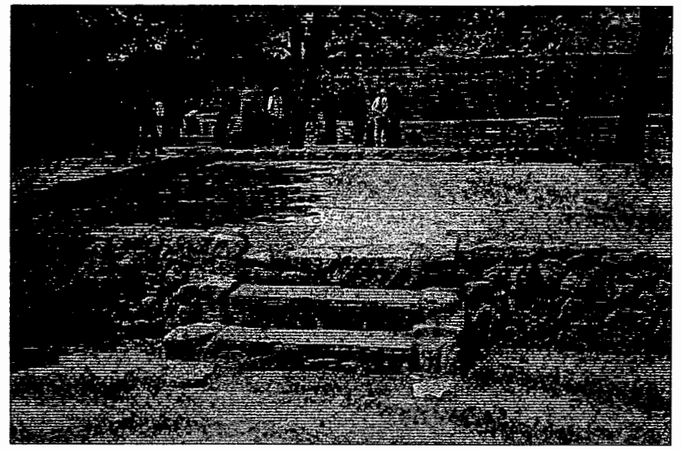
Wood plank steps are located across paths, as with the steps in the western portion of the Rim Trail, and allow the trail to make a slight grade change. **Cut stone curbs**—of similar material to the steps at the south entrance to Bright Angel Lodge—are generally found along contemporary asphalt sidewalks, along Village Loop Drive, the El Tovar Hotel drop-off loop (*Photograph 54*), and Bright Angel Lodge parking lot (*Photograph 9*).

Boulder edging marks the boundaries of the gravel parking lot near the Mule Corral. In the Rim Area, boulders often function as wheel stops and block vehicular traffic (*Photographs 16, 41*). **Stone edging**, comprised of smaller rocks, appears along the loop road within the Bright Angel Cabins (*Photographs 10, 25*) and are used to edge portions of the Rim Trail (*Photographs 12, 46*). **Wheel stops** in parking lots are typically composed of concrete, as in the lot east of Hopi House. Others, such as those located near Verkamp's Store, are composed of logs.

There are numerous benches scattered throughout the Rim Area. Along the Rim Trail, **notched-log benches** add to the historic character of the Village Historic District. These benches are comprised of a single, massive log laid horizontally with a 90-degree section notched out along its length to make a seating surface. One of these benches is located to the east of Hopi House along the Rim Trail. Other types of **wooden benches** are located throughout the site (*Photograph 55*).

Wood slat fencing exists near the Verkamp's residence and consists of thin, vertical wood slats. At the western-most shuttle bus stop, **metal pipe railing with curved posts** extends across the canyon rim. Painted **wood privacy fencing** screens the north and south sides of Bright Angel Lodge from views of service areas (*Photograph 56*). Metal post **bollards** are placed in various locations, such as in the Bright Angel Cabins parking lot, to block vehicular access and/or protect features such as fire hydrants from vehicles. **Bollard-and-chain fencing** is utilized at locations along pedestrian paths around the lodges, such as the circle in front of the El Tovar Hotel, to prevent visitors from walking across the lawns (*Photograph 19*). Orange plastic mesh fencing was visible during fieldwork along the Rim Trail.

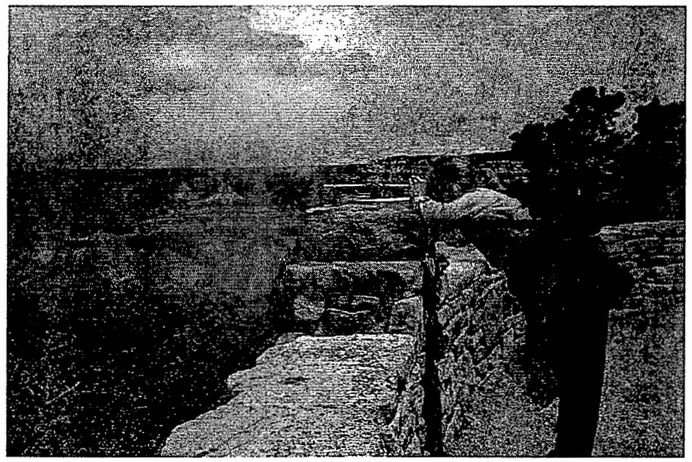
Drainage-related small-scale features include metal **drainage grates** covering drop-inlet storm drains. Examples of these grates are found along the El Tovar drop-off loop, along Village Loop Drive, and in the parking lots.



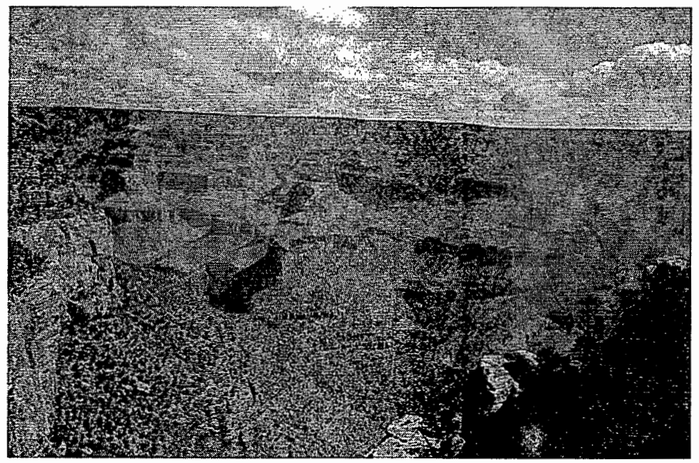
Photograph 45. Hopi House Dance Platform. (JMA, 2001)



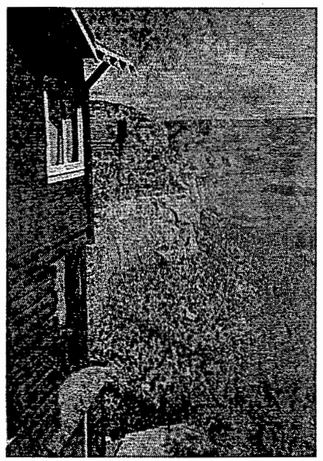
Photograph 46. Rim Trail view, with stone edging. (JMA, 2001)



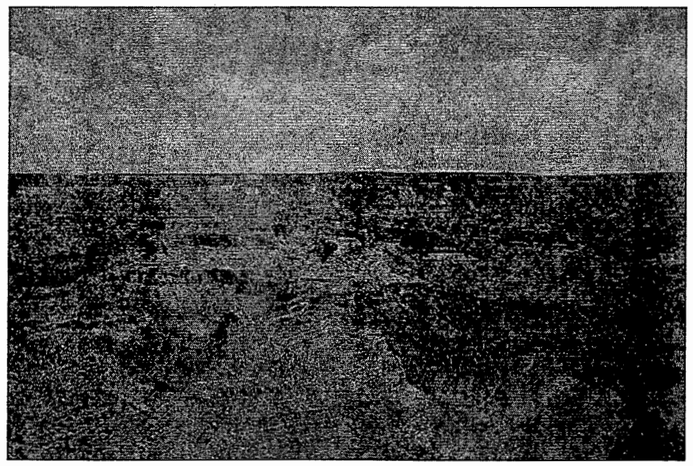
Photograph 47. View from Rim Trail near El Tovar Hotel, with sculptural telescope on rim wall. (JMA, 2001)



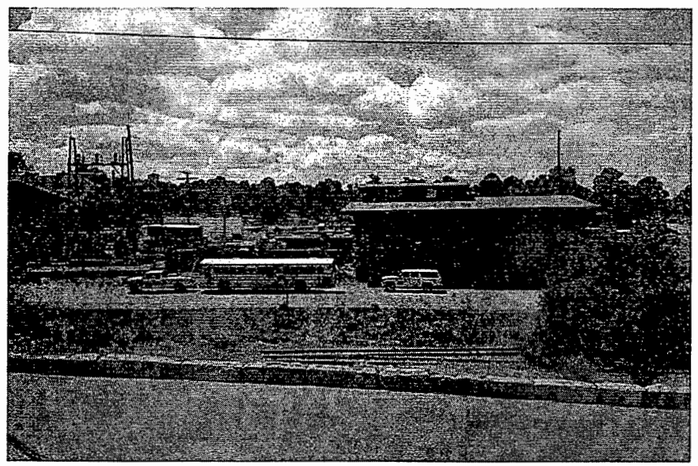
Photograph 48. Panoramic view toward the canyon from along the Rim Trail. (JMA, 2001)



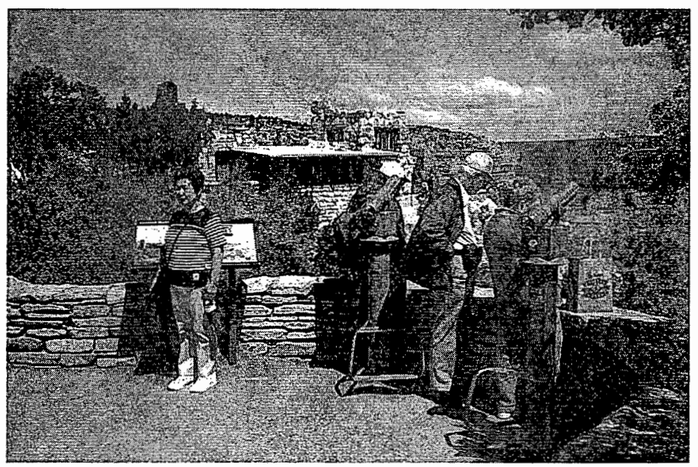
Photograph 49. Kolb Studio vista. (JMA, 2001)



Photograph 50. Lookout Studio panoramic vista. (JMA, 2001)



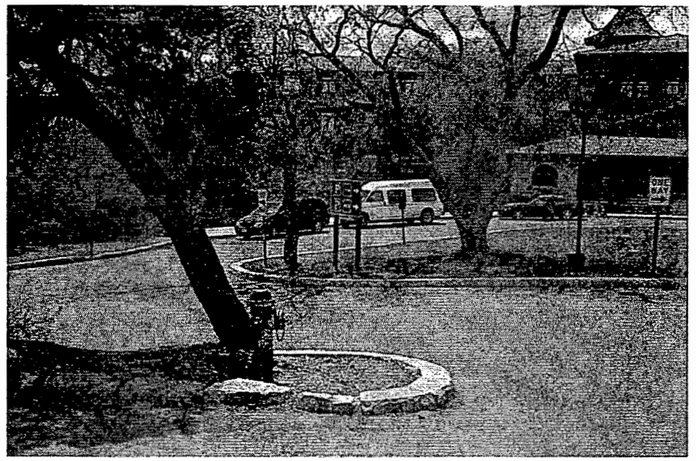
Photograph 51. View of Utility Area from south side of Bright Angel Lodge. (JMA, 2001)



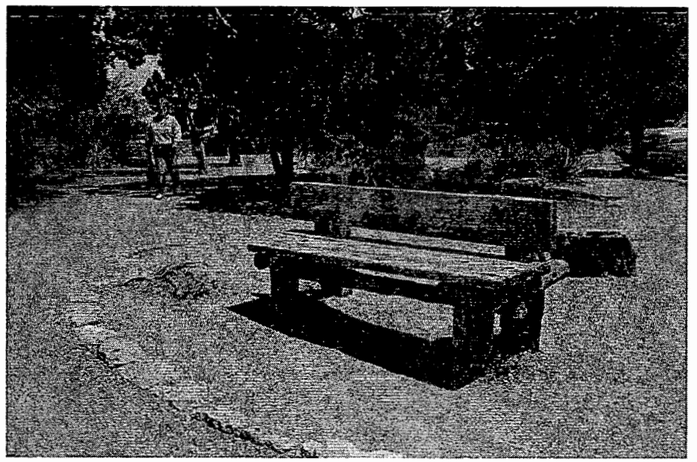
Photograph 52. Telescopes along Rim Wall east of Lookout Studio. (JMA, 2001)



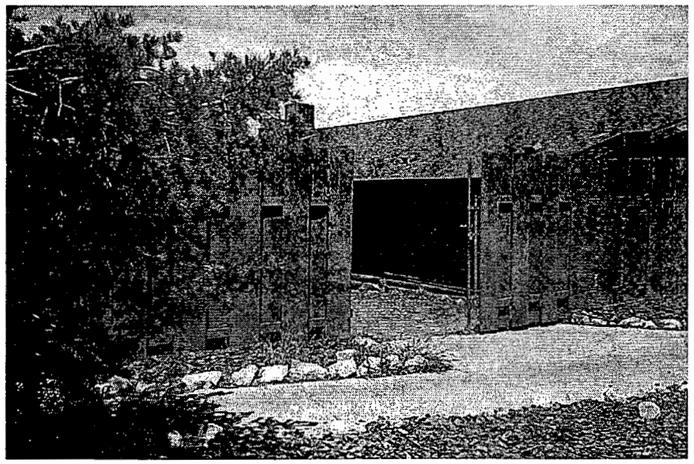
Photograph 53. Metal railing at Lookout Studio steps. (JMA, 2001)



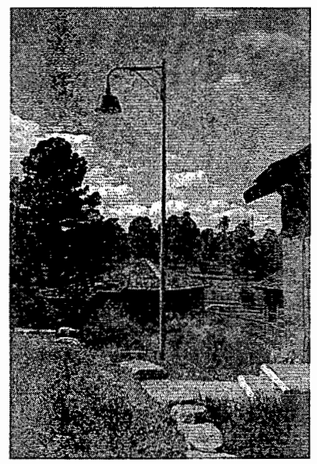
Photograph 54. Small-scale features near El Tovar: stone curbing, fire hydrant, light, and signage. (JMA, 2001)



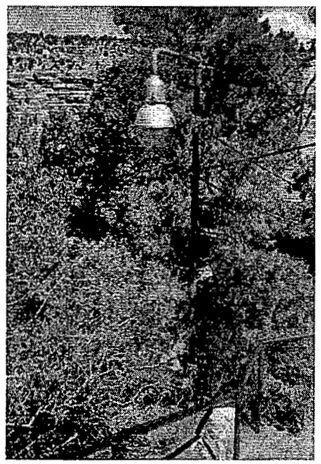
Photograph 55. Typical wooden bench. (JMA, 2001)



Photograph 56. Painted wood privacy fencing. (JMA, 2001)



Photograph 57. Green-painted metal streetlight. (JMA, 2001)



Photograph 58. Light with acorn luminaire. (JMA, 2001)



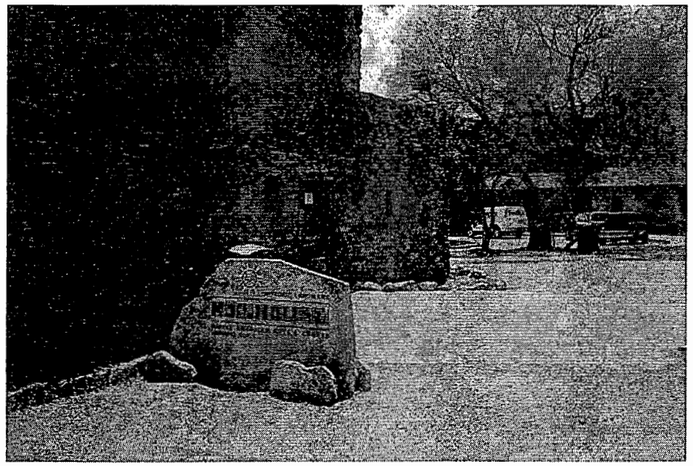
Photograph 59. "Modern"-style lights along Rim Trail. (JMA, 2001)



Photograph 60. Drinking fountain at left. (JMA, 2001)



Photograph 61. Flagpole, wayside, stone edging, historical marker, and petrified wood in front of Verkamp's Gift Shop. (JMA, 2001)



Photograph 62. Hopi House sign. (JMA, 2001)



Photograph 63. Brown and white metal arrow indicators on wooden post. (JMA, 2001)



Photograph 64. Trash receptacles. (JMA, 2001)



Photograph 65. Bicycle rack. (JMA, 2001)

Lighting is found along parking, roads, and walkways throughout the Rim Area. These lamps occur in four different styles. At Lookout Studio along the stair in the side of the building is a **single metal light** on a pole, approximately seven feet tall, incorporated into the metal railing (*Photograph 53*). The luminaire is a four-sided, simple metal enclosure with a pyramidal metal top.

In the Bright Angel Cabin cluster are several **green-painted metal street lights**, approximately eighteen feet tall, featuring a curving lamp arm and ornamental metal bracket with curled ends (*Photograph 57*). These may be the circa 1920 light standards described in the National Historic Landmark nomination for the Village Historic District. The luminaires and lamp arms of some lights have been replaced by contemporary "acorn" lights (*Photograph 58*).

From Thunderbird Lodge to the El Tovar Hotel, **"Modern"-style lights** line the Rim Trail and other walkways (*Photograph 59*). These consist of black-painted metal poles, approximately seven feet tall, set in concrete footings and topped by saucer-shaped luminaires.

East of the El Tovar Hotel near Hopi House are more **traditional-style lights**; these are each set on a black-painted metal post approximately ten feet tall with a small cross-arm (*Photograph 54*). The four-sided, tapered, glass luminaire has a metal top.

Drinking fountains include mortared stone fountains with metal fixtures, such as one at the near the Bright Angel Cabin parking (*Photograph 60*). The fountains are comprised of a lower faucet for filling containers, and an upper fountain for drinking.

Other small-scale features include a **flagpole** near the El Tovar Hotel and Verkamp's Store and a piece of **petrified wood** at Verkamp's Store (*Photograph 61*).

Due to the need to orient, regulate, and educate the site's many visitors, there is a great deal of signage in the Rim Area. Four **historical markers**, each composed of a bronze tablet on a two-and-a-half-feet tall, tapered, masonry pedestal are located within the Rim Area. One marker is located in the center of the turn-around circle east of the main entrance to the El Tovar Hotel (*Photograph 34*), another near Hopi House, a third at the entrance to Verkamp's Store, and the fourth near the entrance to Lookout Studio (*Photograph 33*).

The contemporary **stone slab sign** at the entrance to Hopi House is constructed of an irregularly-shaped sandstone slab with painted lettering, flanked by an arrangement of smaller stones (*Photograph 62*). **Wooden trail signs** are located throughout the Rim Area and direct visitors to particular trails (*Photograph 14*).

Wayside exhibits provide interpretive and practical information to visitors unfamiliar with the canyon (*Photograph 14*). Waysides are located along the Rim Trail at many points of interest such as Kolb Studio and the Buckey O'Neill Cabin.

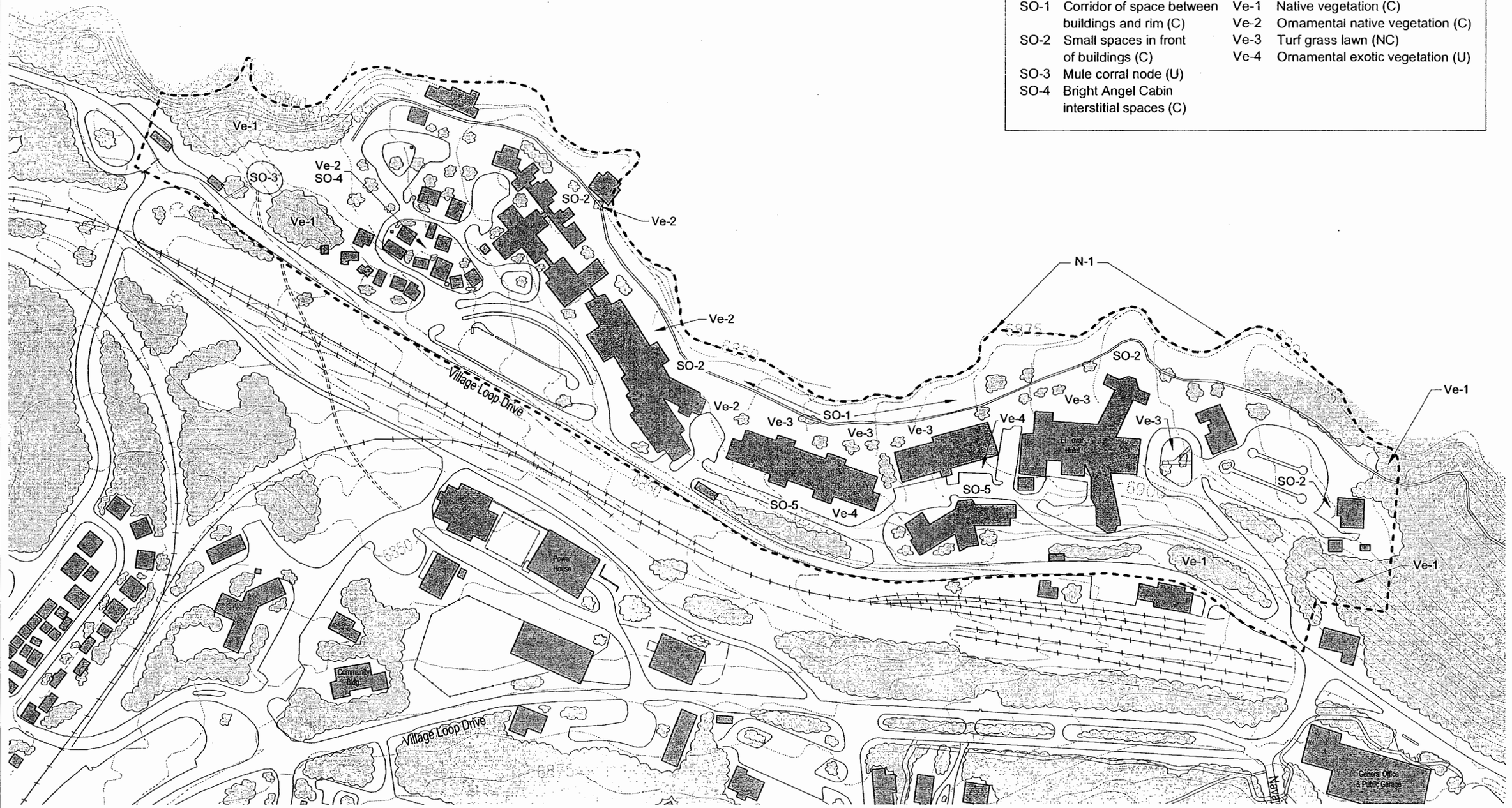
Orientation signs at the West Rim Drive and Village Loop Drive shuttle bus stops stand about eight feet high, and are comprised of two squared wood posts about two feet apart with sign placards placed vertically between the posts to indicate bus stop names and display route maps and other information (*Photograph 22*). **Brown and white metal NPS signs** are located throughout the Village Historic District (*Photograph 9*). Standardized **vehicular traffic signs** are found along the parking lots, roads, and all intersections in the Rim Area (*Photograph 54*). A contemporary **directional sign**, located near the West Rim Drive bus stop, is comprised of brown and white metal arrow indicators placed around an eight- feet-tall, square wooden post (*Photograph 63*).

Many **trash receptacles** are located within the Rim Area (*Photograph 64*). Most trash receptacles are prefabricated and contemporary in style, and include wood-framed, aluminum, white plastic or aggregate-paneled bins. Plastic recycling bins in wood frames are frequently located near the trash receptacles, as at the West Rim Drive bus stop. **Dumpsters** are located in service areas to the south of major buildings along the rim; an example is found just southeast of the Bright Angel Cabins.

Other small-scale features in the Rim Area include **bicycle racks** (*Photograph 65*); **portable toilets** located near the Mule Corral/Bright Angel Trailhead; **utility meters**; and **fire hydrants** (*Photograph 54*).

Feature List:

N-1	Canyon edge (C)	SO-5	Parking/drive corridor (C)
SO-1	Corridor of space between buildings and rim (C)	Ve-1	Native vegetation (C)
SO-2	Small spaces in front of buildings (C)	Ve-2	Ornamental native vegetation (C)
SO-3	Mule corral node (U)	Ve-3	Turf grass lawn (NC)
SO-4	Bright Angel Cabin interstitial spaces (C)	Ve-4	Ornamental exotic vegetation (U)



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

RIM AREA

NATURAL SYSTEMS & FEATURES VEGETATION SPATIAL ORGANIZATION

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

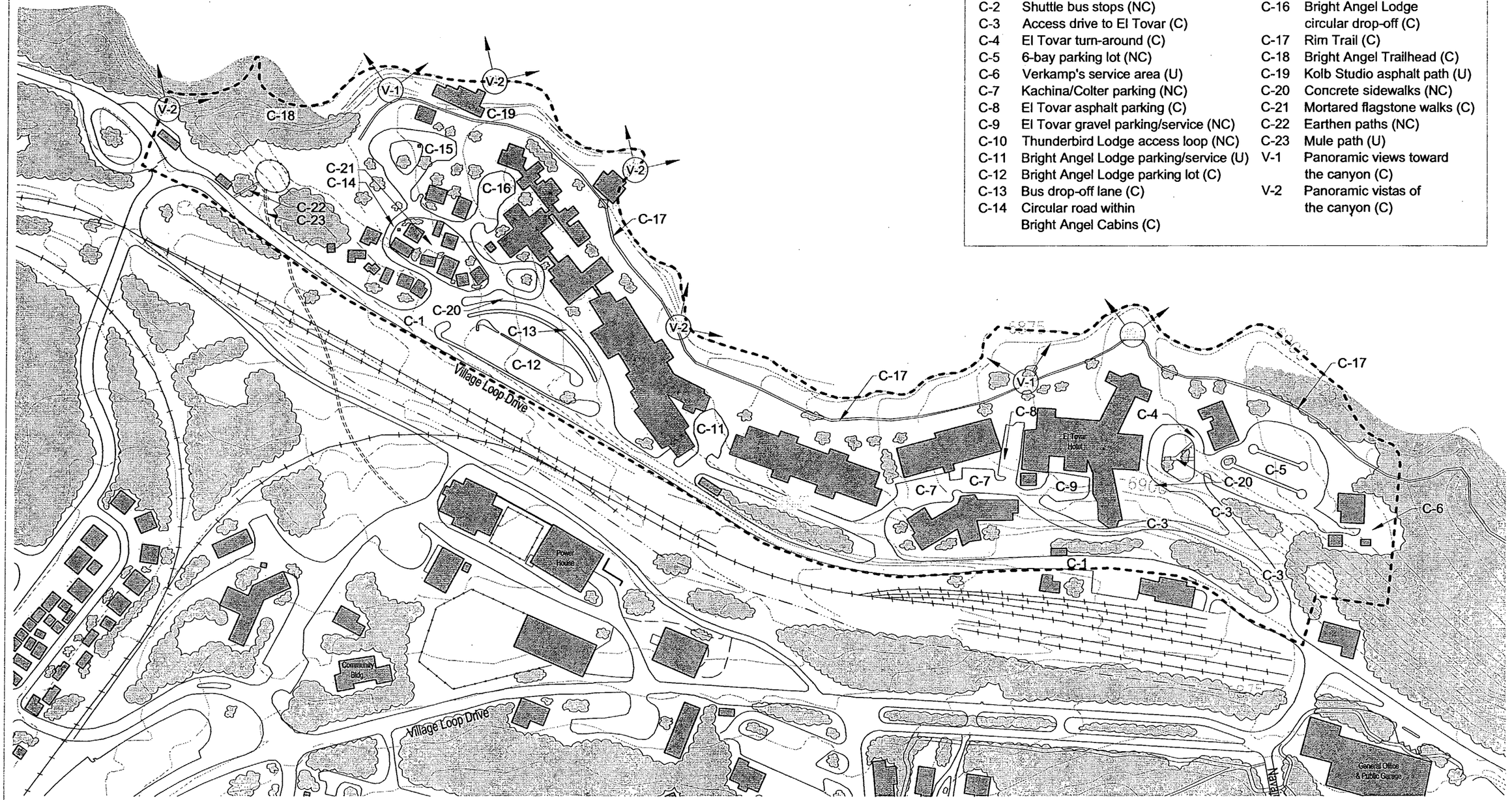
DRAWING NO. 113 20223

PKG. NO.

SHEET 8 OF 67

Feature List:

C-1	Village Loop Drive (C)	C-15	Rim Cabin parking (C)
C-2	Shuttle bus stops (NC)	C-16	Bright Angel Lodge circular drop-off (C)
C-3	Access drive to El Tovar (C)	C-17	Rim Trail (C)
C-4	El Tovar turn-around (C)	C-18	Bright Angel Trailhead (C)
C-5	6-bay parking lot (NC)	C-19	Kolb Studio asphalt path (U)
C-6	Verkamp's service area (U)	C-20	Concrete sidewalks (NC)
C-7	Kachina/Colter parking (NC)	C-21	Mortared flagstone walks (C)
C-8	El Tovar asphalt parking (C)	C-22	Earthen paths (NC)
C-9	El Tovar gravel parking/service (NC)	C-23	Mule path (U)
C-10	Thunderbird Lodge access loop (NC)	V-1	Panoramic views toward the canyon (C)
C-11	Bright Angel Lodge parking/service (U)	V-2	Panoramic vistas of the canyon (C)
C-12	Bright Angel Lodge parking lot (C)		
C-13	Bus drop-off lane (C)		
C-14	Circular road within Bright Angel Cabins (C)		



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600

N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. I

RIM AREA

CIRCULATION VIEWS & VISTAS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 9 OF 67

Feature List:

S-1	Bus Shelters (NC)	B-18	Colter Hall (C)
S-2	Wayside Exhibit (NC)	B-19	El Tovar Hotel (C)
B-1	Red Horse Cabin (C)	B-20	Hopi House (C)
B-2	Bright Angel Cabins (C)	B-21	Verkamp's Gift Shop (C)
B-3	Laundry Building (C)	B-22	Verkamp's Residence (C)
B-4	Utility Shed (C)	B-23	Verkamp's Residence Shed (U)
B-5	Equipment Shed #536 (C)	S-3	Storage shed (U)
B-6	Equipment Shed #483 (C)	S-4	Bus shelter stone walls (NC)
B-7	Comfort Station (C)	S-5	Mule corral wall (C)
B-8	Rim Cabins (C)	S-6	Kolb Studio retaining walls (C)
B-9	Powell Lodge (C)	S-7	Kolb Garage retaining wall (C)
B-10	Electrical Storage (C)	S-8	Lookout Studio stone walls (C)
B-11	Buckey O'Neill Cabin (C)	S-9	Rim Trail wall (C)
B-12	Bright Angel Lodge (C)	S-10	Bright Angel Lodge parking wall (C)
B-13	Kolb Studio (C)	S-11	Bright Angel Lodge seat walls (C)
B-14	Kolb Studio Garage (C)	S-12	Stone steps (C)
B-15	Lookout Studio (C)	S-13	Concrete steps (C)
B-16	Thunderbird Lodge (NC)	S-14	Wood steps (U)
B-17	Kachina Lodge (NC)	S-15	Hopi House Dance Platform (C)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

RIM AREA

BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

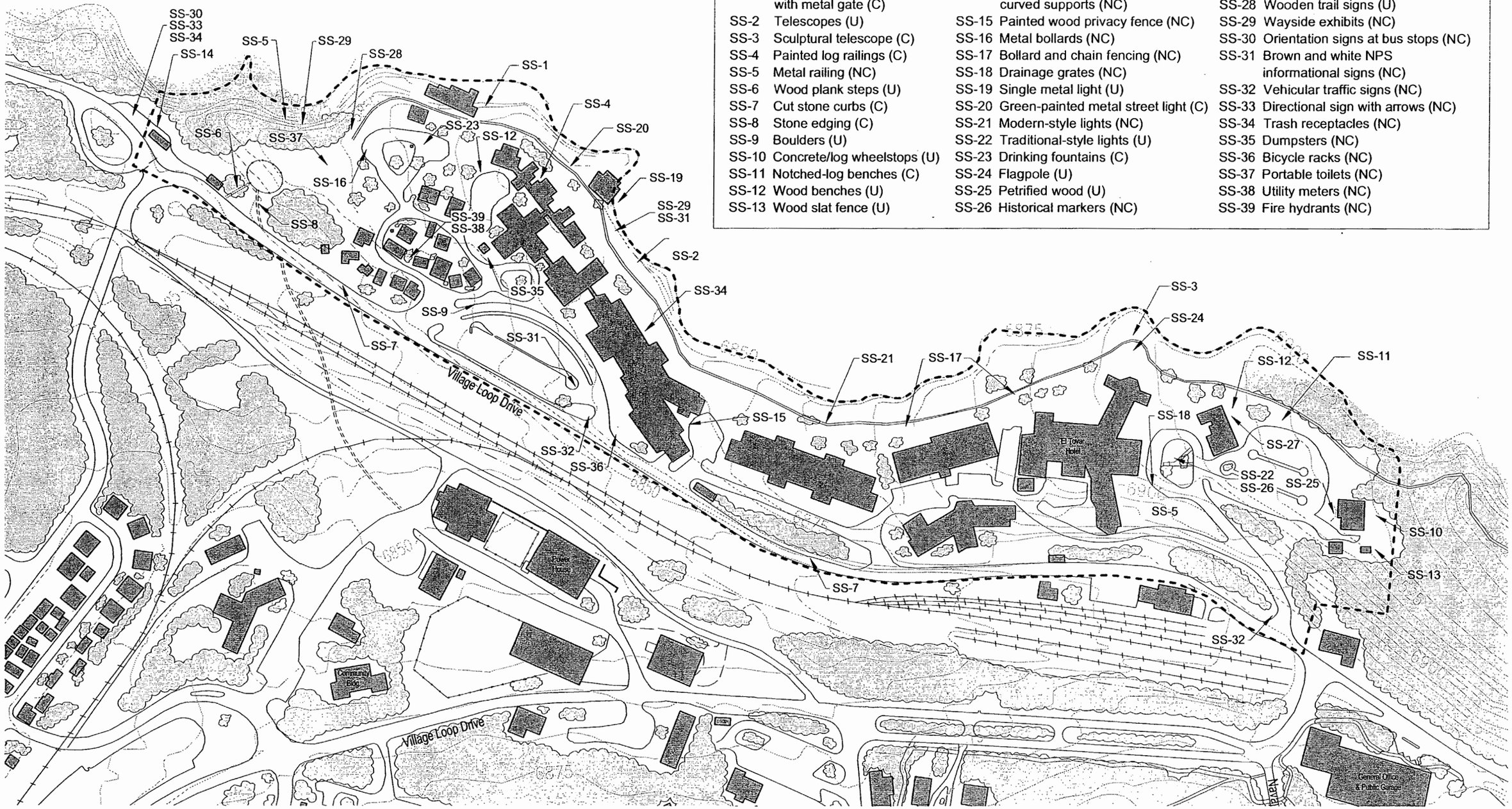
DRAWING NO.

PKG. NO.

SHEET 10 OF

Feature List:

SS-1 Concrete and stone arch with metal gate (C)
SS-2 Telescopes (U)
SS-3 Sculptural telescope (C)
SS-4 Painted log railings (C)
SS-5 Metal railing (NC)
SS-6 Wood plank steps (U)
SS-7 Cut stone curbs (C)
SS-8 Stone edging (C)
SS-9 Boulders (U)
SS-10 Concrete/log wheelstops (U)
SS-11 Notched-log benches (C)
SS-12 Wood benches (U)
SS-13 Wood slat fence (U)
SS-14 Metal pipe railing with curved supports (NC)
SS-15 Painted wood privacy fence (NC)
SS-16 Metal bollards (NC)
SS-17 Bollard and chain fencing (NC)
SS-18 Drainage grates (NC)
SS-19 Single metal light (U)
SS-20 Green-painted metal street light (C)
SS-21 Modern-style lights (NC)
SS-22 Traditional-style lights (U)
SS-23 Drinking fountains (C)
SS-24 Flagpole (U)
SS-25 Petrified wood (U)
SS-26 Historical markers (NC)
SS-27 Stone slab sign (NC)
SS-28 Wooden trail signs (U)
SS-29 Wayside exhibits (NC)
SS-30 Orientation signs at bus stops (NC)
SS-31 Brown and white NPS informational signs (NC)
SS-32 Vehicular traffic signs (NC)
SS-33 Directional sign with arrows (NC)
SS-34 Trash receptacles (NC)
SS-35 Dumpsters (NC)
SS-36 Bicycle racks (NC)
SS-37 Portable toilets (NC)
SS-38 Utility meters (NC)
SS-39 Fire hydrants (NC)



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. I

RIM AREA

SMALL-SCALE FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223
PKG. NO. —
SHEET 11
OF 67

Utility Area

The Utility Area is used for support and maintenance operations and is bordered by the railroad tracks to the north; the Maswik cabins to the west; concessionaire housing and Village Loop Drive to the south; and the Grand Canyon National Park Lodges office to the east. Village Loop Drive bisects this area and the majority of features are located to the north of this road. Characterized by a number of large industrial buildings and utilitarian structures, the area is permeated by access roads, employee parking lots, and pedestrian paths.

Natural Systems and Features

The Utility Area sits on the southern edge of the Bright Angel Wash. North of the Power House and Purchasing and Receiving Building, the land slopes gently down towards the railroad tracks, into the Wash. There are, however, no specific natural systems and features in this area.

Spatial Organization

The spatial organization of the site features large, open work spaces with utilitarian characters and uses. These are generally defined by, and related to, the large utility and livery buildings.

A long, open **central utility yard** forms the spine of the Utility Area (*Photograph 66*). Defined by the Power House and Purchasing and Receiving Building to the north and by the Maintenance Shop, Livery Stable and corrals to the south, the utility yard is enclosed on the east end by the Mule Barn. A paved roadway follows the center of the utility yard, which extends unpaved on the relatively level ground plane to the building façades on both sides.

Between the Livery Stable's eastern end and the Mule Barn's western façade is an **open yard space**. The access road to the Power House's loading dock runs through the center of the area, and unpaved parking and work areas extend to the facades of the two buildings.

West of the Livery Stable are **corrals** (*Photograph 67*). These fenced enclosures are surfaced in compacted earth, and include troughs, hay racks, and other equipment that supports the use of the corrals by a large number of mules.

Between the Power House and Purchasing and Receiving Building is a square, level site that is fenced with chain-link and board. This **substation space** contains several transformers and tall metal power structures that connect to numerous electrical lines radiating out to nearby utility poles (*Photograph 68*). A low retaining wall on the northern side sets this area apart from the railroad to the north.

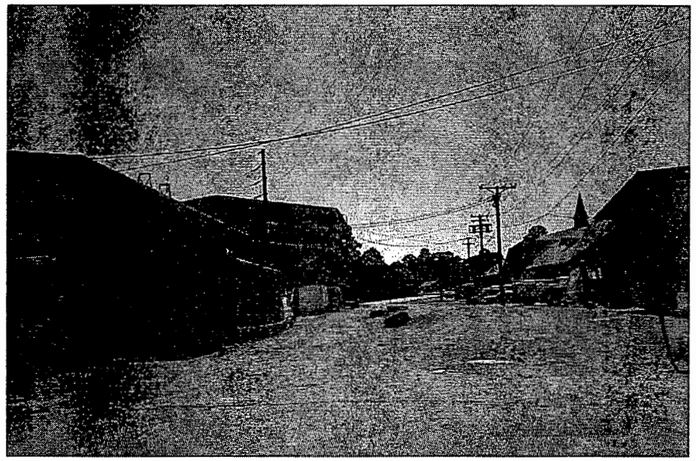
In the southwestern corner of the Utility Area is the **Community Building space**. This space is defined by a grove of trees and features an outdoor terrace, adjacent parking, and a network of paths and sidewalks. This shaded space has a sense of enclosure due to the grove of trees surrounding the building.

The **Village Loop Drive corridor** is defined by adjacent vegetation, buildings, and the pavement. The drive forms the primary vehicular circulation corridor through the Utility Area.

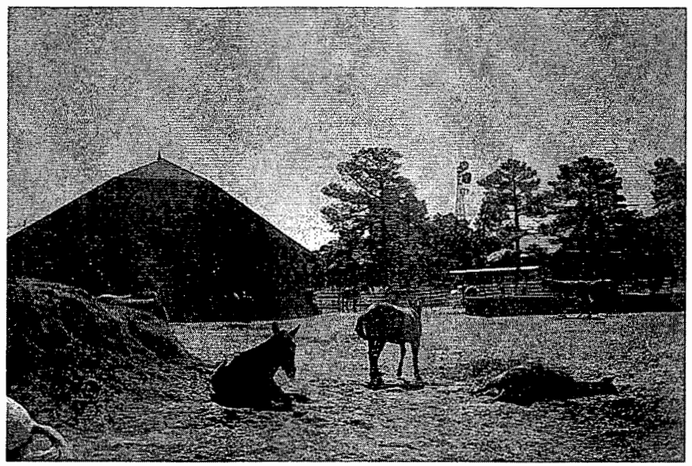
A **massing of vegetation** exists between Village Loop Drive and Apache Alley. These ponderosa pine woods help define road corridors and nodes as well as acting as a visual barrier between the Utility Area and other landscape character areas to the east and south.

Land Use

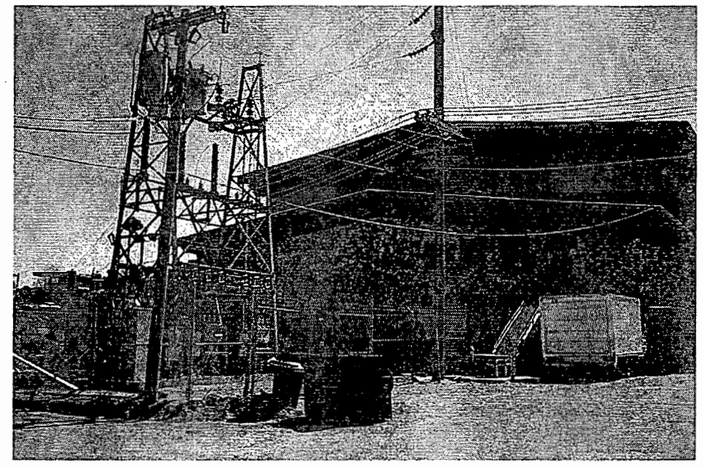
The Utility Area's land uses are dominated by maintenance and support operations, with some residential and civic uses.



Photograph 66. Central utility yard. (JMA, 2001)



Photograph 67. Mule corrals at west end of Livery Stable. (JMA, 2001)



Photograph 68. Substation space. (JMA, 2001)

Circulation

Circulation in the Utility Area consists primarily of vehicular circulation for service and tourist vehicles. **Village Loop Drive** is the primary public vehicular route through the area (*Photograph 69*). Unlike the northern portion of the road, the Utility Area section is two-way. The asphalt road is edged by thick, rectangular masonry curbing on its northern edge and more narrow, masonry curbing on the southern edge. Village Loop Drive curves northward near the southern corner of the area to accommodate the Maswik Lodge parking lot.

A **service road** is accessed from Village Loop Drive (*Photograph 70*). The road begins as an asphalt apron leading north into the Utility Area and then quickly becomes gravel and macadam as it turns west and continues past the Power House and former Laundry Building. The road then turns south to become a drive aisle through the **Victor Hall** and **Community Building parking lots** (*Photograph 70*). The parking lots are composed of single bays along the building fronts, paved in macadam and gravel, and have a mixture of low stone edging and sandstone curbing.

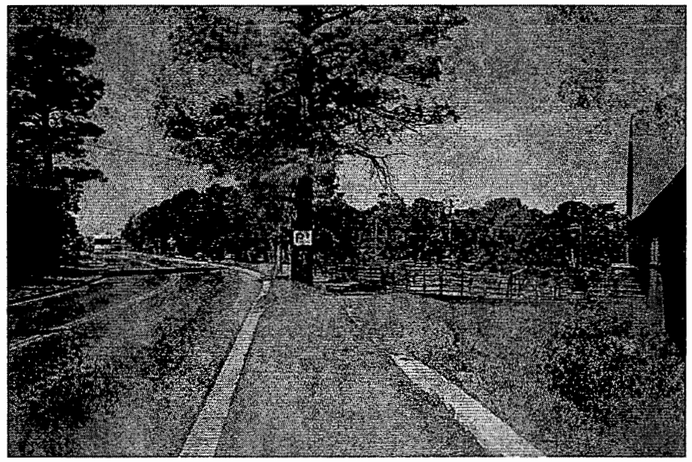
The **Old Village Bypass Road** is an informal asphalt-paved service road that runs along the northern edge of the Utility Area, north of the Power House and Purchasing and Receiving Building, and along the railroad tracks (*Photograph 71*). The road has wide gravel shoulders with no curbing and is used mainly by NPS and concessionaire staff.

Gravel service roads are located west of, and behind, Victor Hall and lead into the Concessionaire Housing Area—south of the Utility Area. Victor Hall's gravel road is currently blocked by boulders and parked cars (*Photograph 72*).

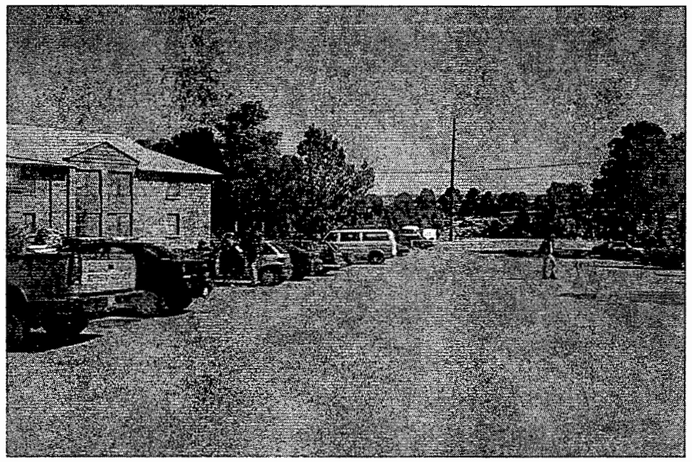
Throughout the Utility Area, **gravel parking** is located near buildings and serves as informal parking for visitors and staff. Gravel parking is found north of the Victor Hall Annex, around the Livery Stable, and between the Power House and former Laundry Building and the Old Village Bypass Road. During fieldwork, vehicles were also observed parking along the outside curve of the service road, between the former Laundry Building and Victor Hall Annex.

A more formal **asphalt parking lot** is located west of the Maintenance Shop (*Photograph 73*). A second **asphalt parking lot** is located between the Blacksmith Shop and The GCNPL Office, although the pavement deteriorates into a gravel surface as it reaches west toward the Blacksmith Shop.

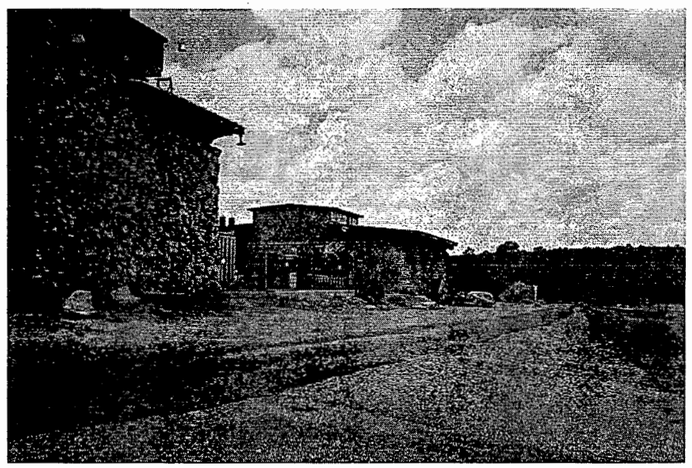
An informal, short **asphalt access drive** extends between Village Loop Drive and Apache Alley.



Photograph 69. Village Loop Drive, south, with sidewalk. (JMA, 2001)



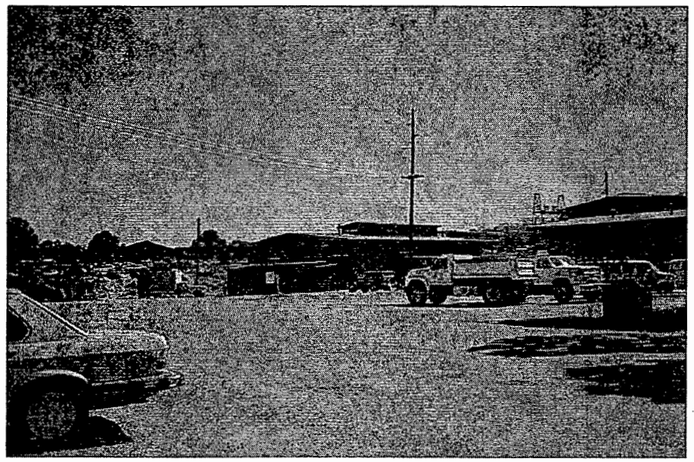
Photograph 70. Service road into utility area and parking lots. (JMA, 2001)



Photograph 71. Old Village Bypass Road. (JMA, 2001)



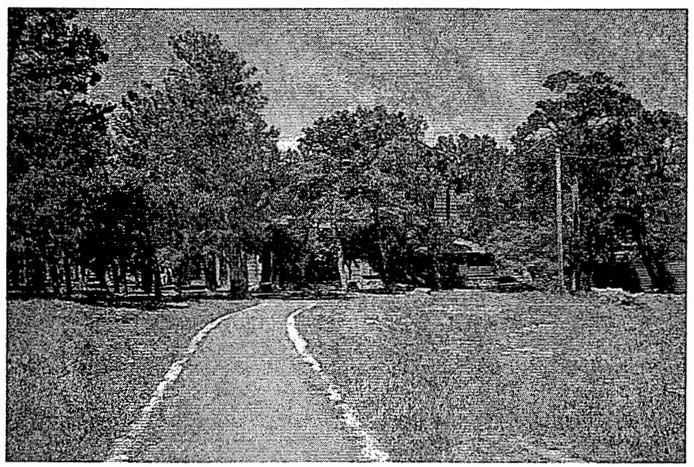
Photograph 72. Gravel service road west of Victor Hall. (JMA, 2001)



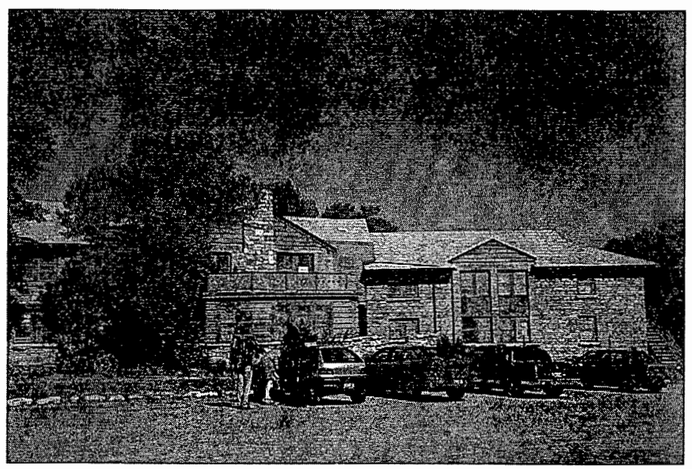
Photograph 73. Parking and service circulation west of Maintenance Shop. (JMA, 2001)



Photograph 74. Wooded area south of Village Loop Drive. (JMA, 2001)



Photograph 75. Grove and grasses around Community Building. (JMA, 2001)



Photograph 76. Victor Hall. (JMA, 2001)

A stone-edged **asphalt sidewalk** leads from the eastern edge of the Utility Area, running along Village Loop Drive to the Community Building, where the sidewalk turns northwest to meet the front of the building (*Photograph 69*).

Earthen paths are located throughout the area where staff and visitors have worn away grass or groundcover over time when seeking the most expeditious route to a destination. For example, earthen paths run through the open space between the Victor Hall Annex and Purchasing and Receiving Building. The earthen mule path to the Rim Area begins at the northwest edge of this character area, although it is described in the Railroad Area section.

Gravel and asphalt paths are located near the main entrance of the Community Building. This formal network of paths increases accessibility to the Community Building, the parking lots, and other points in the vicinity.

To the east of the Power House, a **loading dock** eases loading and unloading operations.

Vegetation

The Utility Area is largely open, and as a functional space, contains little ornamental planting. Ponderosa pines dominate the vegetation around the edges of the area, particularly the **woodland masses** to the south of Village Loop Drive (*Photograph 74*).

A **grove around the Community Building** is comprised of densely-growing ponderosa pines (*Photograph 75*). Other vegetation includes possibly **invasive grasses** along the margins of Village Loop Drive.

Buildings and Structures

Buildings and structures within the Utility Area support maintenance, visitor service, and lodging activities. Utility Area buildings and structures are generally described below as they occur from west to east in the landscape.

Built in 1936, **Victor Hall** (Bldg. #0576) serves as concessionaire housing and is located near the western edge of the Utility Area boundary—east of the railroad tracks wye (*Photograph 76*). The building exhibits elements of Swiss Rustic styling. Victor Hall has multi-level gabled and hipped roofs. Several gable ends have scalloped wood weatherboard. The façade is sheathed in a number of different materials including cut stone, clapboard sidings, and patterned wood. Windows are six-over-six double-hung and typically exist in sets of two or three. Windows have rough stone sills and green-painted wood trim. Detailing

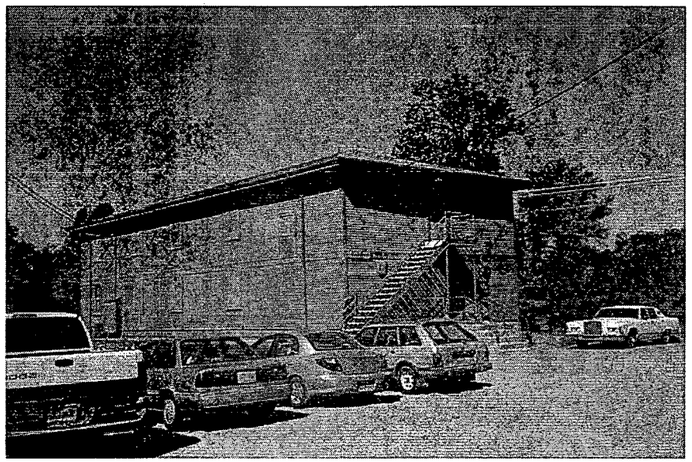
includes a green Swiss Rustic railing on the roof of a first-floor bump-out room and coursed stone pilaster chimney. An eroded asphalt **basketball court**, with a single hoop, is located behind and south of Victor Hall.

Victor Hall Annex (Bldg. #0578) was built in 1913 (*Photograph 77*). It is located northwest of Victor Hall and currently serves as concessionaire housing. The rectangular, clapboard-sided building has a green-shingled hipped roof. Windows are two-over-two double-hung with green trim. Entrances are located on the first and second stories on the north elevation. The first floor door is reached by concrete steps while the second floor is accessed by a metal staircase. The **Heating Plant** (Bldg. #576a) is located between Victor Hall and Victor Hall Annex (*Photograph 78*). Its date of construction is unknown. The small, square structure is constructed of concrete masonry units, has a concrete slab shed roof, and two vented wood doors on the north elevation.

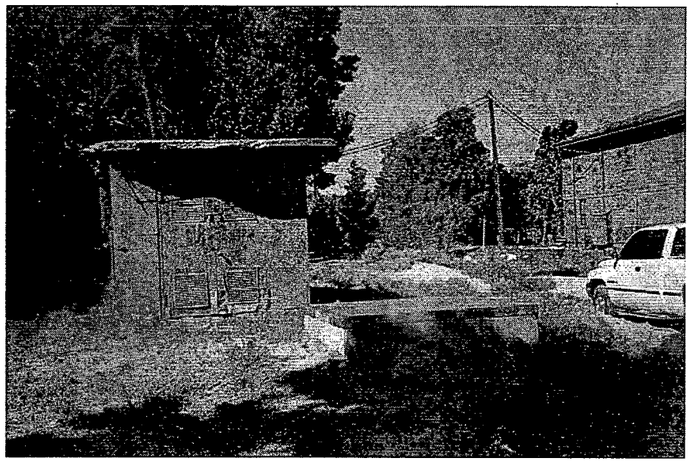
The **Community Building** (Bldg. #SRB0044) is located near the western intersection of Village Loop Drive and the interior Utility Area service road (*Photograph 79*). Completed in 1935, the building was rehabilitated in 1999 and currently serves as a visitor education center and storage area. The building has multi-level gabled, hipped, and shed roofs. The overhanging eaves are supported by logs set parallel to the eaves as well as exposed log rafter tails. Siding consists of brown wood clapboard, sometimes arranged in decorative patterns. Windows are either one-over-one or grouped in larger bays; all with green trim. Smaller windows often have trellis-patterned mullions. A porch, with rustic wood railing, stone foundation, and shed roof, is located on the northwest corner of the building. The main entrance is located on the southeast corner of the building, beneath a hipped-roof overhang. A **stone wall**, approximately eighteen inches in height, is located around the northwestern corner of the Community Building (*Photograph 80*).

The **Storage Building** (Bldg. #0575) is located north and west of the Community Building (*Photograph 81*). The long, rectangular building has a gently-pitched gable roof, several different kinds of vertical wood siding, and various types of windows. Windows vary from traditional two-over-two, to multiple-light, to contemporary aluminum. An entrance is located on the west elevation and consists of a short, wide door. Long, rectangular, brown metal **storage trailers** are located east of the Storage Building (*Photograph 82*).

The **Maintenance Shop** (Bldg. #0572) was constructed in 1931 and is located south of the Purchasing and Receiving Building (*Photograph 83*). The building shares some of the Swiss Rustic characteristics of its surrounding counterparts. The rectangular building has a gently-pitched



Photograph 77. Victor Hall Annex. (JMA, 2001)



Photograph 78. Heating Plant at Victor Hall. (JMA, 2001)



Photograph 79. Community Building. (JMA, 2002)



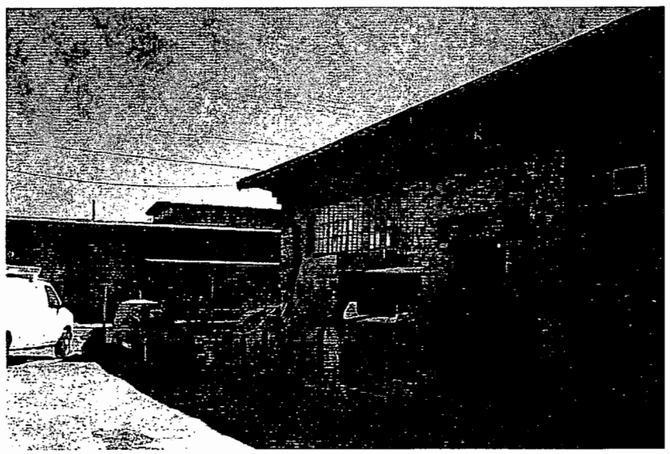
Photograph 80. Stone wall at Community Building. Note typical trash receptacle and picnic table. (JMA, 2001)



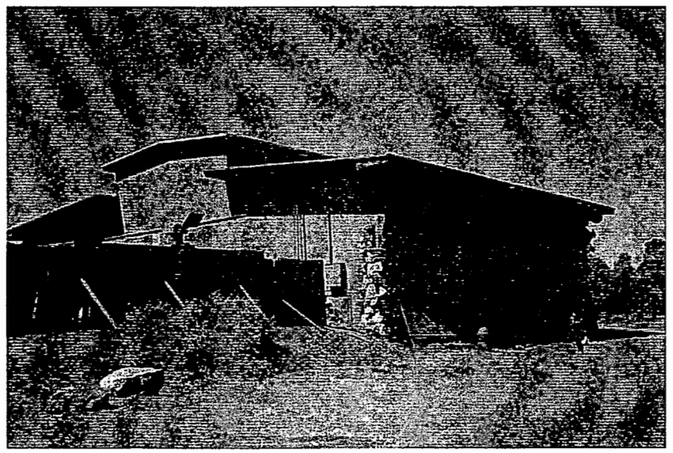
Photograph 81. Storage Building (former Carpentry Shop). (JMA, 2001)



Photograph 82. Storage trailers. (JMA, 2001)



Photograph 83. Maintenance Building (former Paint Shop) with concrete loading dock. (JMA, 2001)



Photograph 84. Purchasing and Receiving (former Laundry Building), with board fence on left. (JMA, 2001)

gable roof with exposed rafter tails and stepped corner brackets. Horizontal wood siding extends below the roof-line to cover the upper third of the wall. The lower third is sheathed in coursed, rough stone. Large, multi-light windows are located on all four sides of the building. The main entrance is located on the west elevation, beneath a sign reading "Engineering Department," and a deeply inset square window. A small shed addition is located on the south elevation. A **concrete loading dock** is located on the west end of the building, near the entrance.

An **Office/Storage structure** (Bldg. #0573) is located east of, and adjacent to, the Maintenance Shop. The small structure is constructed of concrete masonry units with a concrete slab shed roof..

The **Purchasing and Receiving Building** (Bldg. #0569), also known as the Laundry Building, was built in 1927 and is located along the northern boundary of the Utility Area (*Photograph 84*). The building has Swiss Rustic styling with oversized, rounded corner brackets, decorative wood siding below the overhanging eaves, and uncoursed stone siding. The roof has a large, rectangular, gable-roof monitor. The lower roofs gently slope away from the monitor. Windows are tall, rectangular, multi-light bays on the north and south elevations. A shed addition is located on the west elevation.

According to a 1985 National Historic Landmark Nomination, the Grand Canyon **Power House** (Bldg. # 0567) was built in 1926 and detailed like a Swiss Chalet with ties to the California Arts-and-Crafts movement (*Photograph 85*). It is constructed of reinforced concrete. On the exterior, a native stone veneer makes up two-thirds of its height, and exposed aggregate concrete with a decorative wood cornice and balcony makes up the top third. A smaller wing at the west end of the building repeats the wood cornice but has no balcony. The gable roofs of the main building and wing are covered with rolled composition roofing. Multi-story steel sash windows break up the rubble-masonry wall surface. The windows have concrete lintels and spandrels between the basement and upper levels. A **concrete loading dock** is located on the eastern elevation of the Power House. **Concrete steps** lead from the northeast corner of the building down to the Old Village Bypass Road (*Photograph 86*). A rubble **stone retaining wall** extends east from the concrete steps.

Built in 1907, the **Livery Stable** (Bldg. #0563) is located south of the Power House, along the northern edge of Village Loop Drive (*Photograph 87*). Exhibiting early Craftsman-style detailing, the Livery Stable has a board-and-batten lower exterior while the upper wall has shingle siding. It also has a steeple-like cupola on the roof, multi-light

windows, and large sliding doors at the east and west ends of the building. The Livery Stable is built upon a concrete foundation and has a green-shingled gabled roof with hipped ends.

The **Mule Barn** (Bldg. #0562) was built in 1905 and is currently used for concessionaire storage purposes (*Photograph 88*). The barn is located east of the Livery Stable. Although architecturally similar to the Livery Stable, the Mule Barn is much smaller. The barn also has a concrete foundation and board-and-batten/shingle siding exterior. The roof has green asphalt shingles and a low, square cupola. A single row of square windows is located on the south elevation. Barn doors are located on the west elevation. A **concrete and asphalt ramp** leads to the northern door (*Photograph 89*). The hayloft door is located beneath a hipped roof dormer on the southern elevation. To the south and east of the Mule Barn, a **cut-stone masonry retaining wall** supports the earth around part of the barn (*Photograph 90*). A second, upper wall supports the asphalt sidewalk located along Village Loop Drive behind the lower wall.

The **Blacksmith Shop** (Bldg. #0564) was built in 1908 and is located on the south side of Village Loop Drive, across from the Livery Stable (*Photograph 91*). The building is an L-shaped wood-frame structure built upon a concrete foundation. Like the Livery Stable and Mule Barn, the Blacksmith Shop exterior consists of board-and-batten siding halfway up the wall while shingle siding continues to the roof. The hipped roof has green asphalt shingles. A single row of square windows is located on the north elevation while double doors are located to the east. Metal pipe chimneys rise up from the roof. **Concrete steps** and a **concrete pad** are located on the northeast corner of the building.

The **Grand Canyon National Park Lodges Personnel Office** (GCNPL Personnel Office) (Bldg. #558) was built in 1920 and is located south of Village Loop Drive and across from the Mule Barn (*Photograph 92*). The office was once the Fred Harvey Transportation Department Dormitory and Shirley Hall but now serves as administrative offices for Xanterra concessionaire staff. The building is long and rectangular, having a low or flat roof with a very slight eave. The exterior walls are sheathed with brown stucco and have two-over-two double-hung windows of various sizes. The main entrance is located on the west elevation beneath an enclosed shed porch.

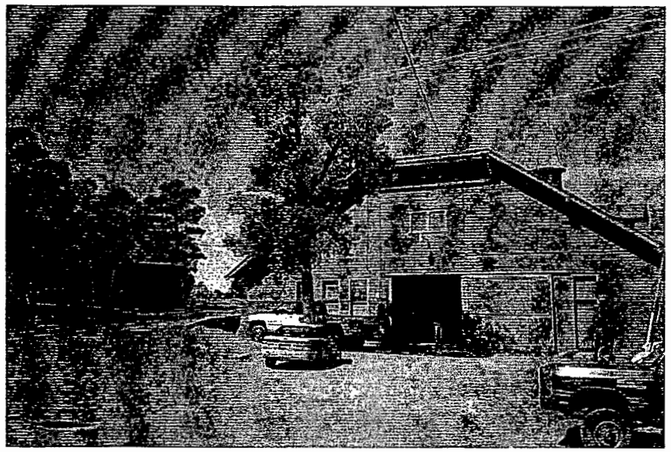
A **Bus Shelter** (Bldg. #450) is located directly east of the GCNPL Personnel Office. Of contemporary construction, the rectangular shelter has a wood-shingled gable roof supported by log rafters and beams. The roof rests on four square stone posts. The posts sit on a stone seat wall foundation where long wood planks span the posts creating seat backs.



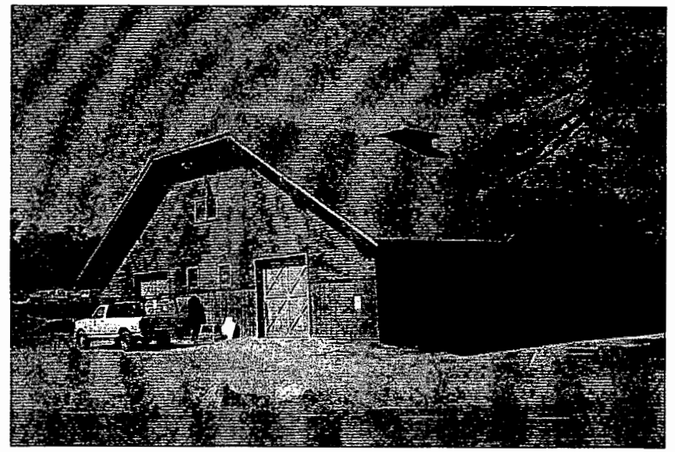
Photograph 85. Grand Canyon Power House and loading dock. (JMA, 2001)



Photograph 86. Concrete steps, rubble stone retaining wall at Power House. (JMA, 2002)



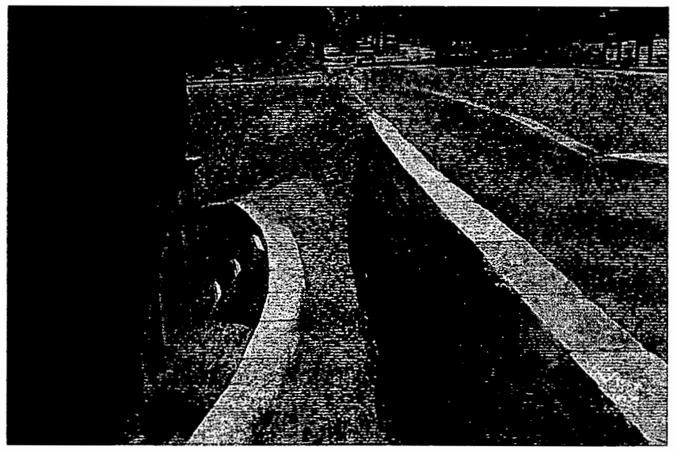
Photograph 87. Livery Stable. (JMA, 2001)



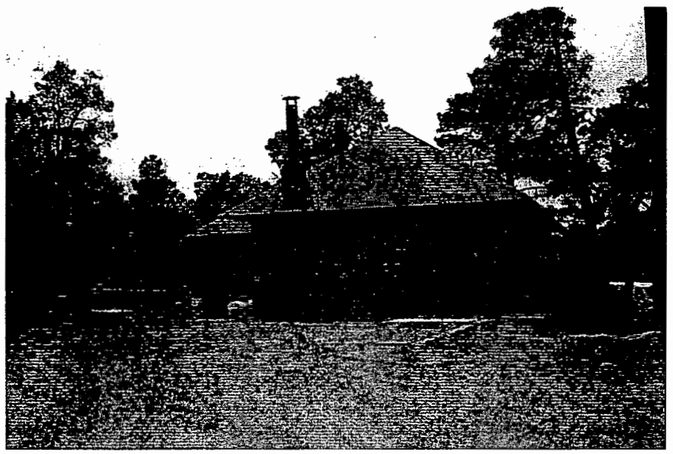
Photograph 88. Eastern facade of the Mule Barn. (JMA, 2001)



Photograph 89. Concrete and asphalt ramp at Mule Barn. (JMA, 2001)



Photograph 90. Cut-stone masonry retaining wall at corner of Mule Barn. (JMA, 2001)



Photograph 91. Blacksmith Shop with concrete pad. (JMA, 2001)



Photograph 92. GCNPL Personnel Office (former Fred Harvey Transportation Department Dormitory). (JMA, 2001)

The **U.S. West Office** (Bldg. #0500), also known as the Mountain States Telephone Building, was built in 1936 and is located along the southern edge of the Utility Area boundary—south of the Personnel Office. The long rectangular building has a gable roof. The exterior walls have a stone foundation that extends to cover the lower third of the wall while horizontal clapboard siding covers the upper third. Windows are six-over-six double hung and exist singly or in pairs. Stone piers, located at building corners, extend from the ground to the roof line. The entrance is located in a small ell addition on the northwestern elevation. A metal frame **radio tower** is located directly south of the building (*Photograph 93*).

A small, square, brown-painted storage shed, called the **Cell Phone Equipment Building** (Bldg. #1564), with gabled roof and clapboard siding, is located directly south of the U.S. West Office (*Photograph 94*). A second **storage shed** is located just east of the Cell Phone building (*Photograph 95*). This seemingly contemporary small, square shed has a gabled roof, board-and-batten siding, and one multi-light window with green trim. The entrance door is located beneath a small gabled porch roof on the north elevation.

The **Boy Scout Building** (Bldg. #241) is located east of the U.S. West Office and its associated sheds (*Photograph 96*). The building has a gabled roof and clapboard siding. Square two-over-two windows, with light green trim, are located on the west, east, and south elevations. Two sets of double garage doors are located on the north façade, as is an attic vent in the gable end.

Between the Power House and Purchasing and Receiving Buildings, a **concrete platform** supports an **electrical substation** (*Photograph 68*). The substation consists of utility boxes, high voltage towers, and other electricity-supplying equipment. **Utility poles** and **power lines** weave throughout the Utility Area.

Views and Vistas

The Utility Area is set back from the Rim and therefore offers no views of the canyon itself. Within the central utility yard in the core of the character area, **long views** of this space include the façades of the Mule Barn, Livery Stable, Power House, and Purchasing and Receiving (*Photograph 66*).

Small-scale Features

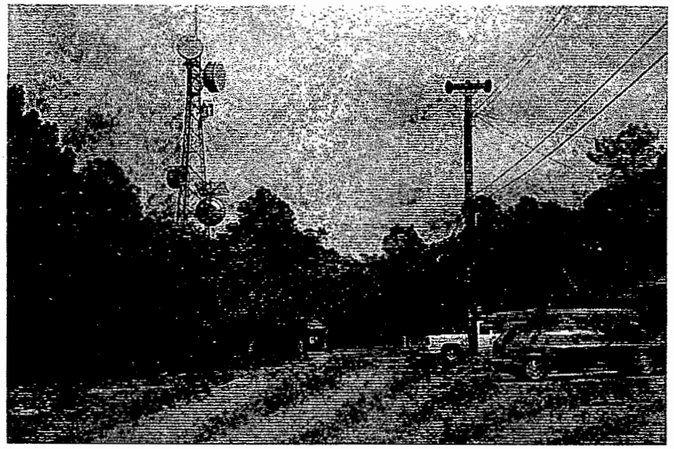
Small-scale features related to circulation include **cut sandstone curbs** found along Village Loop Drive and the asphalt sidewalks that accompany the roadway. These contemporary curbs are of evenly-cut sandstone. Similar curbing is used to protect trees and reinforce slopes along the road edge (*Photograph 97*). In a few places **boulder edging** is used along the road margin. Boulders are used in the Utility Area to control vehicular access, as wheel stops, and to protect small features, such as fire hydrants in the utility yard, from vehicles (*Photograph 98*).

Stone edging lines Community Building parking lot, while smaller stones line the paths to the building (*Photograph 79*). Stone edging also occurs along the corral fence (*Photograph 99*). Concrete **wheel stops**, often painted yellow, are located in the parking lot west of the Maintenance Shop and the lot between the Blacksmith Shop and GCNPL Personnel Office.

Metal **drainage grates** cover drop inlets along the margins of Village Loop Drive, both within the roadway and off to its sides. An example of this feature is the metal grate found just south of the Community Building (*Photograph 100*).

Lighting in the Utility Area includes street lights similar to those near the Bright Angel Cabins. **Black-painted metal street lights** have a curved lamp arm with a decorative bracket. An example of these lights is located along Village Loop Drive adjacent to the Mule Barn. A **light with an acorn fixture** is located at the Community Building parking lot (*Photograph 79*). Other outdoor lighting in the Utility Area consists of small lights mounted on the utility buildings, such as above the doors on the east side of the Livery Stable.

Fencing in the Utility Area is functional and contemporary. **Chain-link fencing** surrounds the radio antenna tower, is found along the south side of the Blacksmith Shop, and encloses the substation west of the Power House (*Photograph 68*). **Painted wood board privacy fence** surrounds other utility functions between the substation and the Purchasing and Receiving building (*Photograph 84*). Green or brown painted **metal corral fencing** surrounds the mule corral to the west of the Livery Stable (*Photograph 99*).



Photograph 93. Radio tower on left. (JMA, 2001)



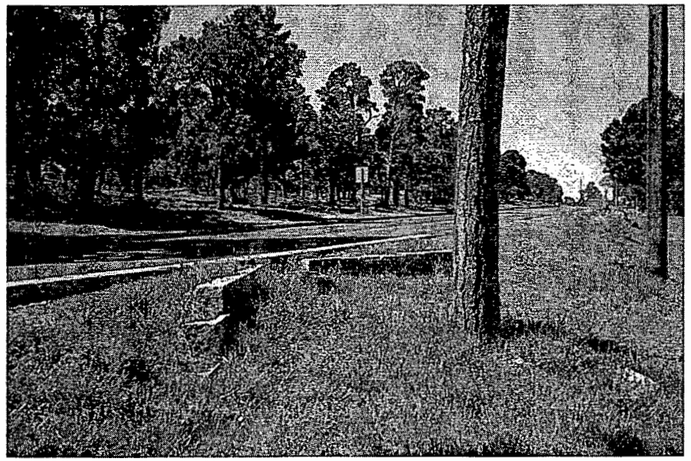
Photograph 94. Cell Phone Equipment Building. (Bldg #1564) (JMA, 2001)



Photograph 95. Storage Shed east of Cell Phone Building. (JMA, 2001)



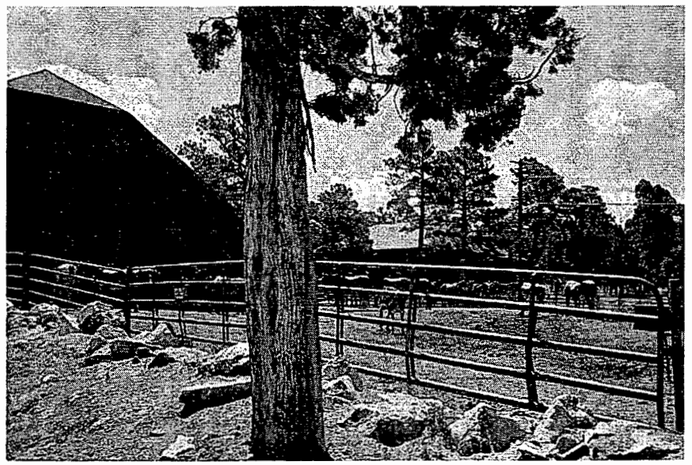
Photograph 96. Boy Scout Building. (JMA, 2001)



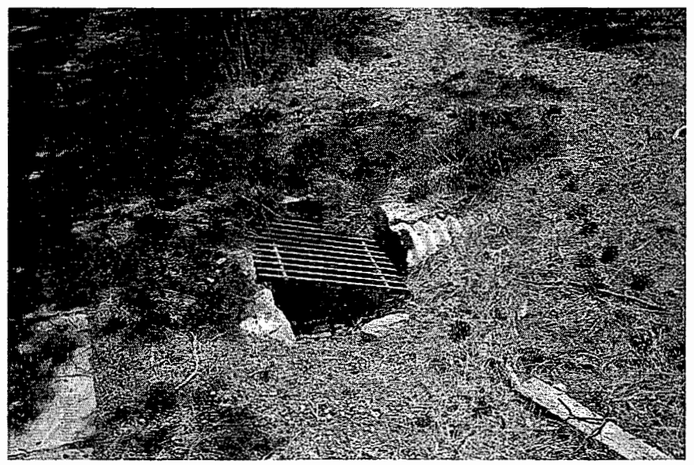
Photograph 97. Cut stone curb blocks used as tree guards along Village Loop Drive bank. (JMA, 2001)



Photograph 98. Fire hydrant and protective boulders. (JMA, 2001)



Photograph 99. Stone edging, corral fence. (JMA, 2002)



Photograph 100. Drainage grate near Community Building. (JMA, 2002)

Other features related to livestock uses include a **hitching post** comprised of a metal pipe bar east of the Livery Stable (*Photograph 101*) and **corral features** including a water tank, hay racks, and water troughs, all made of green-painted metal (*Photograph 102*).

Signage in the Utility Area includes a **historical marker** at the Community Building comprised of a rough boulder about two-and-a-half feet tall with one smooth side engraved with the words "Historic Community Building" over a bronze plaque.

Vehicular traffic signs of reflective painted metal on posts occur along most of the roads and parking lots. **Bus stop orientations signs**, described previously in the Rim Area, are located beside the bus shelter on Village Loop Drive.

Trash receptacles are fewer than in the Rim Area. Trash receptacles near the Community Building are of brown-painted metal. Numerous **dumpsters** of brown or green painted metal, some used for recycling, are found throughout the central yard and south of the Maintenance Shop.

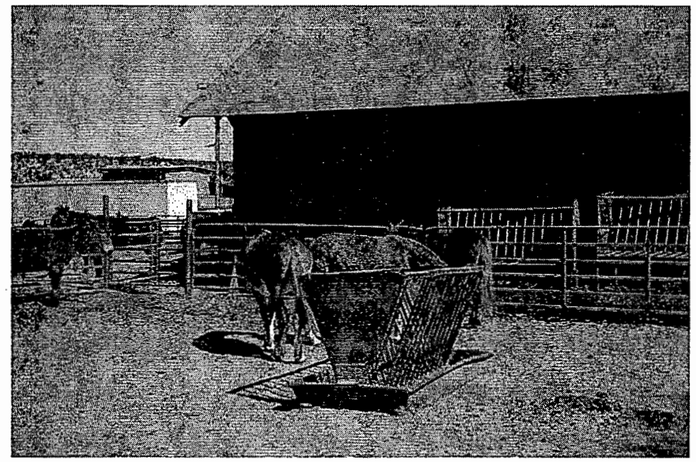
Features related to utility functions include **utility meters/boxes**, **propane tanks** (*Photograph 103*), **fire hydrants** such as the one in the western central portion of the central utility yard, and **manhole covers**, such as the one at the southeastern corner of the Livery Stable.

Piles of materials, including building materials, sand, and firewood are located in the Utility Area in the vicinity of the Storage Building (*Photograph 103*).

Recreational features include an **outdoor grill** (*Photograph 104*) near the basketball court and **picnic tables** on the terrace on the north side of the Community Building.



Photograph 101. Hitching post at Livery Stable. (JMA, 2001)



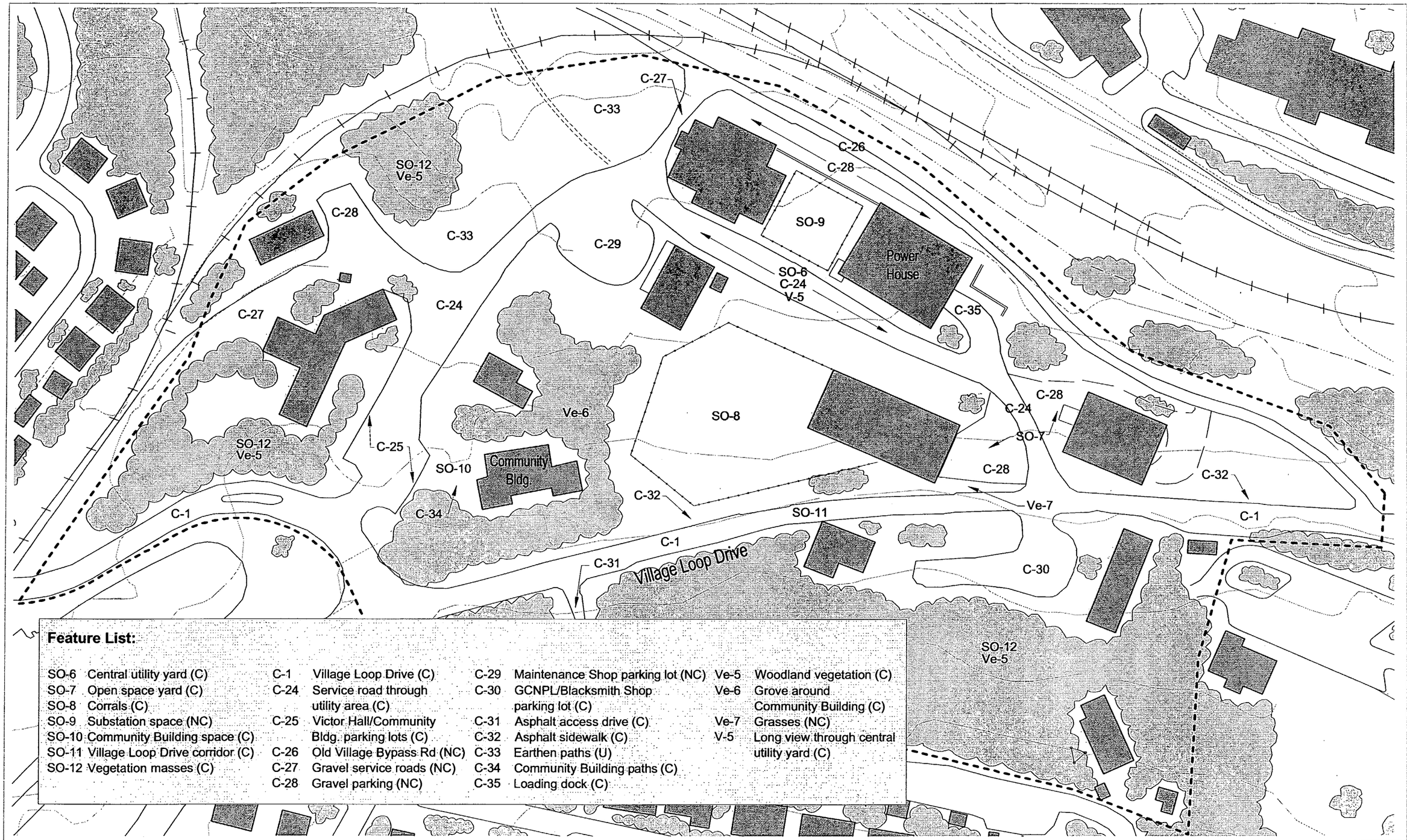
Photograph 102. Corral features. (JMA, 2001)



Photograph 103. Propane tank and wood pile (JMA, 2001)



Photograph 104. Outdoor grill near Victor Hall. (JMA, 2001)



Feature List:

SO-6	Central utility yard (C)	C-1	Village Loop Drive (C)	C-29	Maintenance Shop parking lot (NC)	Ve-5	Woodland vegetation (C)
SO-7	Open space yard (C)	C-24	Service road through utility area (C)	C-30	GCNPL/Blacksmith Shop parking lot (C)	Ve-6	Grove around Community Building (C)
SO-8	Corrals (C)	C-25	Victor Hall/Community Bldg. parking lots (C)	C-31	Asphalt access drive (C)	Ve-7	Grasses (NC)
SO-9	Substation space (NC)	C-26	Old Village Bypass Rd (NC)	C-32	Asphalt sidewalk (C)	V-5	Long view through central utility yard (C)
SO-10	Community Building space (C)	C-27	Gravel service roads (NC)	C-33	Earthen paths (U)		
SO-11	Village Loop Drive corridor (C)	C-28	Gravel parking (NC)	C-34	Community Building paths (C)		
SO-12	Vegetation masses (C)			C-35	Loading dock (C)		

KEY PLAN

SCALE: 1" =100'

0 50 100 200 300

N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. 1

UTILITY AREA

SPATIAL ORGANIZATION
CIRCULATION
VEGETATION
VIEWS & VISTAS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO.

SHEET 12 OF 67

NOTES:

Feature S-32 (Utility poles and power lines) is located throughout the site.

B-30
S-30, 31
B-31 Power House
S-22
S-23
S-26
6850
B-25
S-17
S-20
B-28
B-29
S-21
B-24
S-19
B-27
S-16
S-18
B-32
S-24
B-33
S-25
Community Bldg. B-26
S-1
B-34
S-26
Village Loop Drive
B-35
B-36
S-27
S-29
S-28
B-37

Feature List:

B-24	Victor Hall (C)	B-28	Maintenance Shop (C)	B-32	Livery Stable (C)	B-36	US West Office (C)
S-16	Basketball court (NC)	S-20	Concrete loading dock (C)	B-33	Mule Barn (C)	S-27	Radio tower (NC)
B-25	Victor Hall Annex (C)	B-29	Office/storage structure (U)	S-24	Concrete/asphalt ramp (U)	S-28	Cell Phone Eq. Bldg. (NC)
S-17	Heating Plant (U)	B-30	Purchasing and Receiving (C)	S-25	Cut-stone retaining wall (NC)	S-29	Storage shed (U)
B-26	Community Building (C)	B-31	Power House/Commissary (C)	B-34	Blacksmith Shop (C)	B-37	Boy Scout building (NC)
S-18	Stone walls (C)	S-21	Concrete loading dock (C)	S-26	Concrete steps and pad (U)	S-30	Concrete platform (NC)
B-27	Storage Building (C)	S-22	Concrete steps (NC)	B-35	GCNPL Office (C)	S-31	Electrical substation (NC)
S-19	Storage trailers (NC)	S-23	Stone retaining wall (C)	S-1	Bus shelter (NC)	S-32	Utility poles and power lines (U)

KEY PLAN

SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

UTILITY AREA

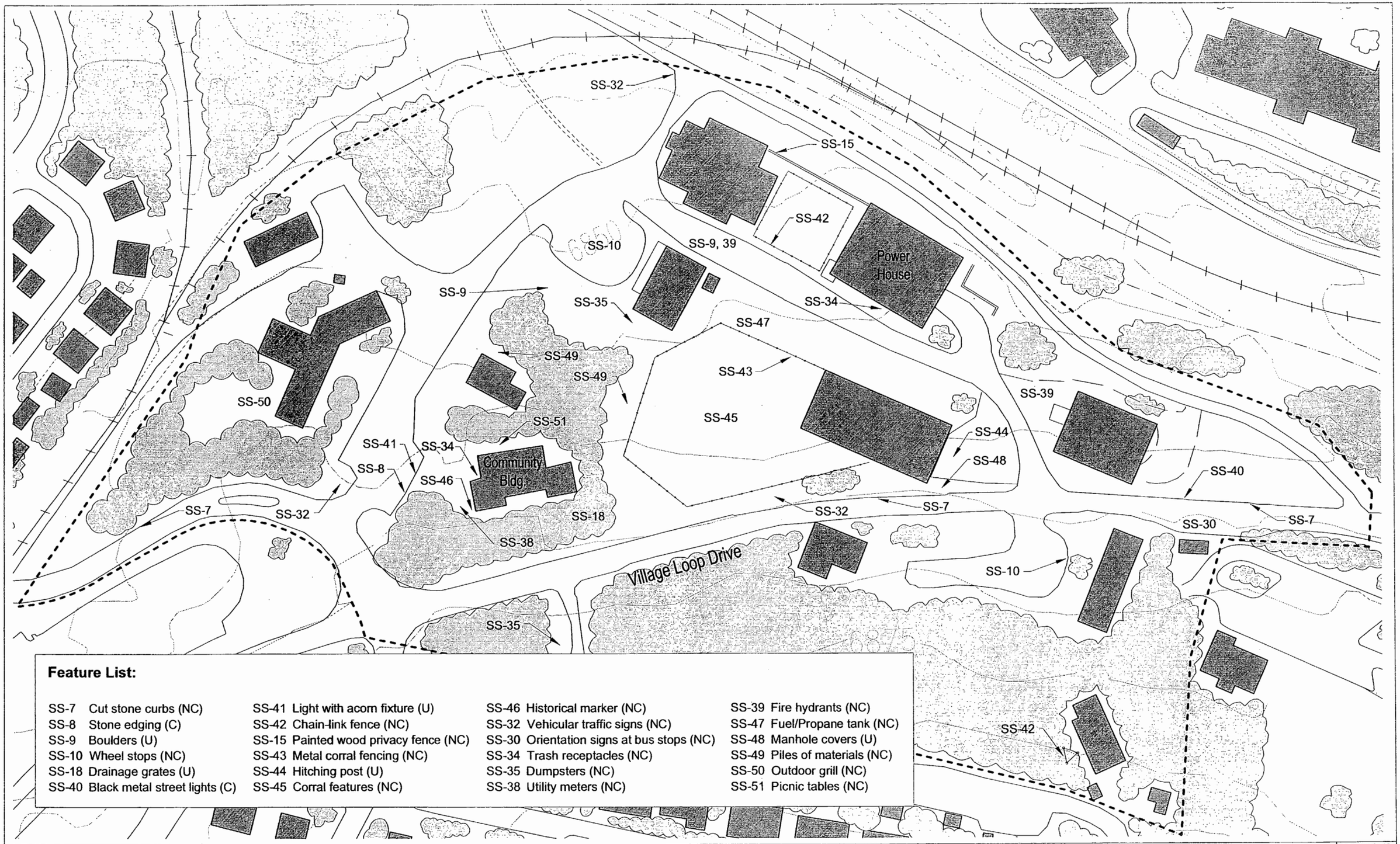
BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

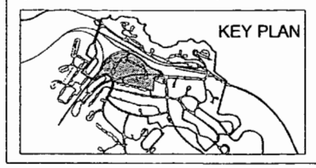
PKG. NO. —

SHEET 13 OF 67



Feature List:

SS-7 Cut stone curbs (NC)	SS-41 Light with acorn fixture (U)	SS-46 Historical marker (NC)	SS-39 Fire hydrants (NC)
SS-8 Stone edging (C)	SS-42 Chain-link fence (NC)	SS-32 Vehicular traffic signs (NC)	SS-47 Fuel/Propane tank (NC)
SS-9 Boulders (U)	SS-15 Painted wood privacy fence (NC)	SS-30 Orientation signs at bus stops (NC)	SS-48 Manhole covers (U)
SS-10 Wheel stops (NC)	SS-43 Metal corral fencing (NC)	SS-34 Trash receptacles (NC)	SS-49 Piles of materials (NC)
SS-18 Drainage grates (U)	SS-44 Hitching post (U)	SS-35 Dumpsters (NC)	SS-50 Outdoor grill (NC)
SS-40 Black metal street lights (C)	SS-45 Corral features (NC)	SS-38 Utility meters (NC)	SS-51 Picnic tables (NC)



SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

UTILITY AREA

SMALL-SCALE FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 14 OF 67

Railroad Area

Stretching from the western edge of the Village Historic District boundaries to the eastern terminus of the railroad line, and edged by Village Loop Drive to the north and partly to the south, the Railroad Area is used exclusively for transportation, circulation, and parking. Characterized by the Santa Fe Railroad tracks and the associated Grand Canyon Railroad Depot, the Railroad Area reflects the early development of the Grand Canyon as a popular tourist destination.

Natural Systems and Features

The Railroad Area is located largely within the **Bright Angel Wash**. From the north, steep slopes descend from Village Loop Drive and the rim plateau to the railroad tracks (*Photograph 105*). The tracks are aligned along the gentle grade that runs from east to west across the bottom of the drainage. Water flows west down the drainage in a **ditch** that is located generally to the south of the railroad tracks (*Photograph 106*).

Spatial Organization

The spatial organization of the Railroad Area is based on the open, **linear corridor of the Bright Angel Wash**. The space is defined on the north by the steep slope up to Village Loop Drive and to the south by the Old Village Bypass Road. The western portion of this open corridor, which generally lacks plantings and large built features, allows views between the Rim Area and Utility Areas.

In the western portion of the area, a triangular space is created by the **wye intersection** of the railroad tracks (*Photograph 107*). This space contains ponderosa pine woods and a portion of the Old Village Bypass Road. A **node** at the eastern terminus of the railroad tracks consists of the Railroad Depot, gathering spaces for arriving or departing passengers, and spaces for loading or unloading cargo (*Photograph 108*). The node's low-lying location and the adjacent stands of tall ponderosa pines give the Depot cluster an enclosed feeling.

Land Use

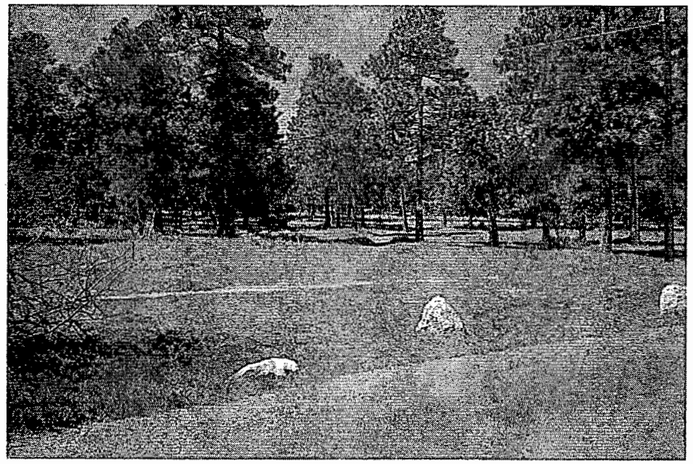
The primary land use of the Railroad Area is transportation. This use includes railroad use, parking, and pedestrian circulation.



Photograph 105. Bright Angel Wash. Note metal pipe feature on right. (JMA, 2001)



Photograph 106. Drainage ditch along tracks. (JMA, 2001)



Photograph 107. Area inside wye intersection of railroad tracks. (JMA, 2001)



Photograph 108. Railroad Depot node and tracks. (JMA, 2001)

Circulation

The primary form of circulation in the Railroad Area is the Grand Canyon Railroad and associated tracks. The **railroad tracks** enter the Village Historic District between the Maswik cabins and Utility Area, continuing north until they "wye" into western and eastern directions. The eastern tracks join two other tracks which head east toward the railway terminus near the Depot.

Vehicular circulation has a limited presence in the Railroad Area. A short section of **Village Loop Drive** bounds the western edge of the area (*Photograph 109*). The **Old Village Bypass Road** terminates into Village Loop Drive, also at the area's western edge (*Photograph 110*). A short **asphalt access drive** terminates at the Railroad Depot fence, east of the building.

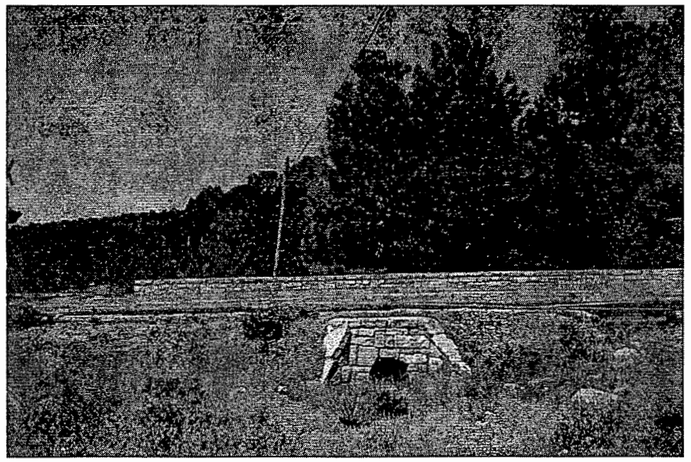
Two parking lots exist in the Railroad Area. A **gravel parking lot** is located on the south side of the railroad tracks, northeast of the Power House and Mule Barn (*Photograph 111*). An **asphalt parking lot** is located adjacent to, and west of, the Railroad Depot. North of the Depot, a **small median** divides traffic and creates a bus drop-off lane (*Photograph 112*).

Pedestrian circulation is also limited. An **asphalt path**, with stone edging, leads from Village Loop Drive to a log bridge located in the eastern portion of the site and south of the tracks. A metal staircase leads down from the Bright Angel Lodge parking lot to the tracks and two pedestrian bridges. These features are described separately under Buildings and Structures.

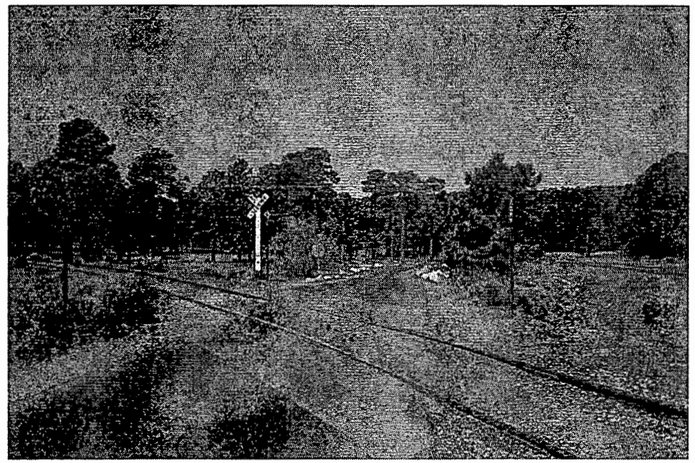
Vegetation

Tall stands of typical, native **woodland vegetation** are located to the south of the Railroad Depot and in the western portion of the character area.

A large **maple tree** provides shade on the Depot platform area (*Photograph 113*). A **peach tree** grows behind the Depot's associated storage structure. It is not known whether these trees were planted or were volunteers.



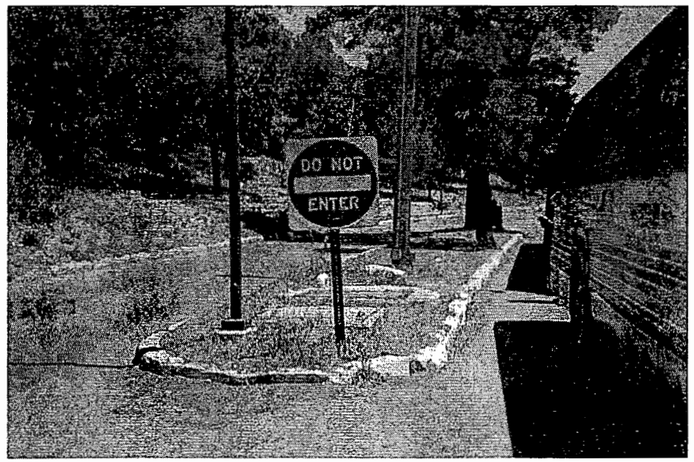
Photograph 109. Village Loop Drive on western edge of Railroad Area, with stone-faced culvert. (JMA, 2001)



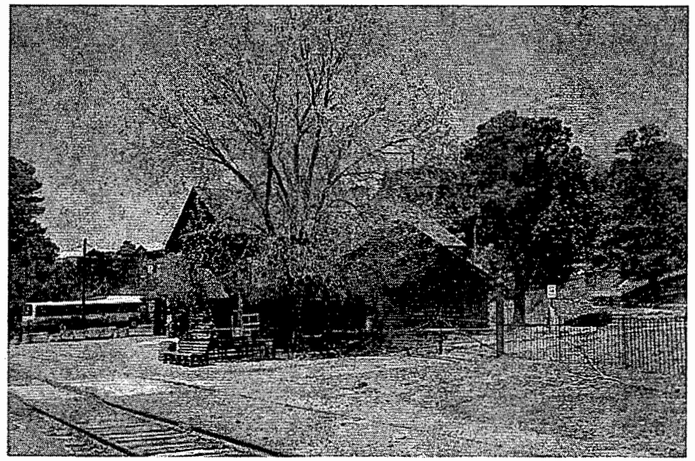
Photograph 110. Old Village Bypass Road at crossing of tracks. (JMA, 2001)



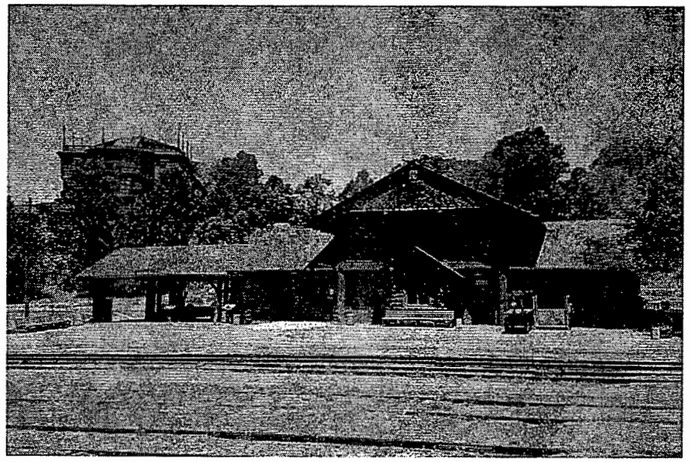
Photograph 111. Old Village Bypass Road in foreground, gravel parking along tracks in background. (JMA, 2001)



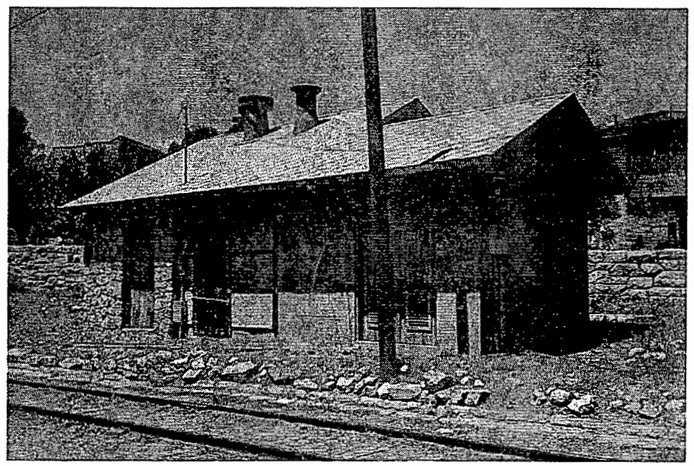
Photograph 112. Small median north of Depot, with typical vehicular traffic signage, stone curbing. (JMA, 2001)



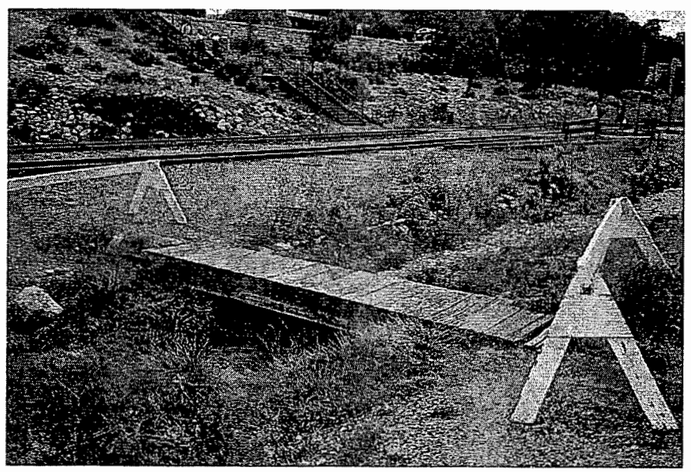
Photograph 113. Large maple tree at Depot. (JMA, 2001)



Photograph 114. Railroad Depot from south. (JMA, 2001)



Photograph 115. Air Conditioning Building. (JMA, 2001)



Photograph 116. Wood plank bridge north of Power House. (JMA, 2001)

Buildings and Structures

Buildings and structures in the Railroad Area serve transportation and circulation purposes for pedestrians and train passengers. These buildings and structures include the Railroad Depot, staircases, and bridges.

Two buildings form this character area's only cluster: the Railroad Depot and its associated storage structure.

The **Grand Canyon Railroad Depot** (Bldg. #SRB0549) was built in 1910 and is a National Historic Landmark (*Photograph 114*). The depot is located at the eastern end of the Railroad Area and southeast of El Tovar Hotel. The building consists of a two-story log and wood-frame core with gabled roof. The first floor is of log construction while the second floor is sheathed in wood clapboard siding. Two one-story, gable-roof wings project out from the west and east sides of the core, both with log siding. A gable-roof open-air porch extends west from the western wing. The roof is supported by thick, peeled-log posts with diagonal log bracing. Windows are either multi-light or multi-light-over-single-pane. Metal letters on the south gable end spell out "Grand Canyon."

The **Air Conditioning Building** (Bldg. #548), also known as the Railroad Utility Building, was built circa 1950 (*Photograph 115*). It is located west of the Railroad Depot. The narrow, rectangular building appears to have been added onto over time, possibly in the 1980s, according to the 1995 National Register nomination. The western, and likely original, section is constructed of mortared rubble stone; the central portion has exceptionally wide clapboard siding while the third section is built of concrete masonry units. A gable roof covers all three sections.

Throughout the Railroad Area, bridges are used to aid pedestrian circulation. A **wood plank bridge** is located north of the Power House (*Photograph 116*). The bridge is approximately eighteen to twenty-four inches wide and consists of short planks placed perpendicular to long, wood stringers. Several feet east of this bridge is a **wood and asphalt bridge**. The bridge consists of six-feet to eight-feet-wide planks that overhang wood supports and are attached to metal abutments (*Photograph 117*). The wood planks have been covered with a narrow asphalt path. Metal pipe railings are attached to the east and west edges of the bridge. The bridge is currently closed to pedestrian traffic due to its poor condition.

A **log-edged bridge** is located east of the wood and asphalt bridge and at the western edge of the gravel parking lot. The bridge consists of two log stringers edging the approximately eight-foot-wide gravel bridge surface. Two corrugated metal pipe culverts sit beneath the bridge.

Just east of the log-edge bridge is an **asphalt vehicular bridge** consisting of an asphalt road surface leading into the gravel parking lot over two rubble-faced corrugated metal pipe culverts.

A **peeled-log bridge** is located in the wooded, eastern portion of the area, south of the tracks and Air Conditioning Building (*Photograph 118*). The bridge consists of wood planks, approximately five feet in width, atop long, log stringers. The log post and rail railing has diagonal braces attached to short log beams jutting out from the stringers.

Bridges also carry the railroad tracks over culverts and drainageways. A wood **box-culvert bridge** is located north of the Purchasing and Receiving Building. The bridge consists of a wood platform—supporting earth and railroad tracks—that is braced by three stacked-wood piers placed at an angle to the platform (*Photograph 119*). A vehicular **stone-faced bridge** is located at the intersection of Village Loop Drive, Old Village Bypass Road, and the railroad tracks (*Photograph 120*). The bridge has four pipe culverts and short wing walls.

A **stone foundation** located south of the Bright Angel Cabins may be a former building or bridge location (*Photograph 121*).

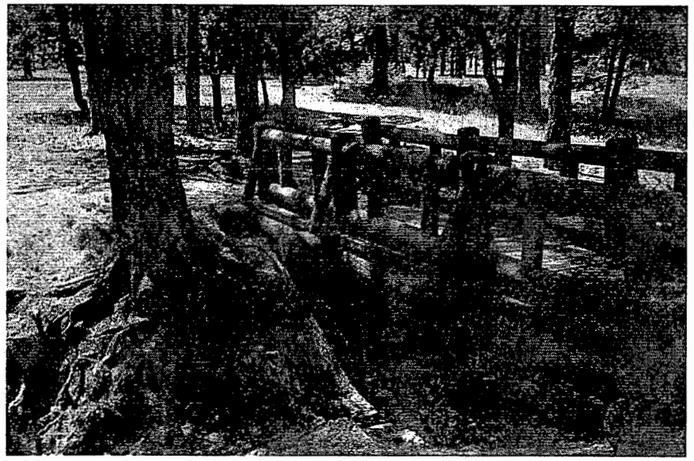
Rubble stone headwalls, connecting four large corrugated metal pipes, form a U-shaped structure adjacent to the Old Village Bypass Road, closer to the western end of the Railroad Area boundary. A **stone-faced culvert** is at the western edge of the area along Village Loop Drive (*Photograph 109*). A second **stone-faced culvert**, with one pipe opening, is located in the wooded southeastern portion of the area, north of Village Loop Drive.

A five-to-six-feet diameter **corrugated metal pipe culvert**, associated with the asphalt vehicular bridge, is located west of the gravel parking lot and south of the railroad tracks.

Rough-faced, cut-stone **retaining walls** are located along the northern and eastern edges of the character area. The walls retain the Bright Angel Wash slopes and support the Village Loop Drive pavement (*Photograph 122*). A lower, **rubble retaining wall**, built in 1928 by stonemason Jesus Morales, follows the same alignment as the upper wall but is heavily deteriorated.



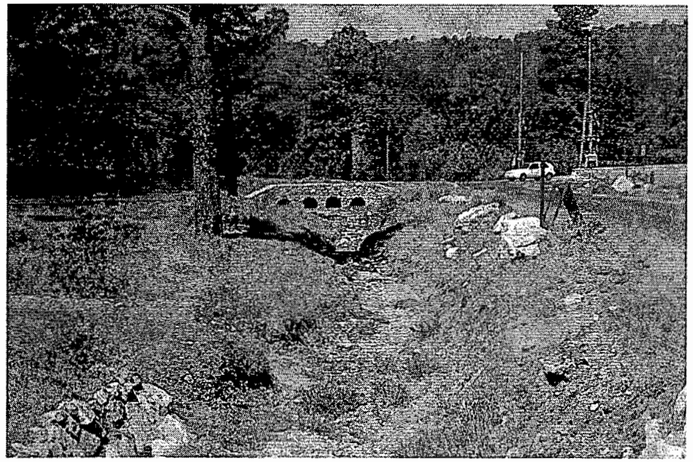
Photograph 117. Wood and asphalt bridge. (JMA, 2001)



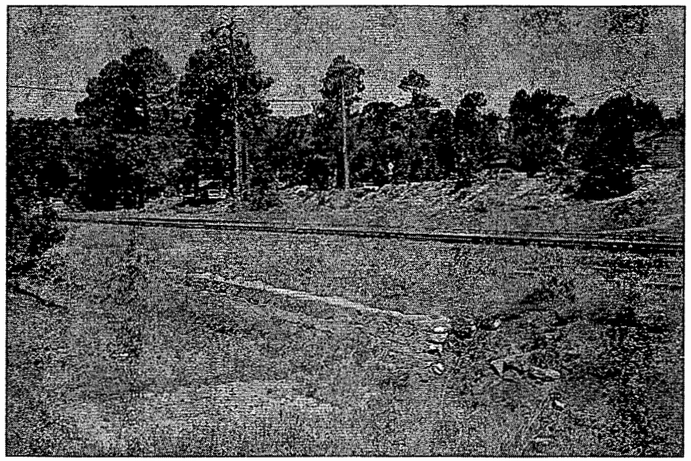
Photograph 118. Peeled-log bridge. (JMA, 2001)



Photograph 119. Box culvert bridge. (JMA, 2001)



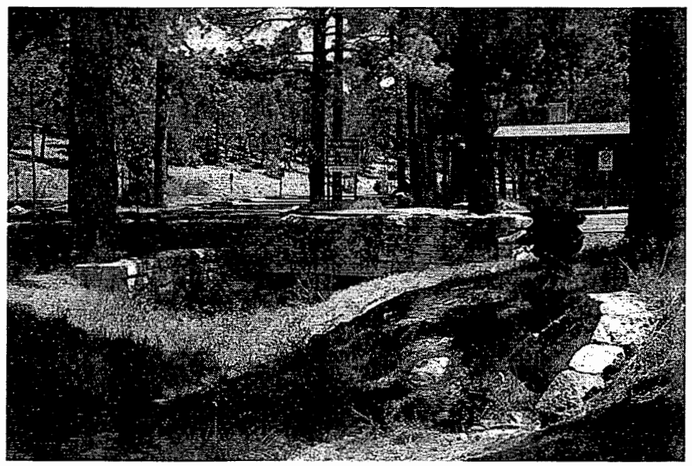
Photograph 120. Stone-faced bridge at intersection of Village Loop Drive, Old Village Bypass Road, and the railroad tracks. (JMA, 2001)



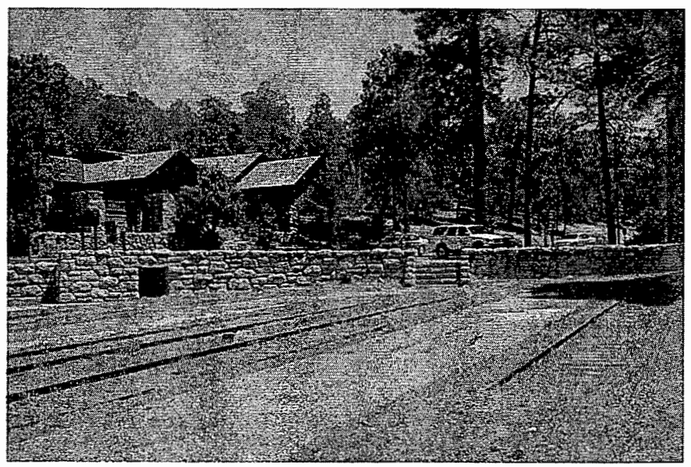
Photograph 121. Stone foundation. (JMA, 2001)



Photograph 122. Metal stair, stone walls, and lights on slope to north of railroad tracks. Note two sets of stone walls. (JMA, 2001)



Photograph 123. Stone-faced bridge over grassy swale. (JMA, 2001)



Photograph 124. Stone wall with steps at eastern end of Railroad Area. (JMA, 2001)

The eastern portion of the cut-stone retaining wall extends south and becomes a **stone bridge** carrying Village Loop Drive over a grassy swale, west of the Public Garage (*Photograph 123*). The northern portion of this wall also has a set of **stone steps**, with a stepped cheek wall, that lead from the easternmost edge of the character area to Village Loop Drive (*Photograph 124*).

A **metal staircase**, dated circa 1980, is located on the north slope of Bright Angel Wash (*Photograph 122*). The stairs lead from the Bright Angel Lodge parking lot and Village Loop Drive to the railroad tracks.

Views and Vistas

The views and vistas within the Railroad Area are oriented around the rail tracks and the sequence of arrival to the Grand Canyon by rail. The linear, unobstructed railroad corridor provides **long views of the railroad tracks** from points along the tracks (*Photograph 108*).

Views of the Railroad Depot from the tracks provide a signal of arrival to visitors. Additionally, partially-screened **views of the El Tovar Hotel** are afforded to the north from the Depot and tracks, providing a sense of orientation as visitors disembark from the train (*Photograph 125*).

Small-scale Features

At the far western edge of the Railroad Area where Village Loop Drive crosses the tracks is a **railroad crossing gate** (*Photograph 126*). In the small grassy median of Village Loop Drive just north of the Depot are a group of **boulders** that function both as traffic bollards and ornamental features. **Stone curbing** borders the roads and parking area near the Railroad Depot (*Photograph 112*). Cut-stone curbing—of the same type described above in the Utility Area—edges Village Loop Drive in the Railroad Area's western section.

A significant amount of surface water runoff is directed through the area due to its location at the bottom of Bright Angel Wash. A **concrete-lined swale** is located just west of the Depot, with a small **stone arch** over the channel (*Photograph 127*). Nearby is a **stone-lined swale** that carries runoff south of the storage structure (*Photograph 128*). **Stone riprap** slows the flow of runoff below certain culverts and bridges along the ditch south of the tracks. Small **pipe culverts** carry water under Village Loop Drive down into the Railroad Area. Larger culverts and culverts with headwalls are described above in Buildings and Structures.

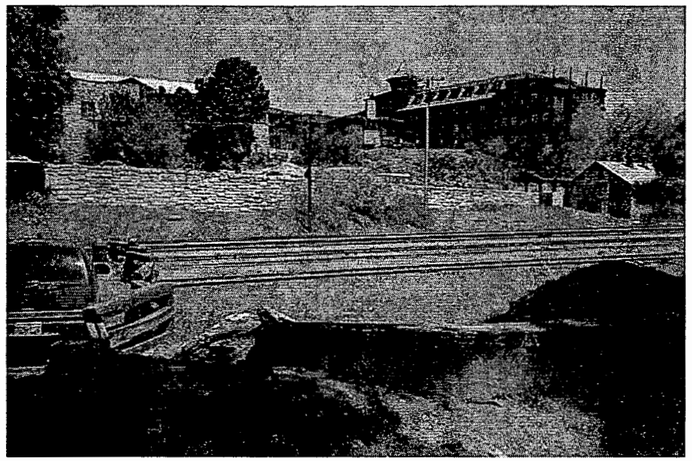
An exhibit comprised of a **historic railroad cart** is located just south of the Depot on the platform (*Photograph 129*). This exhibit includes a refurbished cart of metal with red-painted wheels and undercarriage.

Fencing in the Railroad Area includes an **iron fence** surrounding the Depot parking area and running along the south edge of Village Loop Drive just east of the Depot (*Photograph 130*). A wooden **railroad tie fence**, made of old railroad ties laid in a zig-zag pattern, borders the eastern edge of the unpaved parking lot south of the tracks (*Photograph 125*).

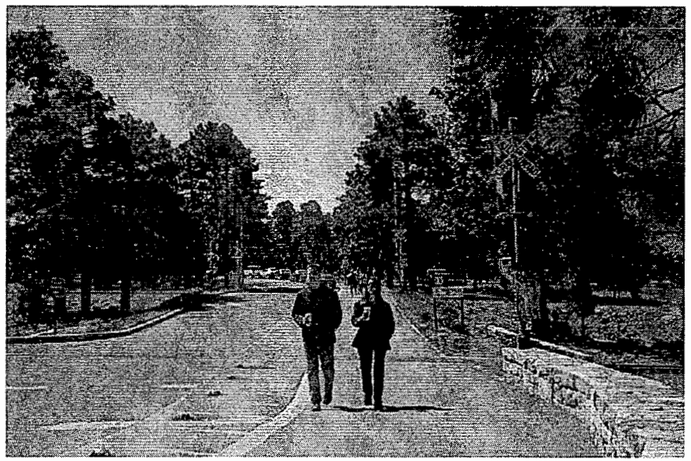
Lighting in the Railroad Area consists primarily of **overhead safety lighting**. Examples of this lighting are located along the metal stairs that descend from Village Loop Drive to the pedestrian crossing along the tracks (*Photograph 122*). Seating features include **wood benches** located around the Depot and platform.

Signage in the Railroad Area includes several contemporary **wayside exhibits** at the Depot. A contemporary **railroad crossing sign** is located at the intersection of the rail tracks and Village Loop Drive along the western edge of the Railroad Area (*Photograph 126*), while another is located at the intersection of the railroad wye and Old Village Bypass Road (*Photograph 110*). **Vehicular traffic signs**, typical of those found throughout the Village, are located where Village Loop Drive intersects or borders the railroad (*Photograph 112*).

Most of the **trash receptacles** and recycling bins near the Depot are aggregate-covered cylinders. A **metal standpipe** is located in the central portion of the Railroad Area and consists of a tall, metal pipe set into a square concrete base. Its purpose and date of construction are unknown (*Photograph 105*).



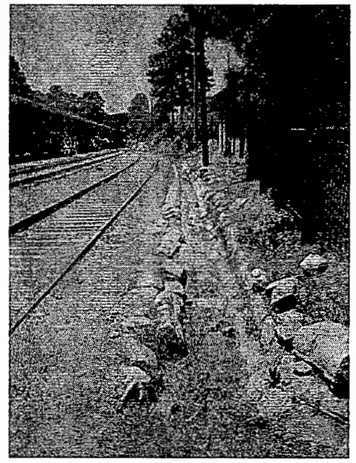
Photograph 125. View of El Tovar from Railroad Area. Note zig-zag railroad tie fence on left. (JMA, 2001)



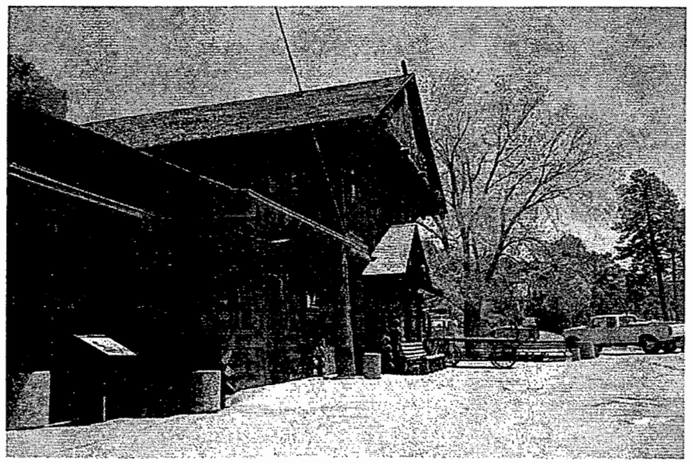
Photograph 126. Railroad crossing gate and sign, cut stone curbing along Village Loop Drive. (JMA, 2001)



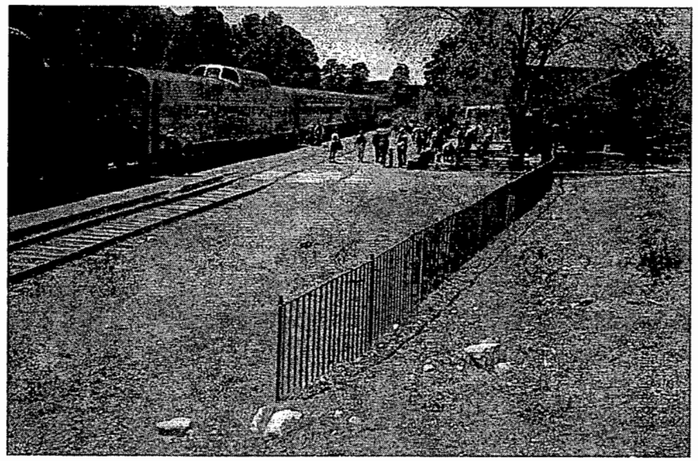
Photograph 127. Concrete-lined swale with decorative cut stone arch, viewed through iron fence at Depot. (JMA, 2001)



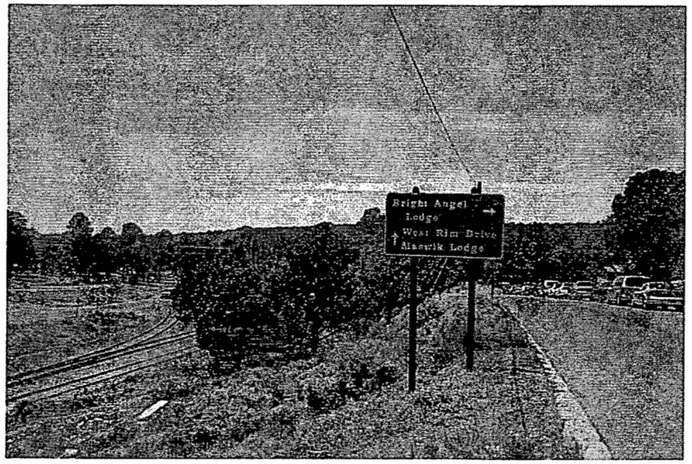
Photograph 128. Stone-lined swale and iron fence. (JMA, 2001)



Photograph 129. Depot platform features including trash receptacles, historic railroad cart, wood bench, wayside. (JMA, 2001)



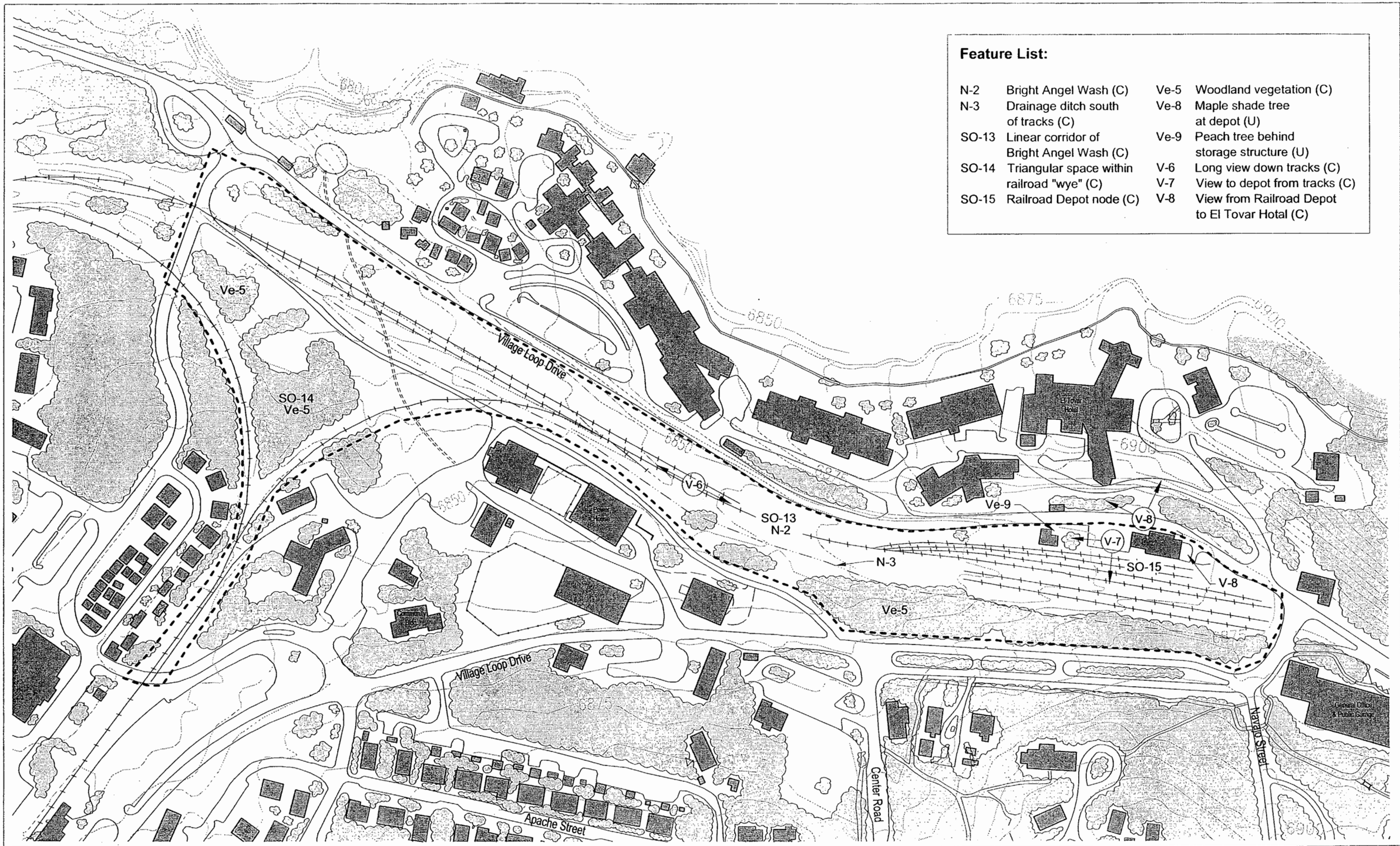
Photograph 130. Iron fence. (JMA, 2001)



Photograph 131. Slope from north into Bright Angel Wash drainage, with typical brown and white NPS sign. (JMA, 2001)

Feature List:

N-2	Bright Angel Wash (C)	Ve-5	Woodland vegetation (C)
N-3	Drainage ditch south of tracks (C)	Ve-8	Maple shade tree at depot (U)
SO-13	Linear corridor of Bright Angel Wash (C)	Ve-9	Peach tree behind storage structure (U)
SO-14	Triangular space within railroad "wye" (C)	V-6	Long view down tracks (C)
SO-15	Railroad Depot node (C)	V-7	View to depot from tracks (C)
		V-8	View from Railroad Depot to El Tovar Hotal (C)



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600

N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. I

RAILROAD AREA

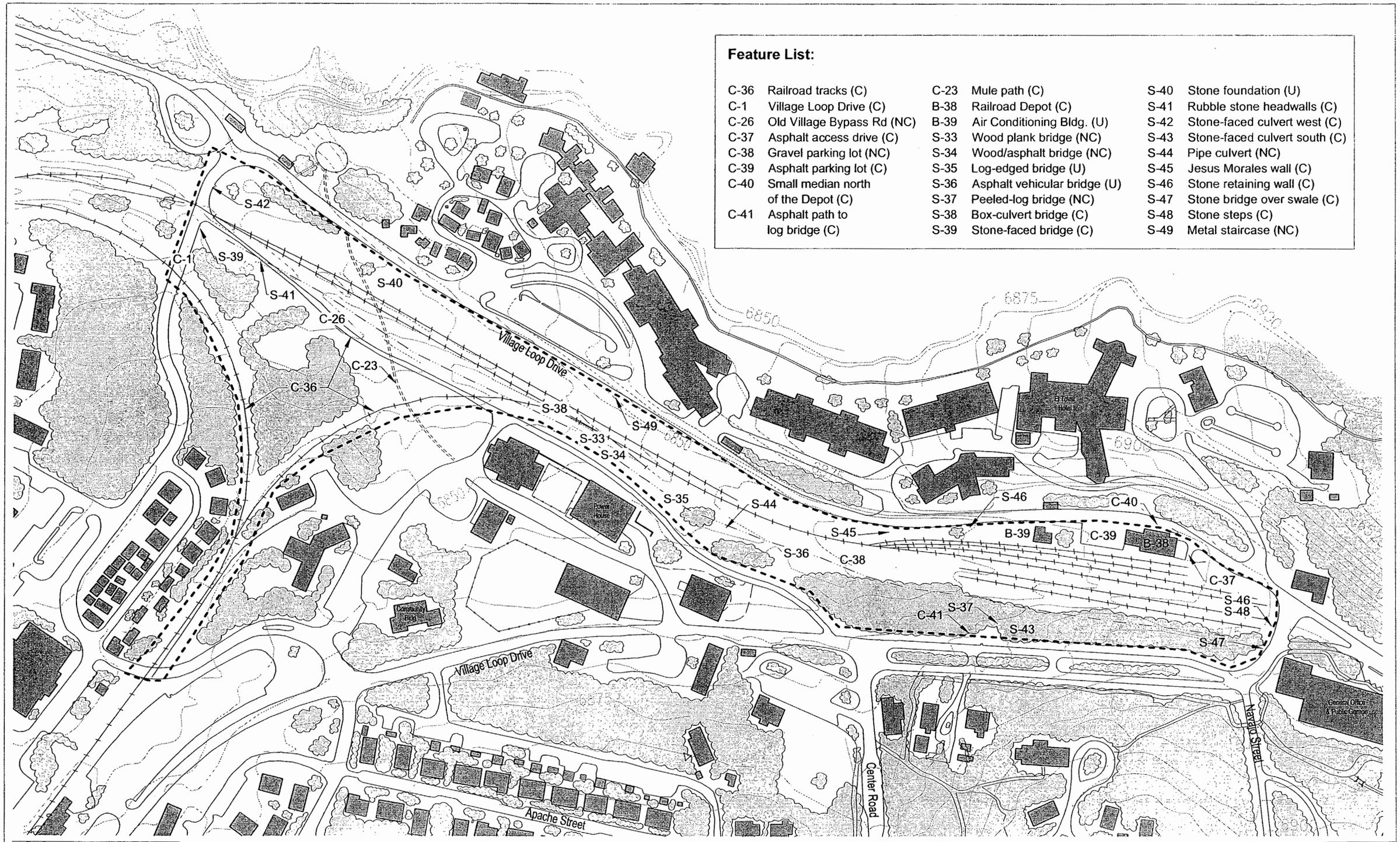
NATURAL SYSTEMS & FEATURES
SPATIAL ORGANIZATION
VEGETATION
VIEWS & VISTAS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO. —

SHEET 15 OF 67



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600

N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
1

RAILROAD AREA

CIRCULATION BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO. —

SHEET
16
OF 67

Feature List:

SS-52 Crossing gate (NC)
SS-9 Boulders (U)
SS-7 Cut stone curbing (C)
SS-53 Concrete-lined swale (U)
SS-54 Decorative cut stone arch (U)
SS-55 Stone-lined swale (U)
SS-56 Stone riprap (U)
SS-57 Culverts (C)
SS-58 Historic railroad cart (NC)
SS-59 Iron fence (C)
SS-60 Railroad-tie fence (NC)
SS-61 Overhead safety lighting (NC)
SS-12 Wood benches (NC)
SS-29 Wayside exhibits (NC)
SS-62 Railroad Crossing signs (NC)
SS-32 Vehicular traffic signs (NC)
SS-34 Trash receptacles (NC)
SS-63 Metal standpipe (U)

SS-52, 62
SS-32
SS-57
SS-7
SS-9
SS-56
SS-63
SS-59
SS-7, 32
SS-60
SS-55
SS-53, 54
SS-61, 58
SS-12, 29, 34
Village Loop Drive
Power House
Community Bldg.
Village Loop Drive
Apache Street
Center Road
Navajo Street
General Office & Public Garage
6850
6875
6900

KEY PLAN

SCALE: 1" =200'
0 100 200 400 600
N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. I

RAILROAD AREA

SMALL-SCALE FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223
PKG. NO. —
SHEET 17 OF 67

Visitor and Community Services Area

The Visitor and Community Services Area is used for visitor and community support services, circulation, and parking. Building uses include single family residences, garages, administrative buildings, and a library.

This area is bordered by the Grand Canyon Railway and Village Loop Drive to the north; the NPS Housing and Service areas to the east; the Village Historic District boundary to the south; and the Concessionaire Housing Area to the west.

Natural Systems and Features

The primary natural feature of the area is the **ravine** which runs through the center of the Village Historic District and is enclosed by two hills to the west and east. Center Road was sited in this ravine, to take advantage of the pre-existing topography, during the initial development of the Village. No other distinct natural systems or features exist in this area.

Spatial Organization

Spatial organization in this area, as with many other areas in the Village Historic District, is defined by vegetation, circulation corridors, and building relationships.

The **intersection of Center Road and Village Loop Drive** comprises a space that includes the parking lot and clearing at the Magistrate's Office (*Photograph 132*). This node was the site of the historic plaza provided in both the Waugh and Hull Master Plans. To the east of this intersection, the **Village Loop Drive corridor** is divided with a planted median, forming a park-like boulevard (*Photograph 133*). Turning south on Center Road from the intersection, the roadway enters a ravine and is wooded along the sides, creating the **Center Road corridor**. The former **Fred Harvey service station node** is comprised of a paved open space in front of the station building (*Photograph 134*). From the east, visitors enter the Village Historic District at the **intersection of Village Loop Drive and South Entrance Road** (*Photograph 135*). At this point, between the Original Superintendent's Residence and the Public Garage, is a grassy, triangular plaza in the center of the three-way intersection.

Land use

Land use in the Visitor and Community Service Area includes administrative functions that serve both visitor and community needs. In addition, there are some residential and commercial uses.

Circulation

Vehicular circulation is the main focus in the area. **Center Road**, once the main entrance to the Village for all vehicles, now serves as a secondary entrance that is mainly used by park staff. It is a two-lane asphalt road with stone curbing that runs northwest from South Entrance Road and terminates in Village Loop Drive. Solely in this landscape character area, **Village Loop Drive** is a two-way divided road with a central planted median and bike lane along its southern margin (*Photograph 133*). Village Loop Drive extends east from Center Road, curving north near the Public Garage, and then turning sharply west. A small, **one-way wye drive** curves right—east—from Village Loop Drive at the Public Garage, to provide easier access to South Entrance Road. **South Entrance Road** leads from the park's main entrance and enters the eastern edge of the Village Historic District.

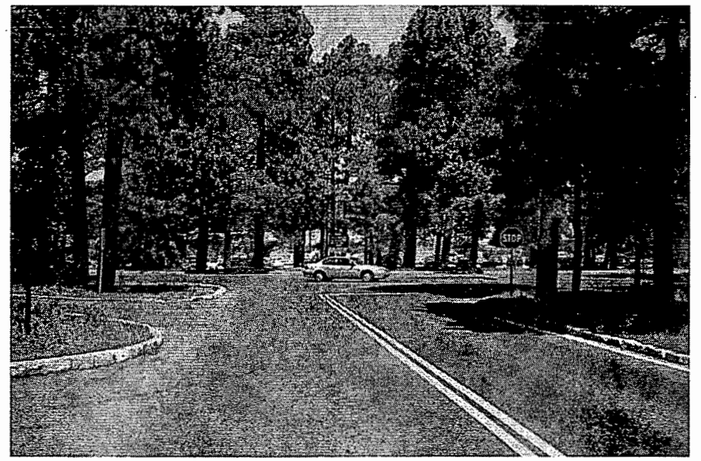
The **residential asphalt loop drive** leads from the southern lane of Village Loop Drive south into the residential cluster (*Photograph 136*). A **gravel and macadam drive** leads behind, west and south, of the Magistrate's Building (*Photograph 137*).

Several asphalt parking lots are located throughout the area. The **largest parking lot** is located off Center Road and north of the Magistrate's Building (*Photograph 138*). The asphalt lot has angled parking stalls and low, rectangular stone curbing. This parking lot was intended to serve as a civic plaza, although parking uses took over soon after its construction.

A **small asphalt parking** lot with straight stalls is located to the east of the Grand Canyon Association building, along the east edge of the turn-around drive. Another **small asphalt parking lot** is located south of the General Office building. The parking lot has angled stalls and concrete wheel stops. A large **asphalt parking lot** is located east of the Public Garage (*Photograph 139*). Concessionaire service vehicles, trucks, and personal staff vehicles use this rectangular parking lot.

North of the General Office building, South Entrance Road has a slight **bump-out** to the south which creates a small parking area and loading zone. In the southern portion of the Visitor and Community Services Area, an asphalt-paved **semi-circular drive** is located to the northeast of the old Fred Harvey Service Station, now the School Maintenance Building.

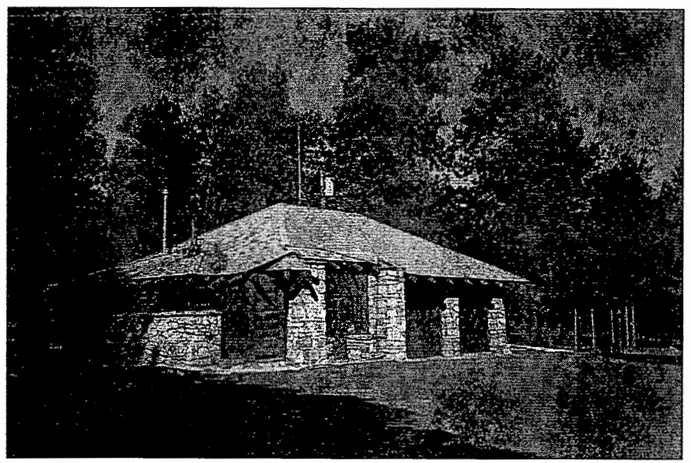
Stone-edged **asphalt sidewalks** run throughout the area and constitute the main form of pedestrian circulation. These sidewalks occur along South Entrance Road's southern edge, the southern edge of Village Loop Drive (*Photograph 133*), a short section of the eastern edge of



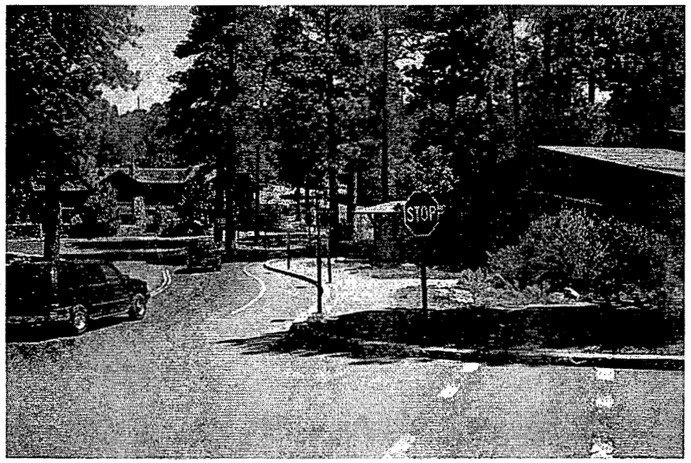
Photograph 132. Intersection of Center Road and Village Loop Drive. (JMA, 2001)



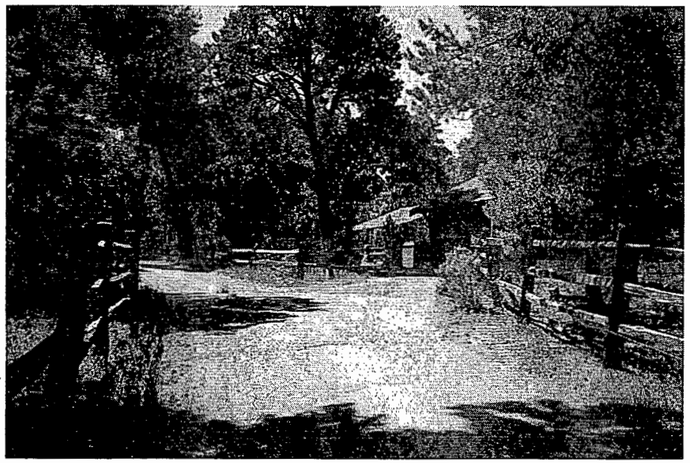
Photograph 133. Village Loop Drive corridor. Note asphalt sidewalk along left edge of road. (JMA, 2001)



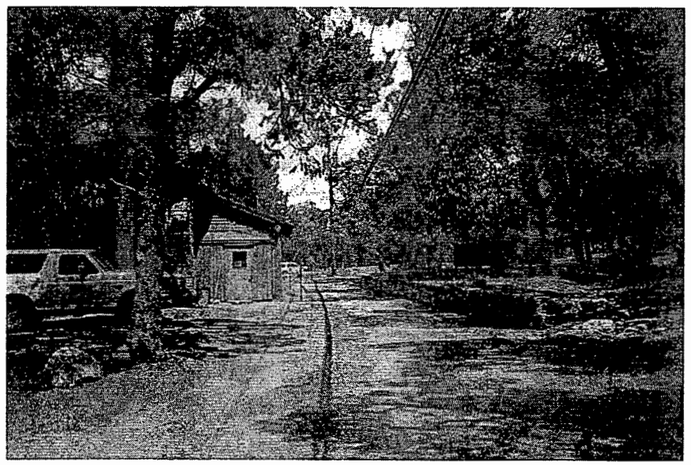
Photograph 134. Fred Harvey service station node and School Maintenance Office (former Fred Harvey Service Station). (JMA, 2001)



Photograph 135. Intersection of Village Loop Drive and South Entrance Road in background. (Center Road and Village Loop Drive intersection in foreground.) (JMA, 2001)



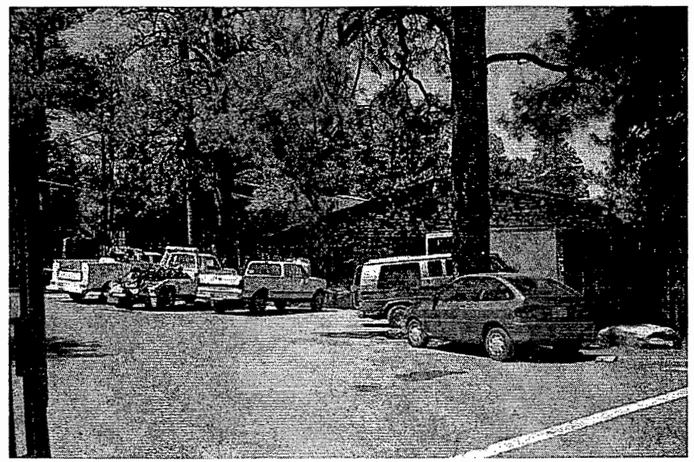
Photograph 136. Residential asphalt drive. (JMA, 2001)



Photograph 137. Gravel and macadam drive behind Magistrate's Office, with retaining wall. (JMA, 2001)



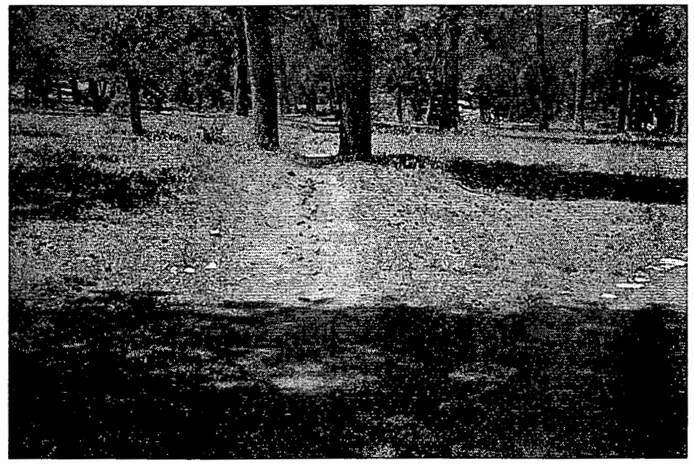
Photograph 138. Magistrate's Office with parking lot. (JMA, 2001)



Photograph 139. Asphalt parking lot adjacent to Public Garage. (JMA, 2001)



Photograph 140. Concrete sidewalk and post-and-rail fencing in front of residence. Note grasses in yard. (JMA, 2001)



Photograph 141. Earthen desire path. (JMA, 2001)

Center Road, and south of the residential cluster. The asphalt sidewalks are often three-to-four feet in width and are typical of those seen throughout the Village Historic District.

Narrow **concrete sidewalks** lead to the front doors of the single family residences in the residential cluster (*Photograph 140*). The walks are two feet to three feet in width. A **gravel path**, two feet to three feet in width with stone edging, leads west from the Grand Canyon Association Building to the asphalt path south of the residential cluster. An **earthen path**, most likely a desire path worn by staff and visitors, leads from the asphalt sidewalk located at the corner of Village Loop Drive and Navajo Road, south to the Grand Canyon Association Building parking lot and turn-around (*Photograph 141*).

Vegetation

Vegetation in the Visitor and Community Services Area is comprised largely of ponderosa pine and pinyon-juniper-association **woodlands**. Some **grasses** exist around the residences in the area, and grass grows under the trees in areas where sunlight penetrates the canopy (*Photograph 140*). It is not known if these grasses are native or invasive.

Buildings and Structures

Buildings and structures in the Visitor and Community Services Area include residences, administrative offices, and maintenance facilities. They are described below according to their location, from west to east.

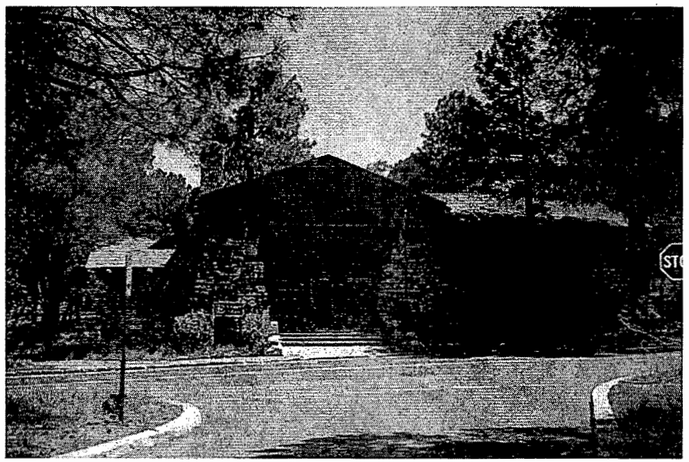
The only significant cluster of buildings and structures in the character area consists of the closely-sited single-family residences and their associated outbuildings. These buildings and structures are discussed together due to their similar use, proximity, and design.

The **Magistrate's Building** (Bldg. #SRB0166) was built in 1935 and served as a post office and ranger services office before being adaptively re-used as the local judicial magistrate's and NPS law enforcement offices (*Photograph 138*). The rectangular building has a gable roof with exposed rafter tails. The exterior walls are sided with wood clapboard interrupted by cut stone piers. Windows are four-by-four and located in long bays. The main entrance is located at the northwestern corner of the building; in a stone and board-and-batten-sided ell with gable roof. The west elevation is taken up almost completely by windows located between stone corner piers. A stone chimney rises from the roof near the entrance. A low, **stone retaining wall**, approximately eighteen inches in height, runs along the back of the Magistrate's Building and yard, retaining earth from the driveway (*Photograph 137*).

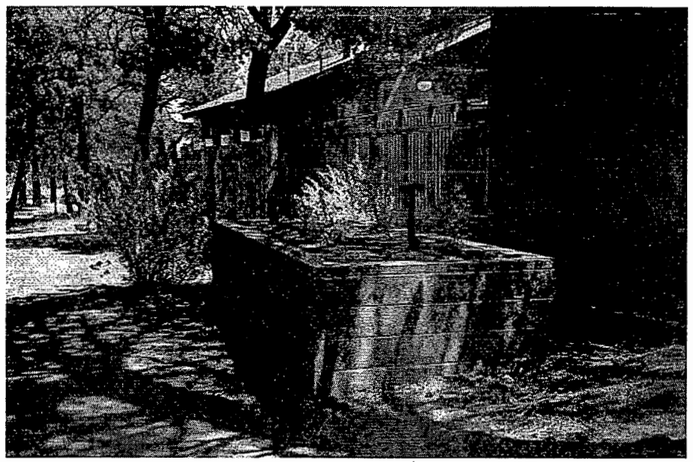
The **Ranger Operations Building** (Bldg. #SRB0103) is located at the intersection of Center Road and Village Loop Drive (*Photograph 142*). Built in 1929, the building is now designated as a National Historic Landmark. According to a 2000 Historic Structure Report, the Grand Canyon Ranger Operations Building was styled after a rustic Swiss chalet. The building is a two-story stone and wood-frame structure of classic park rustic design. The first floor of the building, up to sill height, and the building's corner piers, are of coursed rubble masonry with cement mortar. The rest of the superstructure is of wood-frame construction with horizontal wood siding on the first floor and vertical board-and-batten siding on the second floor. The battered stone piers at the building's corners each support three peeled logs that define the corners. The main pavilion of the building is symmetrical and sits slightly forward of two side wings. The north wing is one story while the south wing has two stories. The roof is gabled with wood shingles and no gutters. Exaggerated eaves overhang the walls and have axe-cut brackets and outlookers. A coursed rubble masonry chimney rises through the roof on the north side of the building. A **concrete masonry unit planting bed**, approximately three feet in height and rectangular in shape, is located at the southeast corner of the building (*Photograph 143*).

Two residences are located east of the Ranger Operations Building. Built in 1937, the western **single family residence** (Bldg. #0554), at 221 Village Loop Drive, is a simple rectangular building with a gable roof, vertical board siding, and what appear to be replacement windows. The extended roof eaves are supported by oversized brackets while the gable-ends are covered with shingles. A **garage** (Bldg. #555) is located south of the residence. Also built in 1937, the garage is a rectangular structure with a gable roof, vertical board siding, two contemporary roll-up garage doors on the east elevation, and an entrance on the north side.

A second **single family residence** (Bldg. #0552), at 219 Village Loop Drive, is located east of the first residence. Built in 1937, the residence is a 1,932 square feet building with a gabled roof, vertical board-and-batten siding, and what appear to be replacement windows. The main entrance is located beneath a small gabled dormer and porch. Behind, and south of, the second residence are the **Guest House** (Bldg. #552a) and **Garage** (Bldg. #552b) (*Photograph 144*). The Guest House was built in 1937 and originally served as the heating plant for 219 Village Loop Drive. The building is a small, square building with a gable roof, clapboard siding, and rectangular windows with green trim. The garage is a long, rectangular building with split-level shed roofs. A roll-up garage door and second, uncovered opening are located on the west elevation.



Photograph 142. Ranger Operations Building. (JMA, 2001)



Photograph 143. Concrete masonry unit planting bed. (JMA, 2001)



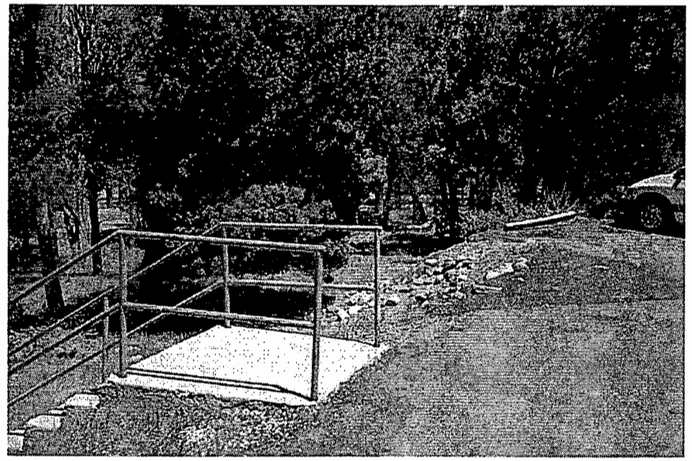
Photograph 144. Guest House and Garage. (JMA, 2001)



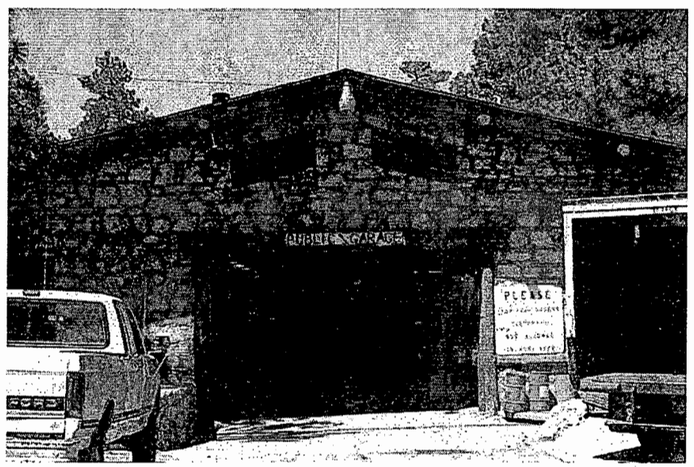
Photograph 145. Grand Canyon Association building. (JMA, 2001)



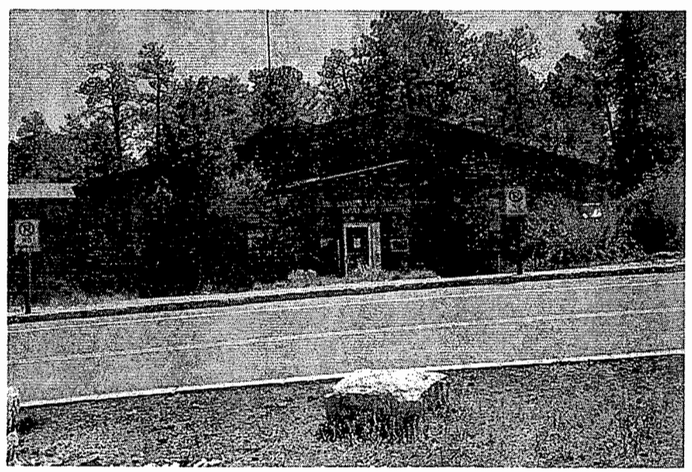
Photograph 146. Concrete masonry unit wall. (JMA, 2001)



Photograph 147. Concrete stairs with metal pipe railing at Grand Canyon Association Building. (JMA, 2001)



Photograph 148. Vehicular entrance to Public Garage. (JMA, 2001)



Photograph 149. General Office entrance to General Office and Public Garage building. (JMA, 2001)

The **Grand Canyon Association building** (Bldg. #SRB0100) is sited to the east of the residential cluster (*Photograph 145*). Built in 1930, the building was originally a hospital, then a Youth Conservation Corps dormitory, and currently houses the Grand Canyon Association offices. The long, rectangular building has a large, gable-roofed entrance ell on the northern façade. A massive stone staircase leads to the entrance porch, which is supported by a stone foundation. The remainder of the building is covered in horizontal wood siding, has a gabled roof, green-painted windows, and rests on a stone foundation.

A **concrete masonry unit wall**, approximately four feet in height, is located south and west of the Grand Canyon Association building (*Photograph 146*). A square **concrete masonry unit structure** is located near the southwestern corner of the building. It has a flat roof, rectangular windows, and a door on the east elevation. **Concrete stairs**, with a metal pipe handrail, are located near the northeast corner of the building and lead down from the parking lot (*Photograph 147*).

The **General Office and Public Garage** (Bldg. #0551) was built in 1914 and is located in the northern portion of the character area—at the intersection of Village Loop Drive and South Entrance Road (*Photographs 148, 149*). The large, 24,000-square-feet, garage and office complex has gently-pitched gable roofs with peeled-log outlookers, thickly-mortared stone walls, and multi-light windows. A large garage door is located on the east elevation. Low, **mortared-stone retaining walls**, approximately eighteen inches in height, are located around the building's parking lots. **Concrete and stone planter walls** are located around the building and create elevated planting beds filled with mulch or non-ornamental grasses. A short **log retaining wall** is located south of the garage building and associated parking lot (*Photograph 150*). At the intersection of Navajo Street and Village Loop Drive, a **cut stone pier** sits in a traffic island. The pier is square in shape and demarcates the pedestrian sidewalk the follows the island.

Built in 1920, the **Original Superintendent's Residence** (Bldg. #0001), also known as the Xanterra offices, is located north of the General Office and Public Garage building, on the opposite side of Village Loop Drive, and currently contains concessionaire offices (*Photograph 151*). Like many other buildings of the same era in the Village Historic District, the Original Superintendent's Residence exhibits Swiss-Rustic and chalet detailing. The multi-level, gable-roofed building has log outlookers supporting exaggerated eaves, stone corner piers, and false cut-wood balconies between the first and second stories. The exterior walls are sheathed in board-and-batten siding while vertical clapboard weatherboard is located at the gable ends. Windows are two-over-two or three-by-three, both with green trim. Double garage doors are located

on the south elevation. A low stone retaining wall is located around the front, or south, of the building. **Stone retaining and garden walls** encircle portions of the building. A stone garden wall, with metal gate, is also located south of the building. Stone steps lead from the garage doors to the entrance on the south side. Finally, a tall, semicircular stone courtyard wall is located on the west elevation.

The **School Maintenance Office** (Bldg. #0862) is located in the southern portion of the Visitor and Community Services Area (*Photograph 134*). Built in 1937, the office once served as a Fred Harvey service station, yet currently operates as a maintenance facility. The rectangular, stone-faced building has an asphalt-shingled hipped roof with peeled-log outlookers. A small log and stone addition is located on the south elevation while the entrance and two roll-up garage doors are located on the east elevation.

Views and Vistas

Due to the density of vegetation and its location well back from the canyon rim, there are no distinct views and vistas available within the Visitor and Community Services Area.

Small-scale Features

Small-scale features in the Visitor and Community Services Area include numerous fences, indicating the need to divide service, public, and residential uses. Many features relating to circulation also occur here due to the presence of two major thoroughfares: Village Loop Drive and Center Road.

Features associated with circulation in this character area include **wheel stops** in parking lots. These are made of concrete in the asphalt parking lots near the Grand Canyon Association Building, while wheel stops in the small parking lots adjacent to the Public Garage are of both log and concrete (*Photograph 150, 152*).

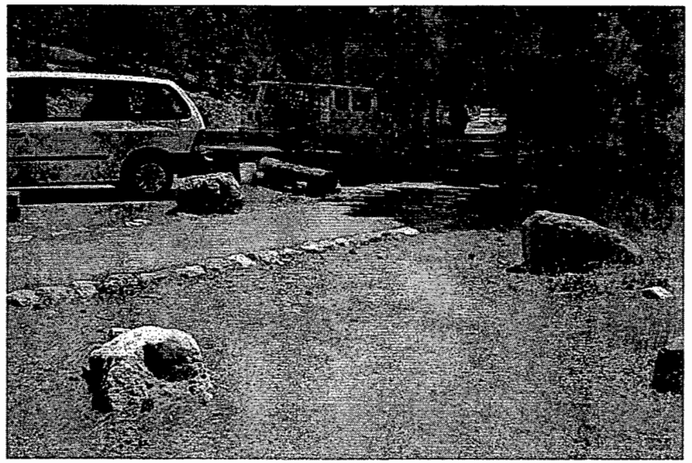
Cut stone curbing lines Village Loop Drive and Center Road (*Photograph 135*), as well as certain parking lots such as the asphalt lot north of the Magistrate's Office. Stretches of **stone edging** line gravel paths leading to the Grand Canyon Association building (*Photograph 151*) and the asphalt path leading south from Village Loop Drive. **Boulders** are used ornamentally along roads and function as traffic bollards. These are found in the medians of the divided portion of Village Loop Drive, in the parking lots at the Public Garage, and near the Magistrate's Office.



Photograph 150. Log retaining wall and wheelstops near General Office and Public Garage. (JMA, 2001)



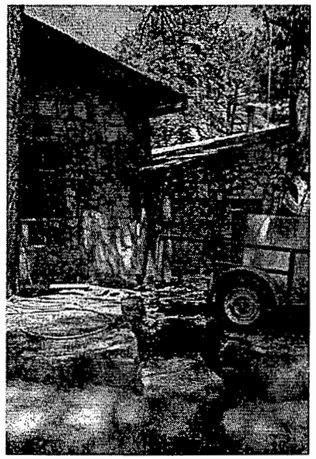
Photograph 151. Original Superintendent's Residence with stone courtyard wall. (JMA, 2001)



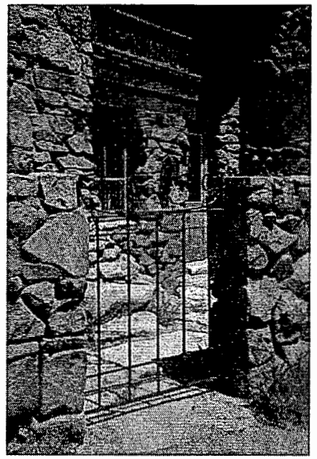
Photograph 152. Rough stone and boulder edging and log wheel stops. (JMA, 2001)



Photograph 153. Terra cotta culvert and fire hydrant. (JMA, 2001)



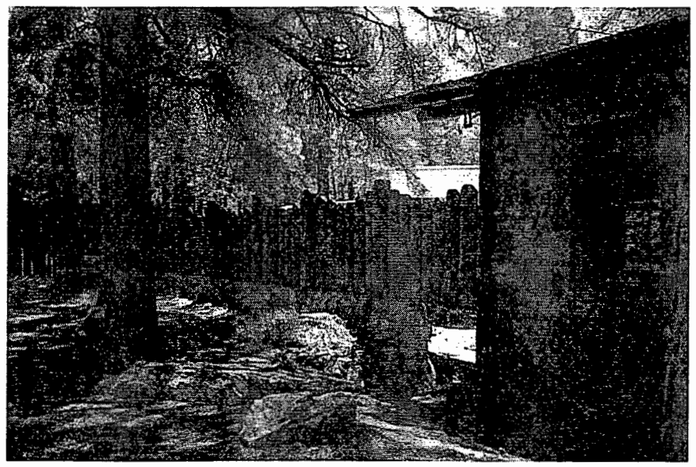
Photograph 154. Stone and concrete drainage structure. (JMA, 2001)



Photograph 155. Iron gate in garden wall, Original Supt's Residence. (JMA, 2001)



Photograph 156. Painted wood privacy fencing, picnic table south of Ranger Operations building. (JMA, 2001)



Photograph 157. Log stave fence at Public Garage. (JMA, 2001)



Photograph 158. Trash receptacles, telephone along Center Road. (JMA, 2001)

A **metal pipe culvert**, with flared end, directs drainage under the asphalt drive leading to the Fee Management Office. A **terra cotta culvert** is located at the corner of Boulder Street and Center Road (*Photograph 153*). There is a **concrete-lined swale** south of the Public Garage. This swale leads into a **stone/concrete drainage structure** consisting of depressed drain covered by a metal grate and surrounded by one course of mortared stone edging (*Photograph 154*).

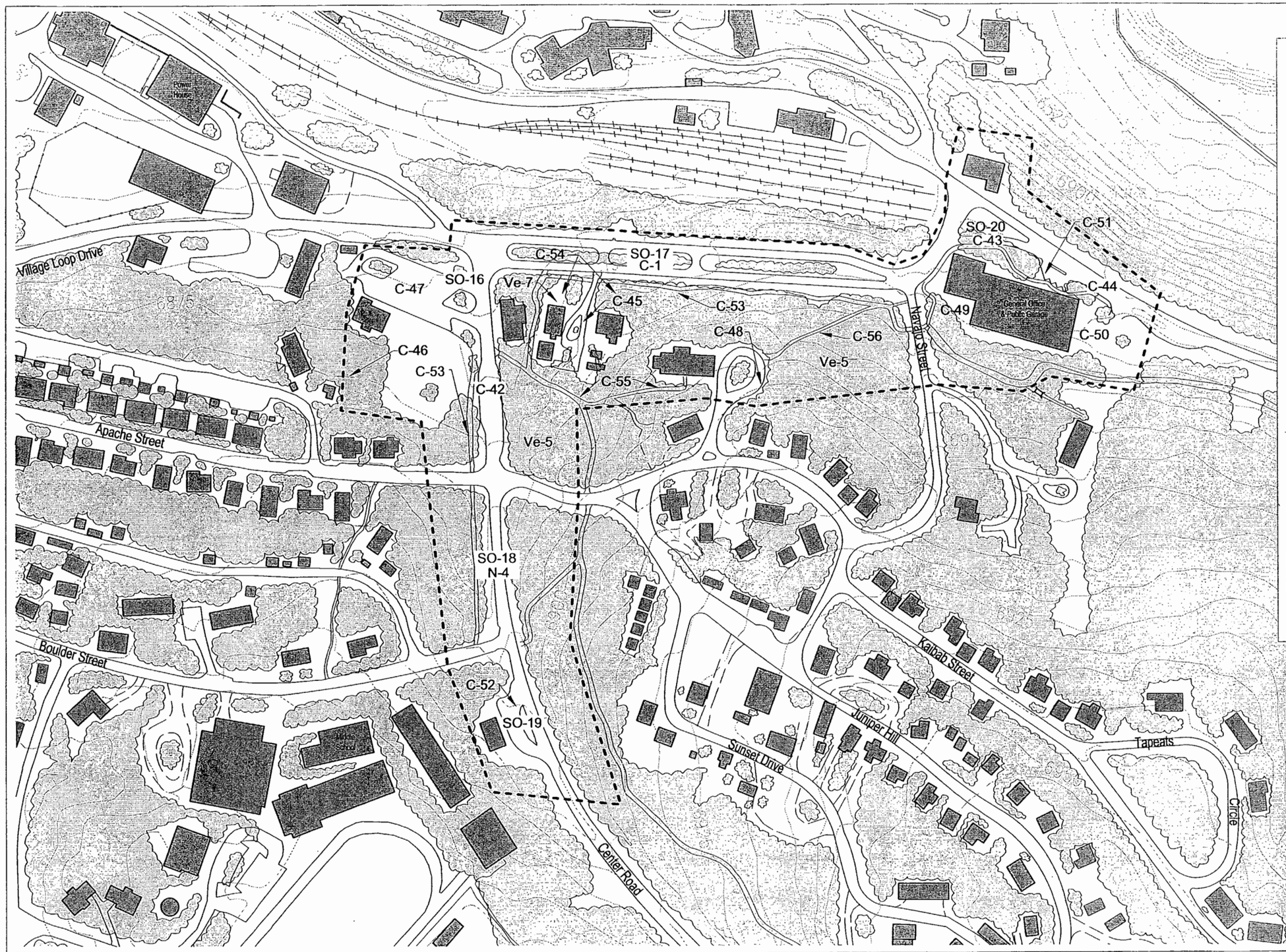
An **iron gate** is located in the stone wall at the Superintendent's Residence (*Photograph 155*). **Painted wood privacy fencing** separates a garage from the Ranger Operations Building (*Photograph 156*).

The residences at 219 and 221 Village Loop Drive are surrounded by unpainted **post-and-rail fencing** (*Photograph 140*). A short length of wooden **picket fence** runs along the south end of the access drive leading to these residences, screening a propane tank behind a garage from view. A short length of decorative **stone pier and wooden rail fence** is also located adjacent to this garage.

A **log stave fence** tops a stone wall adjacent to the edge of the Public Garage on its northeastern corner (*Photograph 157*). A second type of **log fence** separates the southern side of the Public Garage from the WMDO/Library building—along the edge of the Visitor and Community Services Area.

Signage in the Visitor and Community Services Area is typical of that described in sections above, and includes standard **vehicular traffic signs**, and standard **brown and white NPS signs** (*Photograph 135*).

North of the Ranger Operations Building is a cluster of small-scale features including a **pay telephone** and **trash receptacles** (*Photograph 158*). Trash receptacles found throughout the character area are primarily contemporary brown-painted cylinders with dome lids, similar to those seen elsewhere in the Village Historic District. Wooden **picnic tables** are found south of the Ranger Operations Building (*Photograph 156*). Small **fuel/propane tanks** sited near buildings, including an oil tank at the southeastern corner of the Public Garage and a propane tank adjacent to the residence at 221 Village Loop Drive. **Fire hydrants** are typical of the Village Historic District; a representative hydrant is located on the corner of Center Road and Boulder Street (*Photograph 153*).



Feature List:

N-4	Ravine (C)
SO-16	Intersection of Center Rd and Village Loop Dr (C)
SO-17	Village Loop Dr Corridor (C)
SO-18	Center Road Corridor (C)
SO-19	Former Fred Harvey service station node (C)
SO-20	Intersection of South Entrance Dr and Village Loop Dr (C)
C-42	Center Road (C)
C-1	Village Loop Drive (C)
C-43	One-way wye drive (C)
C-44	South Entrance Road (C)
C-45	Residential asphalt loop drive (C)
C-46	Gravel and macadam drive (C)
C-47	Large asphalt parking lot (C)
C-48	Grand Canyon Association parking lot (C)
C-49	General Office parking lot (C)
C-50	Public Garage parking lot (C)
C-51	Bump-out parking near Public Garage (C)
C-52	Service Station drive (C)
C-53	Asphalt sidewalks (C)
C-54	Concrete sidewalks (C)
C-55	Gravel paths (C)
C-56	Earthen paths (NC)
Ve-5	Woodland vegetation (C)
Ve-7	Grasses (NC)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO.

VISITOR AND COMMUNITY SERVICES AREA

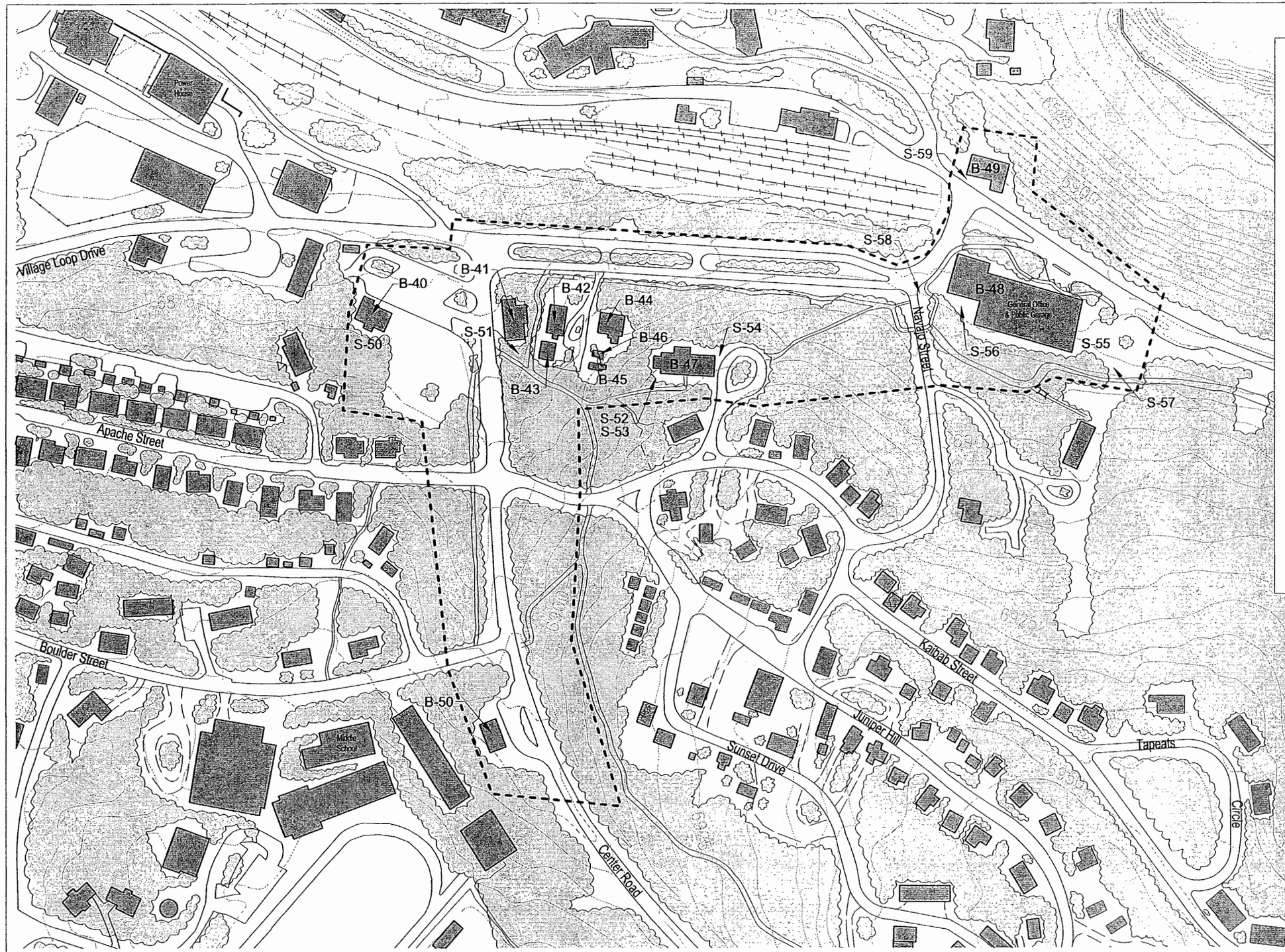
NATURAL SYSTEMS & FEATURES
SPATIAL ORGANIZATION
CIRCULATION
VEGETATION

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO.

SHEET 18 OF 67



Feature List:

B-40	Magistrate's Building (C)
S-50	Stone retaining wall (C)
B-41	Ranger Operations (C)
S-51	Concrete masonry unit planting bed (NC)
B-42	SFR #554 (C)
B-43	SFR #554 Garage (C)
B-44	SFR #555 (C)
B-45	SFR #555 Garage (NC)
B-46	Guest House (C)
B-47	Grand Canyon Association Building (C)
S-52	Concrete masonry unit wall (NC)
S-53	Concrete masonry unit structure (NC)
S-54	Concrete stairs (NC)
B-48	General Office and Public Garage (C)
S-55	Mortared-stone retaining wall (C)
S-56	Concrete and stone planter walls (U)
S-57	Log retaining walls (U)
S-58	Cut stone pier (C)
B-49	Original Superintendent's Residence (C)
S-59	Stone garden and courtyard walls (C)
B-50	School Maintenance office (C)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
1

VISITOR AND COMMUNITY SERVICES AREA

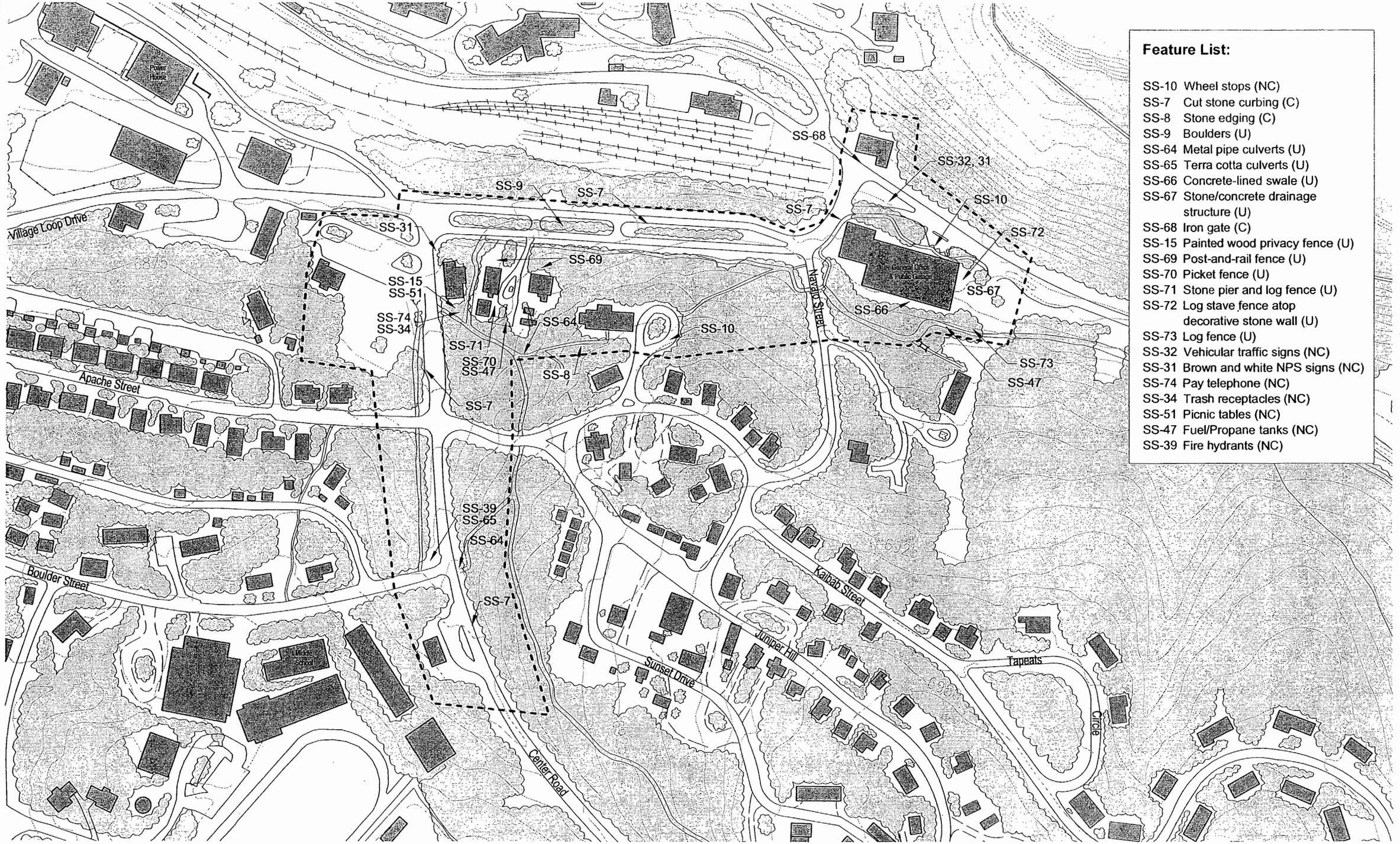
BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO. —

SHEET
19
OF 67


Power House
Village Loop Drive
Apache Street
Boulder Street
Center Road
Kaibab Street
Juniper Hill
Sunset Drive
Tapeats
Circle
Navajo Street
Bright Angel Lodge & Public Garage
Bright Angel Lodge
Cabins
Maswik Lodge
Cabins
Maswik Lodge
Maswik Cafeteria
Maswik Gift Shop
Maswik Service Station
Maswik Transit Center
Maswik Parking
Maswik Parking
Maswik Parking

NPS Housing Area

The NPS Housing Area is used primarily as a residential area. It is bordered by the Visitor and Community Services Area to the north, to the east by the woodland adjacent to the Village Historic District boundary, to the west by NPS service facilities, and to the south by residential areas outside of the Village Historic District boundary.

Although two non-residential buildings exist within this character area, the NPS Housing Area is characterized by a number of single-family and multi-family houses and dwelling units. The area was originally designed to accommodate NPS employees working at the South Rim.

Natural Systems and Features

The sole, character-defining natural feature of this area is the **gently sloping hill** upon which buildings and other features rest.

Spatial Organization

Within the area, space is defined by woodland edges, building facades, and circulation corridors.

Residential corridors consist of buildings lining and facing streets. **Pockets of space** within the woodland, such as the WODC/Library space, are created by roads or driveways extending into the woodland edge to access buildings. **Interstitial spaces** are formed between residences and garages. A **triangular space**, known as Tapeats Circle, is located to the north of Kaibab Street. The space is formed by the intersection of Tapeats Circle and Kaibab Street.

Land use

Land use in this area is primarily residential. The WODC/Library building forms a single administrative and community service use in the NPS Housing Area.

Circulation

Vehicular circulation is the predominant form of circulation within this character area. **Navajo Street**, a two-way, unstriped asphalt road with no curb, extends south from Village Loop Drive and curves west ending at Tonto Street (*Photograph 159*). **Tonto Street** is a semicircular, un-curbed, two-way asphalt road that begins in a wye intersection with Juniper Hill at the western edge of the character area (*Photograph 160*). Tonto Street curves east through the residential neighborhood, turning south as it meets Navajo Street, and terminating into Juniper Hill.

Kaibab Street begins at Tonto Street, just south of the Navajo Street terminus and heads east out of the Village Historic District (*Photograph 161*). Kaibab Street is a two-way, uncurbed, asphalt road. **Tapeats Circle** is another semicircular, two-way, uncurbed asphalt road that is accessed from Juniper Hill, in the eastern portion of the area, and curves around to meet Juniper Hill again. **Juniper Hill**, an asphalt, two-way road, begins at Center Road, heads northeast into the NPS Housing Area and continues eastward until curving south to terminate at Sunset Road.

The asphalt-surfaced **WODC/Library access drive** leads east from Navajo Street and curves through the woodland to end in a turn-around loop. The drive forks at the loop to access Bldg. #SRQ0009. The Grand Canyon Association **asphalt driveway** begins in this character area. The asphalt drive starts in a right-in/right-out wye with triangular island, and heads north to the building.

A **gravel drive** extends west from Tonto Road, past Bldg. #SRQ0006, and ends in a wider gravel parking lot associated with a garage structure. **Gravel parking** is located south of the Fee Management Office (*Photograph 162*). This parking lot is small and rectangular with head-in parking and boulder edging. **Gravel parking** is also located south of Residence #49/Bldg. #SRQ0012.

Gravel paths with stone edging are located off of Kaibab Street, between Bldg. #SRQ0019 and Garage #SRB0019A (*Photograph 163*), and off of Tapeats Circle, north of Bldg. #SRQ0021. Both paths are approximately two-to-three-feet in width.

Vegetation

Ponderosa pine woodland surrounds the houses and spread throughout the NPS Housing Area. **Grasses** and **ornamental vegetation**, both native and exotic, exist around house yards.



Photograph 159. Navajo Street. Note street light and stone wall on left. (JMA, 2001)



Photograph 160. Tonto Street and Juniper Hill wye intersection, with traffic signage and street sign. (JMA, 2001)

Buildings and Structures

Three clusters of buildings and structures exist in the NPS Housing Area. These buildings and structures are grouped according to use, proximity, and/or architectural style. The first cluster includes the WODC/Library building and its associated features. The second cluster includes all of the single family residences along Tonto Street, Kaibab Street, and Juniper Hill. The last cluster includes three larger residences facing Tapeats Circle.

Buildings and structures in this area are primarily residential, although the Fee Management Office and WODC/Library building offer community and administrative services. For this character area, buildings and structures are generally described west to east and north to south. Because numerous buildings entitled "single family residence" or "duplex" exist in this area, they are described first using their street address, then with the NPS-assigned building number in parentheses.

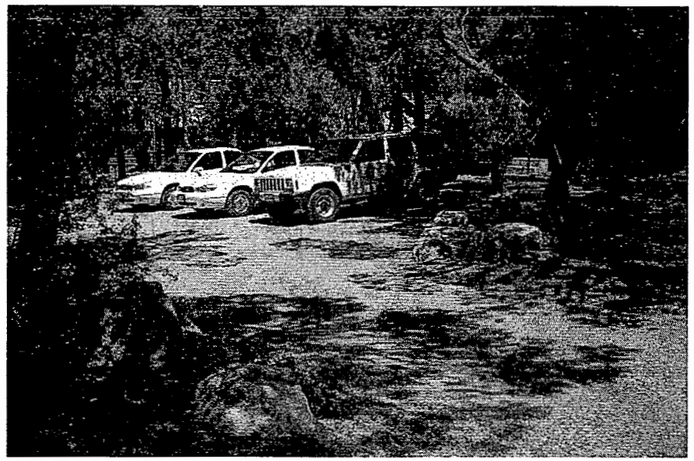
The **Fee Management Office** (Bldg. #SRB0076) was built in 1921 and is located south of the Grand Canyon Association Building and near the intersection of Tonto Street and the Grand Canyon Association Building driveway (*Photograph 164*). The long rectangular building is sheathed with unusually large stone siding set with thick mortar. The roof is gabled, having weatherboard at the gable ends. Windows are inset into the walls and are double-hung.

Single family residence #6 Tonto St. (Bldg. #SRQ0002) is located east of the Fee Management Office and driveway. Built in 1922 and rehabilitated in 2000, the residence is a rectangular building with hipped roof, two-over-two and three-by-three windows with green trim, and horizontal clapboard siding. The foundation is constructed of stone and an entrance is located on the south elevation. The 1922 **shed** (Bldg. #SRB0002A) is located at the southeast corner of Bldg. #SRQ0002.It is rectangular in shape with a gable roof, clapboard siding, and widows with green trim. The associated **garage and fuel shed** (Bldg. #SRB0006C) is one of seven extant garages built by the CCC in 1937 within this character area. It is a one-story, wood-frame, two-bay garage with a gable roof and aluminum siding. Two sets of wood double doors open to the bays.

Single family residence #8 Tonto St. (Bldg. #SRQ0003) is located east of Bldg. #SRQ0002 and was built in 1923 (*Photograph 165*). The building is rectangular in shape with a smaller entrance ell on the south elevation and another ell on the west elevation. The main building and ells all have gable roofs with wood shingles. Siding is wood clapboard while windows are two-over-two double hung with narrow, rectangular lights. Door and window trim is painted green.



Photograph 161. Kaibab Street. (JMA, 2001)



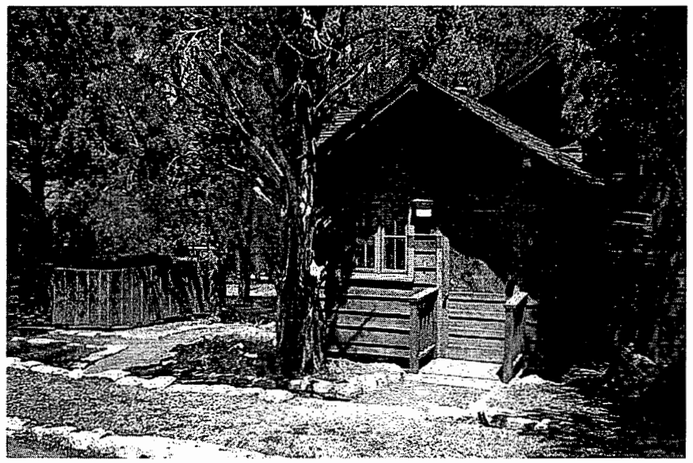
Photograph 162. Gravel parking near Fee Management Office. (JMA, 2001)



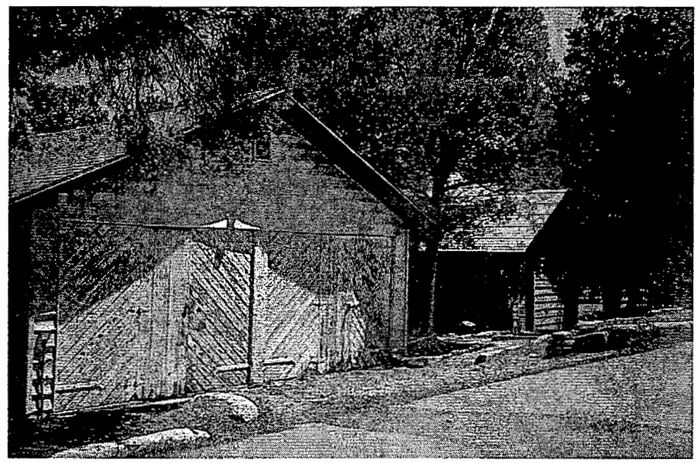
Photograph 163. Gravel path by Bldg. #SRQ0019. (JMA, 2001)



Photograph 164. Fee Management Office. (JMA, 2001)



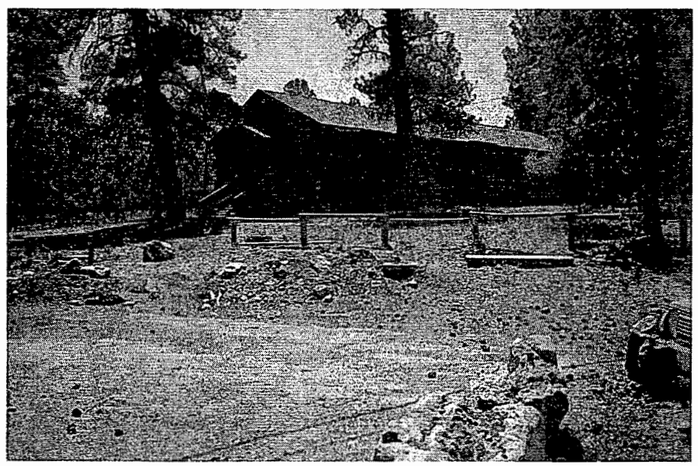
Photograph 165. Single family residence #8 Tonto St. (Bldg. #SRQ0003). (JMA, 2001)



Photograph 166. Garage and shed at Bldg. #SRQ0004. (JMA, 2001)



Photograph 167. Duplex #7 A/B Tonto St. (Bldg. #SRQ0006). (JMA, 2001)



Photograph 168. WODC/Library with parking lot and log fence in foreground. (JMA, 2001)

Single family residence #10 Tonto St. (Bldg. #SRQ0004) is located on Tonto Street, east of Bldg. #SRQ0003. Built in 1924, the building shares much of the same detailing as Bldg. #SRQ0003—having a gable roof, wood clapboard siding, and green-painted door and window trim. The associated **garage and shed** (Bldg. #SRB0004A) is located to the east of Bldg. #SRQ0004 (*Photograph 166*). The building is wide and rectangular, with white clapboard siding and a gable roof covered in asphalt shingles. Two wooden, double garage doors are located on the south elevation.

Single family residence #12 Tonto St. (Bldg. #SRQ0005) is located at the intersection of Tonto and Navajo Streets. The building shares similar architectural characteristics with Bldgs. #SRQ0003, SRQ0003, and SRQ0004. The building has an entrance ell on the south elevation. Both the ell and core have gable roofs, brown wood clapboard siding, and green window and door trim.

Duplex #1 A/B Tonto St. (Bldg. #SRQ0024) is located on the south side of Tonto Street, near the intersection of Tonto and Juniper Hill. The rectangular building fronts Tonto Street and has an ell on the south elevation and an entrance porch on the west elevation. The gable roof has asphalt shingles while the exterior walls are sheathed in light-colored clapboard siding. Two entrances, one to each residence, are located on the south elevation beneath a shed porch roof. Windows are two-over-two double-hung located in bays of three windows. The foundation is constructed of rubble masonry. The associated **garage and shed** (Bldg. #24C) is located southeast of the duplex. The building has a gable roof and siding of similar color to the duplex. The foundation is also of the same stone construction. An entrance is located on the west elevation.

Duplex #7 A/B Tonto St. (Bldg. #SRQ0006) is located on the south side of Tonto Street and across from Bldg. #SRQ0003 (*Photograph 167*). Built in 1924, the rectangular building has a gable roof with shed dormers and stone chimney, brown clapboard siding, and a stone foundation. Windows are three-by-three double hung, placed singly or in bays of three, with green-painted trim. Two entrances, one to each unit, are located on the west elevation.

Duplex #9 C/D Tonto St. (Bldg. #SRQ0007) is located east of Bldg. #SRQ0006, near the intersection of Navajo and Tonto Streets. Built in 1926, the rectangular residential building has a gable roof and brown clapboard siding. The associated **garage and shed** (Bldg. #SRB0007A) was built in 1936 and is located south of Bldg. #SRQ0007. The garage has a gable roof, white clapboard siding, and two wood, double garage doors on the east elevation.

Single family residence #9 Navajo St. (Bldg. #SRQ0009) was built in 1935 and is located on the east side of Navajo Street and south of the Public Garage. The residence has a compound floor plan with ells and bump-outs. The roof is gabled and has wood shingles. Siding is wood clapboard while the foundation is of coursed stone. Windows are located singly or in bays of two or three, all having green trim. The main entrance is located beneath a shed porch.

The **WODC/Library** (Bldg. #SRB0208) is located south of the Public Garage and at the eastern end of a long driveway leading from Navajo Street (*Photograph 168*). Built in 1927, the building was originally a schoolhouse, yet currently houses local Denver Service Center offices and the community library. The long, narrow, rectangular building is of stacked log construction with a gable roof and square rafter tails beneath the eaves. The gable ends are covered with wood shingles. Windows are either two-over-two squares or rectangular in shape. The main entrance is located on the north elevation; beneath a gable-roof porch.

To the west of the WODC/Library, along a path leading to the General Office and Public Garage building, is a **stone pedestrian bridge**. The five-and-a-half to six-foot wide bridge rests on rectangular stone piers no higher than two feet above the ground. The edges of the bridge are lined with stone edging that matches the edging along the remainder of the path leading to the Library.

Single family residence #11 Kaibab St. (Bldg. #SRQ0011) was built in 1928 and is located on the north side of Kaibab Street, near the intersection of Kaibab and Navajo Streets (*Photograph 169*). The building is rectangular in shape and has an addition on the east elevation. Both the central roof and lower addition roof are gabled and have wood shingles and exposed rafter tails. The windows are two-over-two and exist in bays of two. The main entrance is located on the north elevation. All trim is painted green. The associated **garage and shed** (Bldg. #SRB0011A) is located east of Bldg. #SRQ0011 and is a simple wood frame structure with gable roof, exposed rafter tails, and white clapboard siding.

Single family residence #13 Kaibab St. (Bldg. #SRQ0013) was built in 1928 and is located on the north side of Kaibab Street, east of Bldg. #SRQ0011. The building has a gable roof and brown wood clapboard siding.

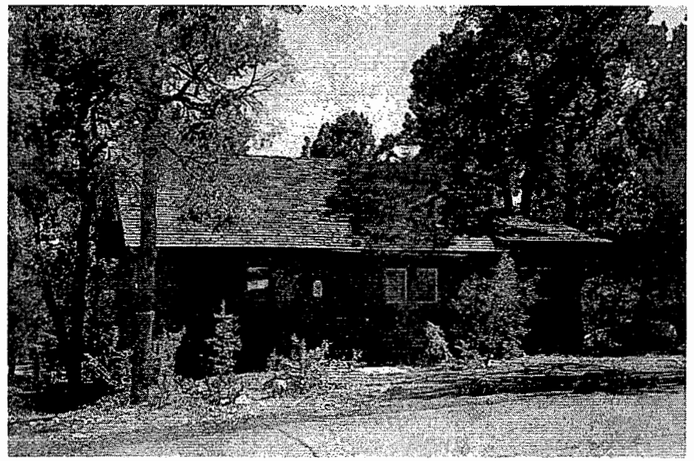
Single family residence #15 Kaibab Street (Bldg. #SRQ0015) was built in 1930 and is located on the north side of Kaibab Street, east of Bldg. #SRQ0013. This one-story wood-frame bungalow has a gable roof with exposed rafter tails, purlins, and composition shingles. It is covered with horizontal lap siding with double-hung and casement windows. The recessed entry porch is enclosed. The building rests on a randomly coursed fieldstone foundation. The associated **shed** (Bldg. #SRB0015A) is located east of the residence. Built in 1936, the shed is a rectangular building with asphalt-shingled gable roof and exposed rafter tails. The siding is composed of white clapboard. Two double garage doors are located on the south elevation. Windows are three-by-three with red trim.

Single family residence #17 Kaibab St. (Bldg. #SRQ0017) was built in 1929 and is located east of Bldg. #SRB0015A. The residence is a one-story, wood-frame bungalow with an intersecting gable roof with exposed rafters, lookouts with knee braces, and composition shingles. The open front porch has triple wood columns supporting the gable porch roof. The exterior walls are covered in horizontal lap siding.

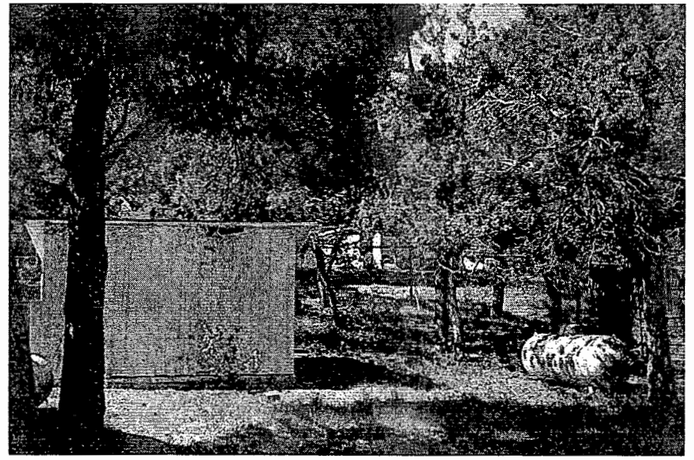
Single family residence #19 Kaibab St. (Bldg. #SRQ0019) was built in 1931 and is located on the north side of Kaibab Street, east of Bldg. #SRQ0017. The building has a gable roof with gable dormers. The lower one-third of the exterior walls is sheathed in horizontal clapboard siding while the upper two-thirds consist of multi-sized wood shingles. The foundation consists of uncoursed stone with a concrete water table. Windows range in size from three-by-three rectangles to two-over-two squares. Window and door trim is painted green. The associated **garage and shed** (Bldg. #SRB0019A) is located east of the residence and consists of a rectangular structure with gable roof and exposed rafter tails. The walls are clad in white clapboard siding while the foundation is coursed stone. Two double garage doors are located on the south elevation.

Single family residence #21 Kaibab St. (Bldg. #SRQ0021) was built in 1931 and is located near the intersection of Kaibab Street and Tapeats Circle. The rectangular building has a gable roof with gable dormers and exposed rafter tails. The lower one-third of the exterior walls are sheathed in white-washed clapboard siding while the upper third have white wood shingles in varying sizes. Windows are either square or rectangular in shape and have pink trim.

Single family residence #14 Kaibab St. (Bldg. #SRQ0014) was built in 1930 and is located on the south side of Kaibab Street, across from Bldg. #SRQ0015. The building has brown clapboard siding and windows with green trim. A small, white **storage shed** is located to the east of the residence (*Photograph 170*). The shed has a shed roof with exposed rafter tails and board-and-batten siding. It rests on a concrete slab foundation.



Photograph 169. Single family residence #11 kaibab St. (Bldg. #SRQ0011). (JMA, 2001)



Photograph 170. Storage shed east of Single family residence #14 Kaibab St. (Bldg. #SRQ0014). (JMA, 2001)



Photograph 171. Single family residence #53 Juniper Hill (Bldg. #SRQ0053), with gravel parking and wood edging. (JMA, 2001)



Photograph 172. Log structure between Single family residence #65 Juniper Hill (Bldg. #SRQ0066) and Single family residence #67 Juniper Hill (Bldg. #SRQ0067). (JMA, 2001)

Single family residence #16 Kaibab St. (Bldg. #SRQ0016) was built in 1925 and is located on the south side of Kaibab Street, east of Bldg. #SRQ0014. The building has a rectangular core with a shed addition to the south and shed porch addition to the north. The central roof is gabled with asphalt shingles. The exterior walls are clad with a combination of white board-and-batten and clapboard siding. The two-over-two double-hung windows have light-green trim. The associated **coal shed** (Bldg. #SRB0016A) was built in 1930 and consists of a one-story wood-frame structure with a shed roof and composition shingles.

Single family residence #49 Juniper Hill (Bldg. #SRQ0012) was built in 1934 and is located on the north side of Juniper Hill—across from Bldg. #SRQ0013. The building has a rectangular central core with an ell porch addition on the north elevation and a side porch addition on the east elevation. All three roofs are gabled with asphalt shingles. A stone chimney rises from the central roof. The upper two-thirds of the exterior walls are clad in brown wood shingles while the lower third is sheathed in brown clapboard. The main entrance porch has a Swiss-Rustic style cut railing. The associated **garage and shed** (Bldg. #SRB0012A) is located east of the residence and was built in 1936. The structure has a gable roof, gray clapboard siding, and two double garage doors on the west elevation.

Single family residence #51 Juniper Hill (Bldg. #SRQ0051) was built in 1931 and is located on the north side of Juniper Hill and east of Bldg. #SRQ0012. The building is a small rectangular house with a cross-gable roof and light-colored siding. The three-by-three windows are located in bays of two and have white trim. The main entrance is located on the east elevation.

Single family residence #53 Juniper Hill (Bldg. #SRQ0053) was built in 1931 and is located on Juniper Hill and east of Bldg. #SRQ0051 (*Photograph 171*). The rectangular building has a gable roof with exposed rafter tails. The upper half of the exterior walls are clad in wide, gray, vertical board siding while the lower half has horizontal clapboard. Windows come in multiple sizes and trim colors. The main entrance is located on the south elevation.

Single family residence #55 Juniper Hill (Bldg #SRQ0054) was also built in 1931. It is a one-story wood-frame bungalow having a gable roof with exposed rafters, lookouts, and composition shingles. The exterior walls are covered in horizontal lap siding to the base of the window sills, and then with board-and-batten siding above.

Single family residence #57 Juniper Hill (Bldg. #SRQ0055) is also known as the Laundry/Boiler Building and the Lavatory Building. It was one of five cabins built following the 1924 Master Plan, originally as a comfort station and later converted to a boiler and laundry. The one-story wood frame cabin has a gable roof with exposed rafters and composition shingles. The exterior wall are covered with horizontal lap siding to the base of the window sills, and then with board-and-batten siding above. The foundation consists of stone and concrete while the chimney is constructed of brick.

Single family residence #59 Juniper Hill (Bldg. #46) was built in 1935 and is located on the north side of Juniper Hill and east of Bldg. #SRQ0055. The small, rectangular building has an asphalt-shingled cross-gable roof with white clapboard siding and contemporary windows and doors. The entrance is located on the south side.
Single family residence #61 Juniper Hill (Bldg. #SRQ0047) is also known as an NPS Employee Cabin and was one of four bungalow cabins completed in 1936 by the CCC. The one-story wood frame bungalow has an intersecting gable roof with enclosed eaves and composition shingles. The exterior walls are clad in aluminum siding.

Single family residence #65 Juniper Hill (Bldg. #SRQ0066) was built in 1921 as a teacherage and is located on the north side of Juniper Hill—near the southern edge of the area boundary. The building is small and rectangular with a gable roof and light-colored clapboard siding. An entrance porch, with gable roof and cornice bracket, is located on the south elevation. The foundation is of uncoursed stone. Windows on the south elevation are two-over-two with transom lights.

A **log structure** is located between Bldg. #SRQ0066 and Bldg. #SRQ0067 (*Photograph 173*). This may be the Bldg. #66A, associated with Bldg. #SRQ0066. The small, rectangular structure has a shingled gable roof and chinked log walls. A small, square window is located on the east elevation while a wood board door is located on the south elevation.

Single family residence #67 Juniper Hill (Bldg. #SRQ0067) is located north of Juniper Hill and on the southern edge of the area and historic district boundary. The building has a gable roof with boxed eaves and, possibly, aluminum siding. The light-yellow colored building also has two-over-two double hung windows with brown trim and an entrance located on the west elevation.

8 The Denver Service Center database lists the LCS ID number for Bldg. #46 as 55393. This LCS ID number, however, does not exist on the park's LCS.

Single family residence #50 Juniper Hill (Bldg. #1140) was built in 1995 on a site originally occupied by Bldg. #52, which was demolished in 1994. The building is located on the south side of Juniper Hill and across from Bldg. #SRQ0012. The building has a rectangular central core with an ell on the south elevation and an entrance ell on the north elevation. The roofs are gabled and have wood shingles and exposed rafter tails. The upper two-thirds of the exterior walls are sheathed in vertical board-and-batten siding while the lower third is clapboard. Windows are four-by-four rectangles with green trim.

Single family residence #54 Juniper Hill (Bldg. #SRQ0050) is also known as an NPS Employee Cabin and was built in 1936 by the CCC. The one-story wood frame bungalow has an intersecting gable roof with exposed rafters, lookouts, and composition shingles. The exterior walls are clad in aluminum siding, while the windows are also constructed of aluminum. The foundation is constructed of stone and concrete.

Single family residence #56 Juniper Hill (Bldg. #SRQ00159) was built in 1935 by the CCC during expansion of the park's facilities. It is a one-story wood frame bungalow with an intersecting gable roof with exposed rafters and composition shingles. The building has aluminum siding and both aluminum and wood casement windows. The foundation is constructed of stone and concrete.

Single family residence #58 Juniper Hill (Bldg. #SRQ0161) was built in 1935 and is a one-story wood frame bungalow. The intersecting gable roof has exposed rafters and composition shingles. The exterior walls are clad in horizontal wood lap siding and contain wood casement windows. The foundation is constructed of stone and concrete.

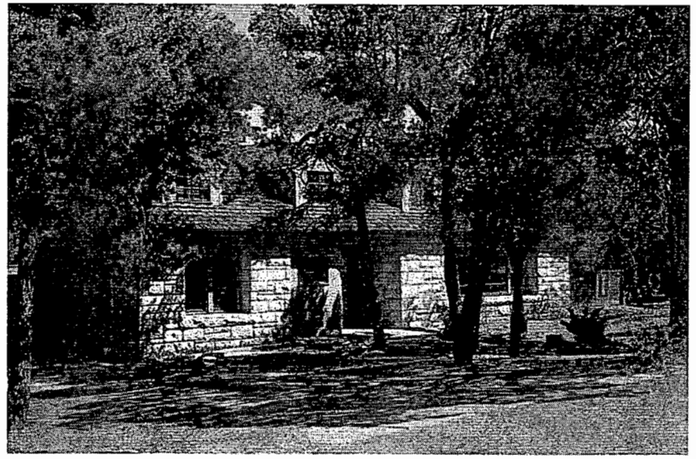
Single family residence #60 Juniper Hill (Bldg. #SRQ0163) was built in 1935 and is located on the south side of Juniper Hill. The L-shaped building has a cross-gable roof with asphalt shingles, light-colored clapboard siding, and three-by-three windows. The main entrance is an aluminum door located on the north elevation.

Single family residence #64 Juniper Hill (Bldg. #472) was built in 1972 and is located on the southern side of Juniper Hill and at the edge of the character area boundary. The building is long and rectangular with a wide gable roof, brown vertical board siding, and aluminum windows.

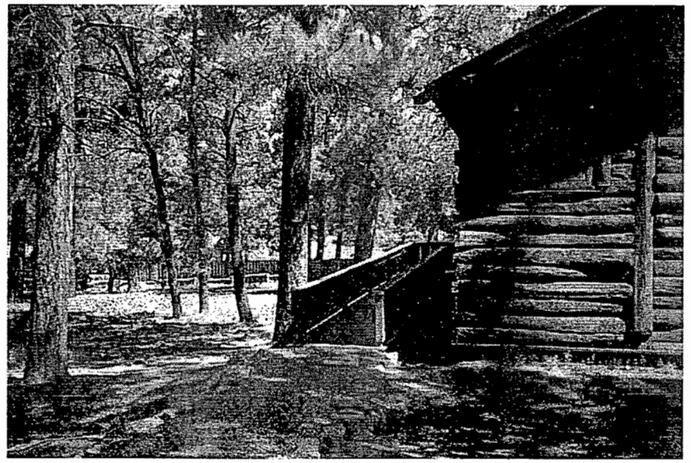
Single family residence #68 Juniper Hill (Bldg. #169) is located in the southern portion of the character area, near the intersection of Juniper Hill and Sunset Drive. The residence is a rectangular building with asphalt-shingled gable roof, light brown clapboard siding and vertical weatherboard, and a concrete foundation. A small shed addition is located on the northwest corner of the building.



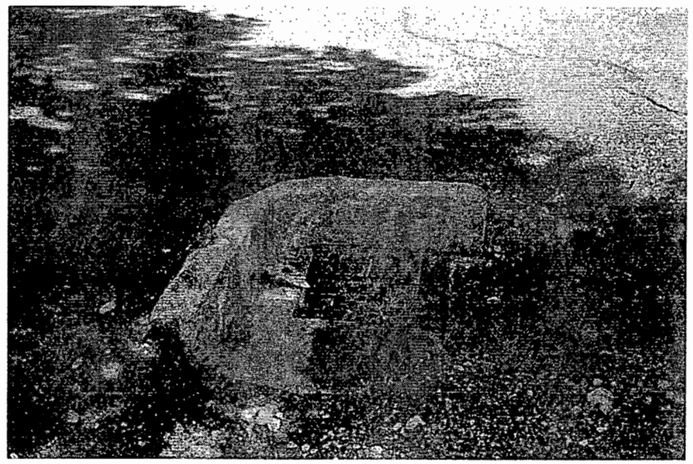
Photograph 172. Log structure between Single family residence #65 Juniper Hill (Bldg. #SRQ0066) and Single family residence #67 Juniper Hill (Bldg. #SRQ0067). (JMA, 2001)



Photograph 173. Single family residence #23 Tapeats Circle (Bldg. #SRQ0023). (JMA, 2001)



Photograph 174. Wood accessibility ramp and railing at WODC/Library. (JMA, 2001)



Photograph 175. Metal drainage grate with concrete curb. (JMA, 2001)



Photograph 176. Clothesline. (JMA, 2001)

Single family residence #23 Tapeats Circle (Bldg. #SRQ0023) was built in 1941 and is located on Tapeats Circle; near the intersection of Tapeats Circle and Kaibab Street (*Photograph 173)*. The building has a wood-shingle gable roof with four gable-roof dormers. The exterior walls are clad in cut stone. The windows are inset into the walls and are varied in size and shape.

Single family residence #25 Tapeats Circle (Bldg. #SRQ0025) was also built in 1941 and located on Tapeats Circle, east of Bldg. #SRQ0023. The low, rectangular building has a wood-shingled gable roof. The exterior walls are clad in thick, cut stone. Bays of windows punctuate the long walls. An attached garage is located on the east elevation while a woodshed addition is located on the west elevation.

Single family residence #27 Tapeats Circle (Bldg. #SRQ0027) is also known as the Assistant Superintendent's Residence. The residence was completed in 1941 and rehabilitated in 1994. The one-story wood-frame house has a gable roof with cornice molding, wood shingles, and louvered vents at the gable ends. The recessed entry porch is constructed of peeled log posts. The residence has an attached garage. The exterior walls are clad in random ashlar limestone veneer and vertical tongue-and-groove siding with wood double-hung windows.

Along the north edge of Tonto Road, a **stone retaining wall** supports the roadbed. The wall is constructed of thick, cut stones. A **stone wall** edges the curve of Navajo Street—at its intersection with Tonto Street. A third **stone wall** is located to the south of Residence #16 and its associated shed structure.

Views and Vistas

Due to the density of vegetation and its distance from the canyon rim, there are no distinct views and vistas available within the NPS Housing Area.

Small-scale Features

Small-scale features associated with circulation include an **accessibility ramp** with **wood railing** located at the entrance of the WODC/Library building (*Photograph 174*). This feature is of recent construction.

Residential parking pull-offs and driveways, as well as many paths, are bordered in **stone edging**, such as the path to the WODC/Library building. Certain unpaved driveways, including the driveway leading to the WODC/Library building, are lined with **boulders**.

Between Bldg. #SRQ0019 and its garage is a gravel path lined with **cut stone edging** that differs from the typical Grand Canyon Village rough stone and boulder edging types due to its more formal, designed appearance (*Photograph 164*). Wooden **wheel stops** that appear to be old railroad ties are used for parking and edging in many places, such as along the side of the driveway to Bldg. #SRQ0053 (*Photograph 171*). Small-scale features associated with drainage include a **metal drainage grate** surrounded by a short concrete curb (*Photograph 175*). Small **metal pipe culverts** are found elsewhere in the character area.

Post-and-rail fencing appears around certain residences and adds to the residential scale of the character area. A recently-constructed **log fence**, consisting of single-rail segments on wood posts, divides the WODC/Library building from the Public Garage and General Office (*Photograph 168*). New plantings in small garden beds in front of Bldg. #SRQ0025 are surrounded by protective **wire fencing**.

Lighting standards in the NPS Housing Area are street lamps composed of green-painted metal poles with a decorative bracket supporting an arm and acorn luminaire— similar to lighting standards found in the Rim Area. An example of this street light type is found along Navajo Street near the intersection with Tonto Street (*Photograph 159*).

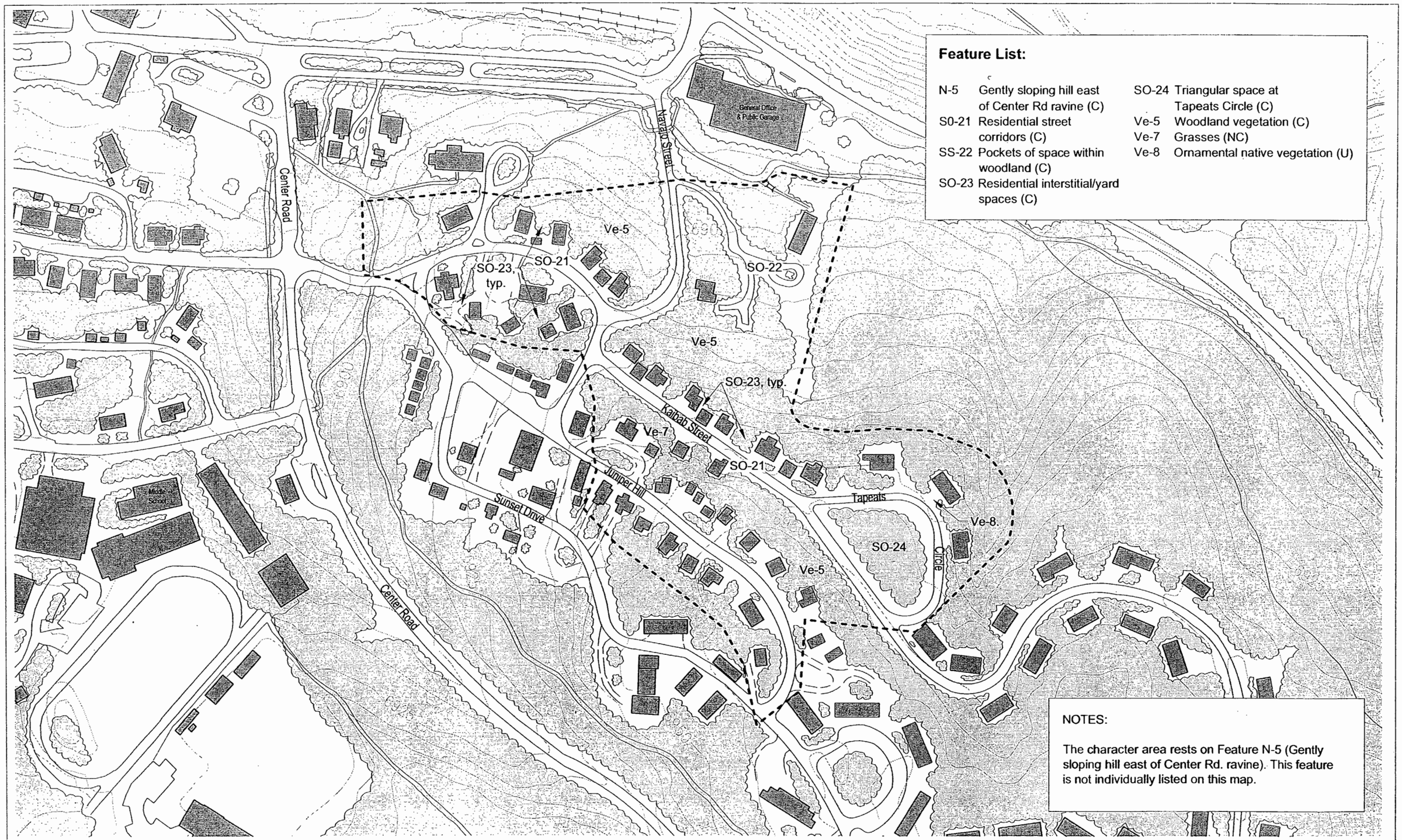
Signage is typical of the Village Historic District, including standard reflective green **street signs,** standard **vehicular traffic signs**, and **brown and white NPS signs** (*Photograph 160*).

Trash receptacles in this character area are generally non-standardized, domestic-scale types and are found adjacent to residences. There is a **dumpster** at the end of the drive behind Bldg. #SRQ0009.

Picnic tables are located in certain yards, such as at Bldg. #169 and #SRQ0066. Domestic yards include numerous small-scale features, such as **clotheslines** comprised of lines stretched between two metal T-shaped poles (*Photograph 176*); small **satellite dishes**, such as those in front of Bldg. #SRQ0003 and Bldg. #SRQ0051; and **woodpiles**, such as the one by Bldg. #SRQ0066. In addition, the homes are heated using fuel from small **fuel or propane tanks**, such as the one in the back yard of Bldg. #SRQ0016. These are typically located adjacent to and behind the older residences in the NPS Housing Area.

Archeological Sites

According to a 1973 archeological survey of the Village Historic District, there is only one known archeological site that falls within the CLR project area boundary. This lithic scatter is not labeled on the CLR inventory maps.



Feature List:

N-5	Gently sloping hill east of Center Rd ravine (C)	SO-24	Triangular space at Tapeats Circle (C)
S0-21	Residential street corridors (C)	Ve-5	Woodland vegetation (C)
SS-22	Pockets of space within woodland (C)	Ve-7	Grasses (NC)
SO-23	Residential interstitial/yard spaces (C)	Ve-8	Ornamental native vegetation (U)

NOTES:

The character area rests on Feature N-5 (Gently sloping hill east of Center Rd. ravine). This feature is not individually listed on this map.

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

NPS HOUSING AREA

NATURAL SYSTEMS & FEATURES SPATIAL ORGANIZATION VEGETATION

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO. —

SHEET 21 OF 67

Feature List:

C-57	Navajo Street (C)	SS-10	Wheel stops (NC)
C-58	Tonto Street (C)	SS-18	Drainage gates (U)
C-59	Kaibab Street (C)	SS-77	Metal pipe culverts (U)
C-60	Tapeats Circle (C)	SS-69	Post and rail fencing (U)
C-61	Juniper Hill (C)	SS-73	Log fence (U)
C-62	WODC/Library drive (C)	SS-78	Wire fencing (NC)
C-63	Asphalt driveway (C)	SS-79	Green-painted lighting standards (C)
C-64	Bldg. #SRQ0007 gravel drive (C)	SS-80	Street signs (NC)
C-65	Gravel parking (C)	SS-32	Vehicular traffic signs (NC)
C-66	Gravel parking for Bldg. #SRQ0012 (U)	SS-31	Brown and white NPS signs (NC)
C-67	Gravel paths (C)	SS-34	Trash receptacles (NC)
SS-75	Wood ramp (NC)	SS-35	Dumpster (NC)
SS-76	Wood railing (NC)	SS-51	Picnic tables (NC)
SS-8	Stone edging (C)	SS-81	Clothesline (NC)
SS-9	Boulders (U)	SS-82	Satellite dish (NC)
SS-7	Cut stone curbing (C)	SS-83	Woodpile (NC)
		SS-47	Fuel/propane tanks (NC)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. 1

NPS HOUSING AREA

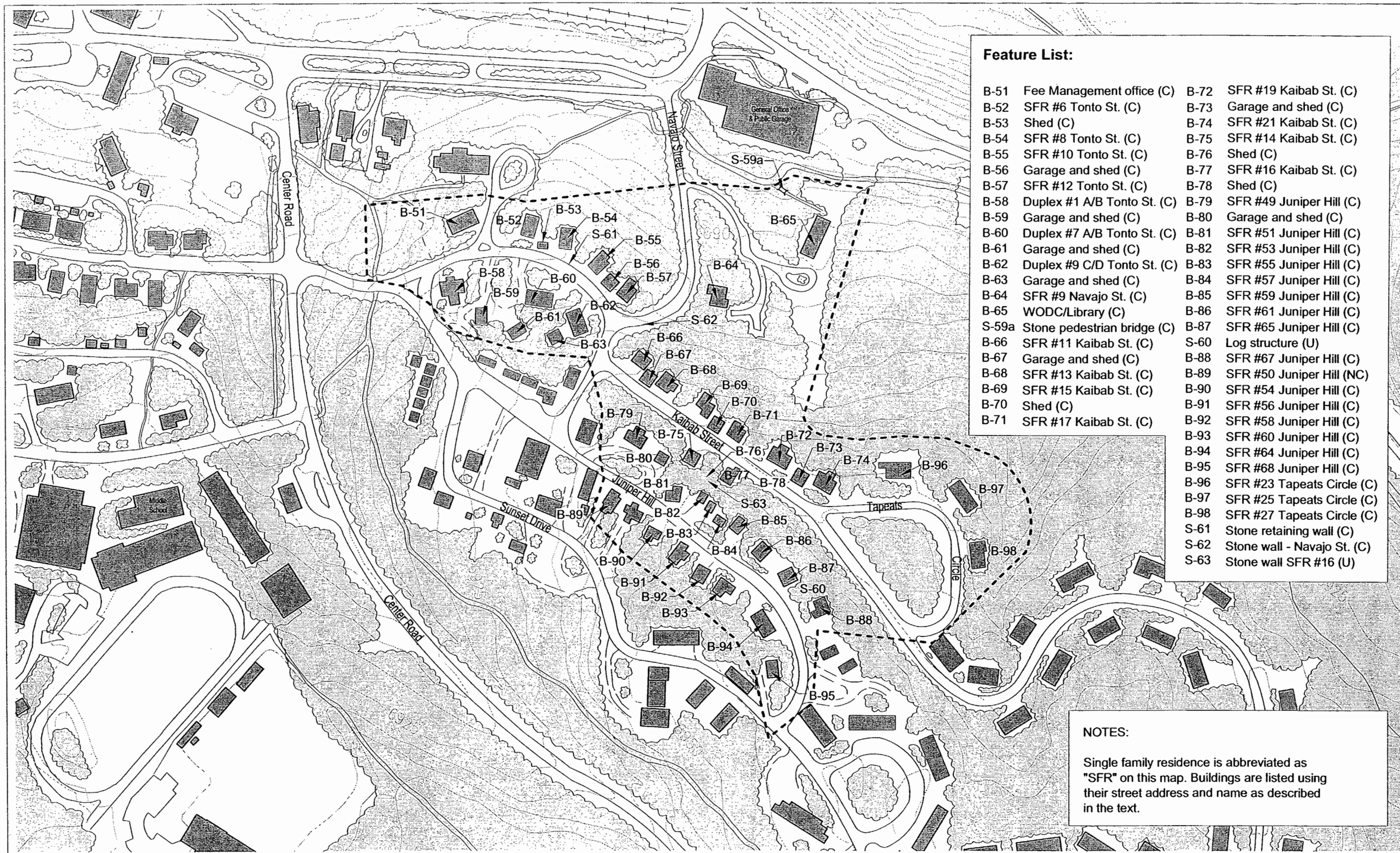
CIRCULATION
SMALL-SCALE FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO.

SHEET 22 OF 67



Feature List:

B-51	Fee Management office (C)	B-72	SFR #19 Kaibab St. (C)
B-52	SFR #6 Tonto St. (C)	B-73	Garage and shed (C)
B-53	Shed (C)	B-74	SFR #21 Kaibab St. (C)
B-54	SFR #8 Tonto St. (C)	B-75	SFR #14 Kaibab St. (C)
B-55	SFR #10 Tonto St. (C)	B-76	Shed (C)
B-56	Garage and shed (C)	B-77	SFR #16 Kaibab St. (C)
B-57	SFR #12 Tonto St. (C)	B-78	Shed (C)
B-58	Duplex #1 A/B Tonto St. (C)	B-79	SFR #49 Juniper Hill (C)
B-59	Garage and shed (C)	B-80	Garage and shed (C)
B-60	Duplex #7 A/B Tonto St. (C)	B-81	SFR #51 Juniper Hill (C)
B-61	Garage and shed (C)	B-82	SFR #53 Juniper Hill (C)
B-62	Duplex #9 C/D Tonto St. (C)	B-83	SFR #55 Juniper Hill (C)
B-63	Garage and shed (C)	B-84	SFR #57 Juniper Hill (C)
B-64	SFR #9 Navajo St. (C)	B-85	SFR #59 Juniper Hill (C)
B-65	WODC/Library (C)	B-86	SFR #61 Juniper Hill (C)
S-59a	Stone pedestrian bridge (C)	B-87	SFR #65 Juniper Hill (C)
B-66	SFR #11 Kaibab St. (C)	S-60	Log structure (U)
B-67	Garage and shed (C)	B-88	SFR #67 Juniper Hill (C)
B-68	SFR #13 Kaibab St. (C)	B-89	SFR #50 Juniper Hill (NC)
B-69	SFR #15 Kaibab St. (C)	B-90	SFR #54 Juniper Hill (C)
B-70	Shed (C)	B-91	SFR #56 Juniper Hill (C)
B-71	SFR #17 Kaibab St. (C)	B-92	SFR #58 Juniper Hill (C)
		B-93	SFR #60 Juniper Hill (C)
		B-94	SFR #64 Juniper Hill (C)
		B-95	SFR #68 Juniper Hill (C)
		B-96	SFR #23 Tapeats Circle (C)
		B-97	SFR #25 Tapeats Circle (C)
		B-98	SFR #27 Tapeats Circle (C)
		S-61	Stone retaining wall (C)
		S-62	Stone wall - Navajo St. (C)
		S-63	Stone wall SFR #16 (U)

NOTES:

Single family residence is abbreviated as "SFR" on this map. Buildings are listed using their street address and name as described in the text.

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

NPS HOUSING AREA

BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO. —

SHEET 23

OF 67

NPS Service Area

Stretching from the southernmost corner of the Village Historic District, west to Center Road, the NPS Service Area contains a variety of service-related buildings including labor cabins, the machine shop, a warehouse, gas station, jail, coal shed, fire house, storage buildings, and a mule barn and corral.

Natural Systems

The NPS Service Area features are located on a **gently sloping hill** that is found west of the Center Road ravine.

Spatial Organization

Space in this character area is defined mostly by woodland edges and building relationships, while circulation corridors also contribute into spatial organization.

The primary space in this area is the **central work plaza** which is defined by building façades (*Photograph 177*). The open plaza is paved with asphalt and contains clusters of buildings and a vehicular drive. Woodlands define the outer edge of this space, encompassing the buildings, drive, and plaza.

A secondary space, the **mule barn node**, is located in the eastern portion of the NPS Service Area. The node is located along the road edge and is defined by vegetation. Corral fencing and building façades define interior spaces within the building cluster.

A **vehicular corridor**—defined by woodland vegetation, building façades, and pavement width— runs through the character area and connects the work plaza and mule barn node.

Land use

Land uses in this area consist of maintenance, livestock care, residential, and storage.

Circulation

As with the NPS Housing Area, circulation patterns in the NPS Service Area revolve around vehicular circulation such as roads, parking, and driveways. Pedestrian circulation is secondary and takes the form of walks and paths.

Sunset Drive is the character area's primary road (*Photograph 178*). The uncurbed, two-way macadam road with faded striping begins by heading south from Juniper Hill—east of the Labor Cabins—then turns east, winding through the character area. Sunset Drive continues its easterly direction beyond the character area boundary. The northern portion of **Juniper Hill** is contained within the character area.

A wide **expanse of gravel and asphalt pavement** stretches west to east between the Warehouse and the Blacksmith Shop, and north to south between Juniper Hill and Sunset Drive (*Photograph 177*). The expanse of gravel and asphalt serves as a parking lot and general service area.

East of the Storage Shed, a **gravel service drive** exists as a wide bump-out from Sunset Drive, reaching from the road edge to just beyond the Storage Shed. The driveway is used for parking, material storage, and as a general service area.

West of the Mule Barn, a narrow **gravel access drive**, consisting of dark-colored loose stone approximately twelve-to-fifteen feet in width, reaches from Sunset Drive to the Pole Hay Shed (*Photograph 179*).

A **gravel drive** leads from Sunset Drive, north, behind the Lumber Shed. An **asphalt drive** leads from Sunset Drive to the rear of Bldgs. #1140 and #48.

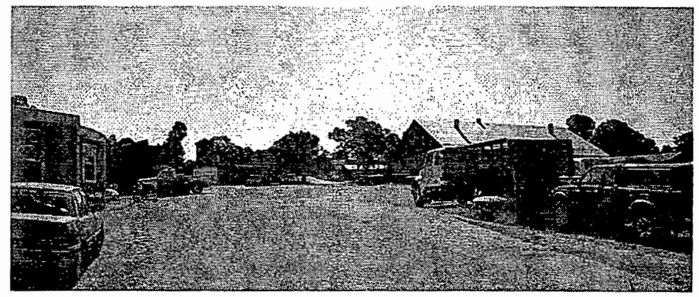
Vegetation

Ponderosa pine woodland surrounds the NPS Service Area. A **stand of ponderosa pines** forms a screen between the service plaza and the Labor Cabins to its west.

Buildings and Structures

Within the NPS Service Area, there are three clusters of buildings and structures associated with service and maintenance operations and residential use. The northern cluster consists of residential labor cabins currently used for staff housing. The largest cluster, also located near the northern portion of the character area, includes warehouses, storage structures, a paint shop, and other maintenance facilities. The third cluster is located in the southern portion of the character area and contains numerous livestock-related and storage buildings. Within these clusters, buildings and structures will be described from west to east.

The **Labor Cabins** (Bldgs. #SRQ0061-SRQ0065) were built in 1930 and are located at the intersection of Juniper Hill and Sunset Drive (*Photograph 180*). The six cabins all share similar characteristics. All of the cabins have gable roofs. Siding is board-and-batten on the upper half of the exterior walls while the lower portions are clapboard. Windows are two-over-two with green trim. The **Labor Cabin Comfort Station** (Bldg. #SRB0060) is larger, having two rooms.



Photograph 177. Central work plaza in NPS Service Area. (JMA, 2001)



Photograph 178. Sunset Drive. (JMA, 2001)

Within the second cluster, several buildings and structures are arranged around a central parking area. Three contemporary **Temporary Housing units** (Bldgs. #TH-01, TH-02, and TH-03) are located along the northeastern boundary of the character area (*Photograph 181*). These trailer-like residences are narrow and rectangular with vertical board siding and contemporary windows.

The **Boat Shop** (Bldg. #SRB0069) was built in 1924 and is located to the east of the temporary housing structures and at the intersection of Juniper Hill and Tonto Street (*Photograph 181*). The Boat Shop, once used as a carpenter shop, appears to be a two-part building with one part having a shed roof running north-south and the other part has a shed roof running east-west. The east-west roof is set forward of the north-south section, creating an-L-shaped alcove space on the south elevation. Exterior walls are clad in board-and-batten siding. three-by-three windows are located in bays of two.

A wood-frame **Storage Shed** (Bldg. #SRB0043) was built in 1936 and is located near the intersection of Kaibab and northeast of the Boat Shop (*Photograph 182*). The shed is a long, rectangular structure with an asphalt-shingled gable roof with exposed rafter tails, wood clapboard siding, and four sets of double doors on the east elevation.

The **Fire Equipment Building** (Bldg. #0097) was built in 1935 and is located east of the Juniper Hill and Tonto Street intersection (*Photograph 183*). The complex building has a rectangular central core with gable roof. A tall, square, enclosed cupola with gable roof is located in the middle of the central core roof. The vehicle bay garage door is located on the west elevation and within a gable-roofed bump-out. Shed additions are located on the north and south elevations. The exterior walls are sheathed in vertical board siding.

The **Horse Barn** (Bldg. #SRB0074) was built in 1924 and is located on the south side of Sunset Drive; it is currently used as an equipment shed and electrical shop. The barn is a square structure with a shed roof and vertical board siding (*Photograph 184*). The barn doors and entrances are located on the east elevation while a corral is located off of the north side of the barn. A three-sided plywood **livestock shelter** with shed roof is located south of the barn.

The **Paint Shop** (Bldg. #SRB0080) is located east of the Horse Barn and was built in 1930 (*Photograph 185*). The building is rectangular in shape and has a gable roof sheathed with corrugated metal. Two large vehicular bay doors, with chamfered door jambs, are located on the north elevation. A set of double doors with long, iron hinges is also located on the north elevation.

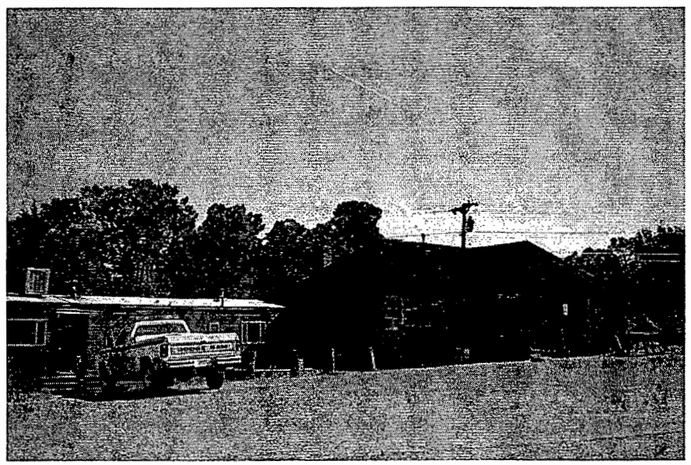
A small **pre-fabricated storage shed**, with gable roof and single entrance door on the north elevation, is located east of the Paint Shop.



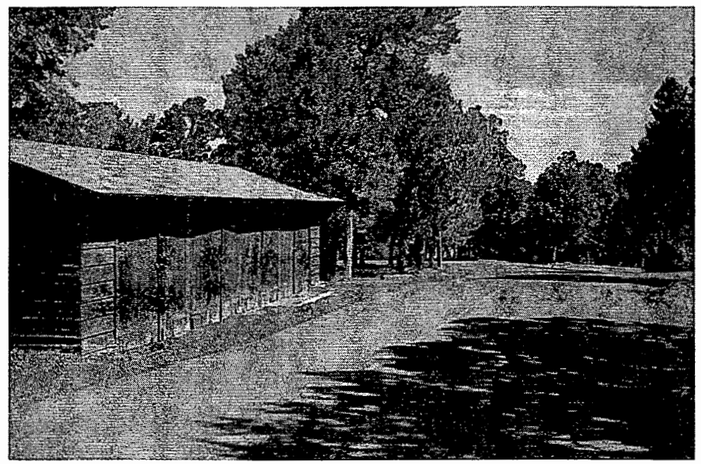
Photograph 179. Gravel access drive near Mule Barn. (JMA, 2001)



Photograph 180. Labor Cabins and Ponderosa pines. (JMA, 2001)



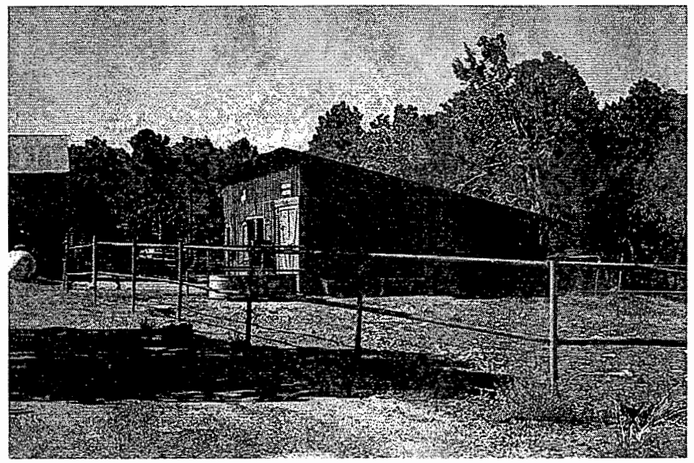
Photograph 181. Temporary Housing units on left, Boat Shop on right. Note wooden bollards. (JMA, 2001)



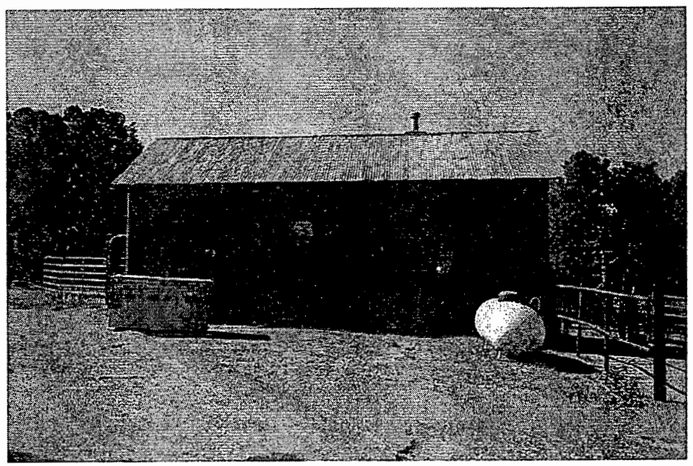
Photograph 182. Storage shed. (JMA, 2001)



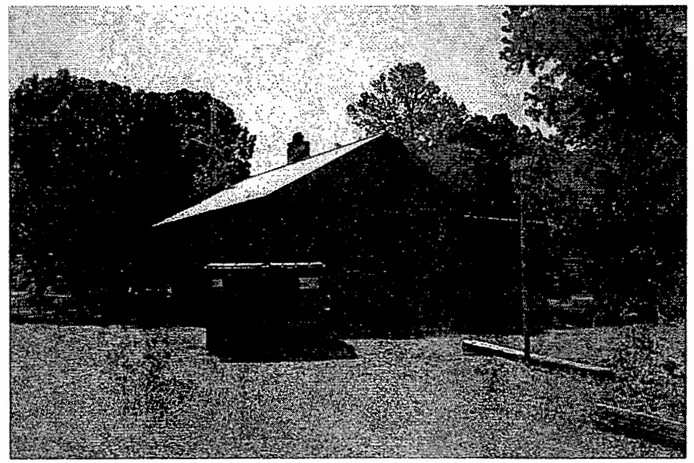
Photograph 183. Fire Equipment Building. (JMA, 2001)



Photograph 184. Horse Barn, with pipe rail fence in foreground. (JMA, 2001)



Photograph 185. Paint Shop with typical propane tank on right. (JMA, 2001)



Photograph 186. Jail, with typical dumpster, wood wheel stops, and street sign in foreground. (JMA, 2001)

The **Jail** (Bldg. #SRB0087) is a two-room holding facility built in 1936 (*Photograph 186*). The Jail is a rectangular building with a gable roof and exposed rafter tails. A brick chimney rises up from the roof near the east elevation. The exterior walls are sheathed in brown wood clapboard siding. Two three-by-three windows with green trim are located on the north elevation, as is the entrance door. A shed addition is located on the south elevation.

A second **Storage shed** (Bldg. #SRB0088) is located east of the jail and once stored coal. The wood external-frame shed has a corrugated-metal sheathed gable roof with vertical weatherboard at the gable ends.

The **Blacksmith Shop** (Bldg. #SRB0075) is located on the southwestern corner of this plaza and on the north side of Sunset Drive (*Photograph 187*). The rectangular building has a gable roof with corrugated-metal sheathing and a gable-roof monitor. The walls are clad in stained board-and-batten siding. Three sets of large double doors are located on the east elevation.

The **Old NPS Gas Station** (Bldg. #SRB0079) was built in 1930 and is located near the southeast corner of the central plaza (*Photograph 188*). The building has a square central core with a covered and open-sided car bay supported by two square posts. The gable roof covers both the core and bay. The gas station has brown wood clapboard siding. An entrance is located on the west elevation and opens into the bay.

The large, rectangular, two-story 1926 **Warehouse** (Bldg. #SRB0078) is located on the east side of the central space and just south of Juniper Hill (*Photograph 189*). The warehouse has a steeply pitched gable roof sheathed with corrugated metal. Large cornice brackets support the eaves. Two brick chimneys puncture the roof at the ridgeline. The exterior walls have brown board-and-batten siding with horizontal weatherboard at the gable ends. three-over-three double-hung windows are located in bays of two windows. An elevated porch is located on the west elevation and runs the length of the building. The porch is located beneath an extended eave of the roof.

A second **Warehouse** (Bldg. #SRB0090) was built in 1936 and is located east of the larger warehouse and old gas station (*Photograph 190*). This smaller building, rectangular in shape, has a gable roof sheathed in corrugated metal. The gable ends have board-and-batten weatherboard while the remaining siding consists of brown clapboard. An inset porch runs the length of the building on the south elevation.

The **Lumber Shed** (Bldg. #SRB0094) is located behind a chain-link fence, east of the larger warehouse and just south of Juniper Hill. Built in 1937, the shed is a long, narrow rectangular building with a gable roof and board-and-batten siding. A **masonry retaining wall** supports the grade, which is heavily eroded. A **wood retaining wall** is found south of the Lumber Shed, abutting the brick wall. It is a low wall consisting of square, wooden timbers.

In the southern cluster, buildings and structures tend to have livestock-related uses. The 1933 **Mule Barn** (Bldg. #SRB0098) is located south of Sunset Drive (*Photograph 191*). The tall, narrow, two-story barn has a steeply-pitched gable roof with two gable-roofed vents. The barn is sheathed in red corrugated-metal siding. The hayloft door and sliding barn door are located on the west elevation. The barn is surrounded by corrals.

The **Mule Pole Shelter** (Bldg. #1125) is attached to the southern elevation of the barn (*Photograph 191*). The low, open-sided structure has a gently-pitched corrugated metal roof supported by square posts. The **Pole Hay Shed** (Bldg. #1124) is a taller, open-sided pole structure with a corrugated metal roof supported by square posts (*Photograph 192*). The hay shed is directly adjacent to the south end of the mule pole shelter.

There are also many kinds of equipment sheds in this cluster. The first, and largest, **Equipment Shed** (Bldg. #SRB0099) was built in 1935 and is located on the north edge of Sunset Drive—across from the Mule Barn. The long, low, and narrow shed has a shed roof, exposed rafter tails, and brown vertical board siding. Rows of doors are located on the south elevation. Three more **Equipment Sheds** (Bldg. #'s SRB0183, SRB0184, and SRB0185) are located near the intersection of Sunset Drive and Juniper Hill, on both sides of Sunset Drive (*Photograph 193*). All three structures have shed roofs with exposed rafter tails, six stalls, and brown vertical board siding.

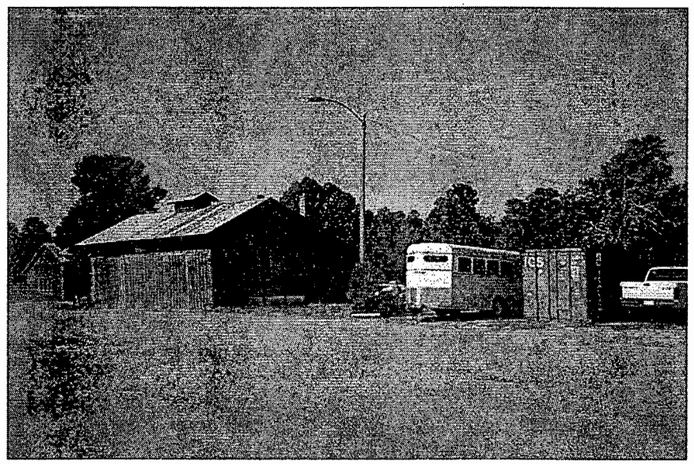
Views and Vistas

Due to the density of vegetation and its location well back from the canyon rim, the only views available within the NPS Service Area are **internal views of buildings** within the work plaza clearing (*Photograph 177*).

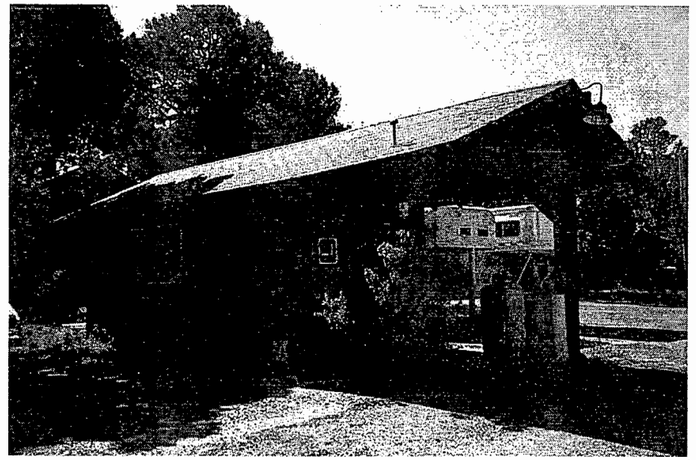
Small-scale Features

In general, small-scale features in the NPS Service Area are functional and utilitarian—most are contemporary in origin.

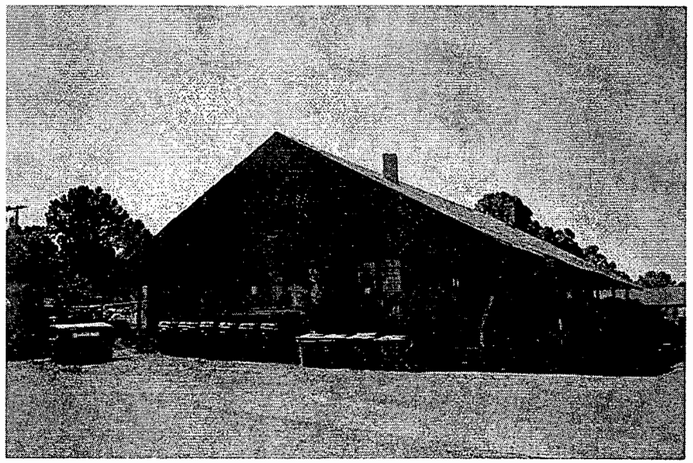
While **boulders** are occasionally sited to block vehicular access, the roads in this character area are not generally edged in curbing or stone. In several places, such as along Sunset Road by the Jail, there are wood **wheel stops** that appear to be made of old railroad ties. This style of wheel stop is common in the NPS Service Area. **Wooden bollards** mark



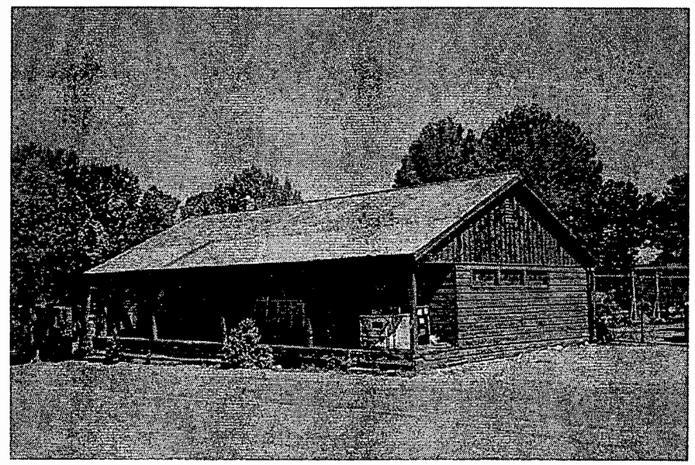
Photograph 187. Blacksmith Shop, on left, with overhead light and storage container. (JMA, 2001)



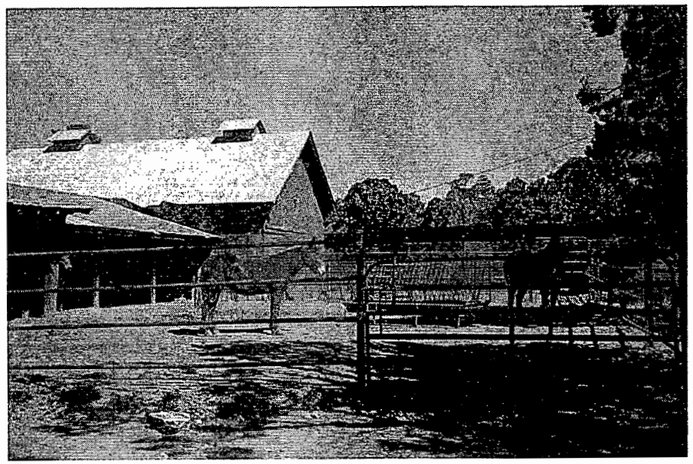
Photograph 188. Old NPS Gas Station with gas pumps. (JMA, 2001)



Photograph 189. 1926 Warehouse, with typical trash receptacles and dumpster. (JMA, 2001)



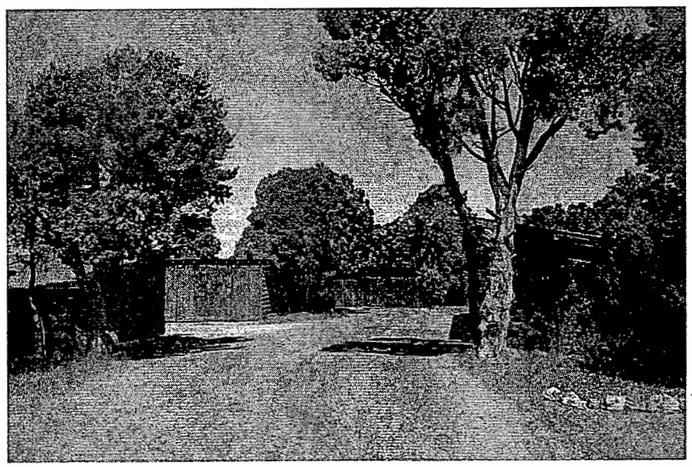
Photograph 190. 1936 Warehouse. (JMA, 2001)



Photograph 191. Mule Barn and corral, with Mule Pole Shelter visible on left; note fencing and hay rack. (JMA, 2001)



Photograph 192. Pole Hay Shed with corral fencing. (JMA, 2001)



Photograph 193. Equipment sheds. (JMA, 2001)



Photograph 194. Chain-link fence and satellite dishes at Lumber Shed. (JMA, 2001)

the edge of parking at the northern perimeter of the service plaza in front of the Boat Shop (*Photograph 181*). A **metal bollard**, circled in reflective yellow tape, protects a dumpster from vehicles in the service plaza.

Chain-link fence surrounds the space bounded by the 1926 Warehouse on the west, 1936 Warehouse on the south, and Lumber Shed on the east (*Photograph 194*). The gate to this area is located on the south edge between the 1936 Warehouse and Lumber Shed. Green-painted **metal corral fencing** surrounding the mule corrals, similar to that in the Utility Area at the Livery Stable (*Photograph 191*). East of the Horse Barn—where the stable doors open—brown-painted **metal pipe fencing** divides the barn from the Paint Shop (*Photograph 184*). In the vicinity of both the Mule Barn and Horse Barn are **corral features** similar to those in the Utility Area, including a water tank, water troughs, and hay racks.

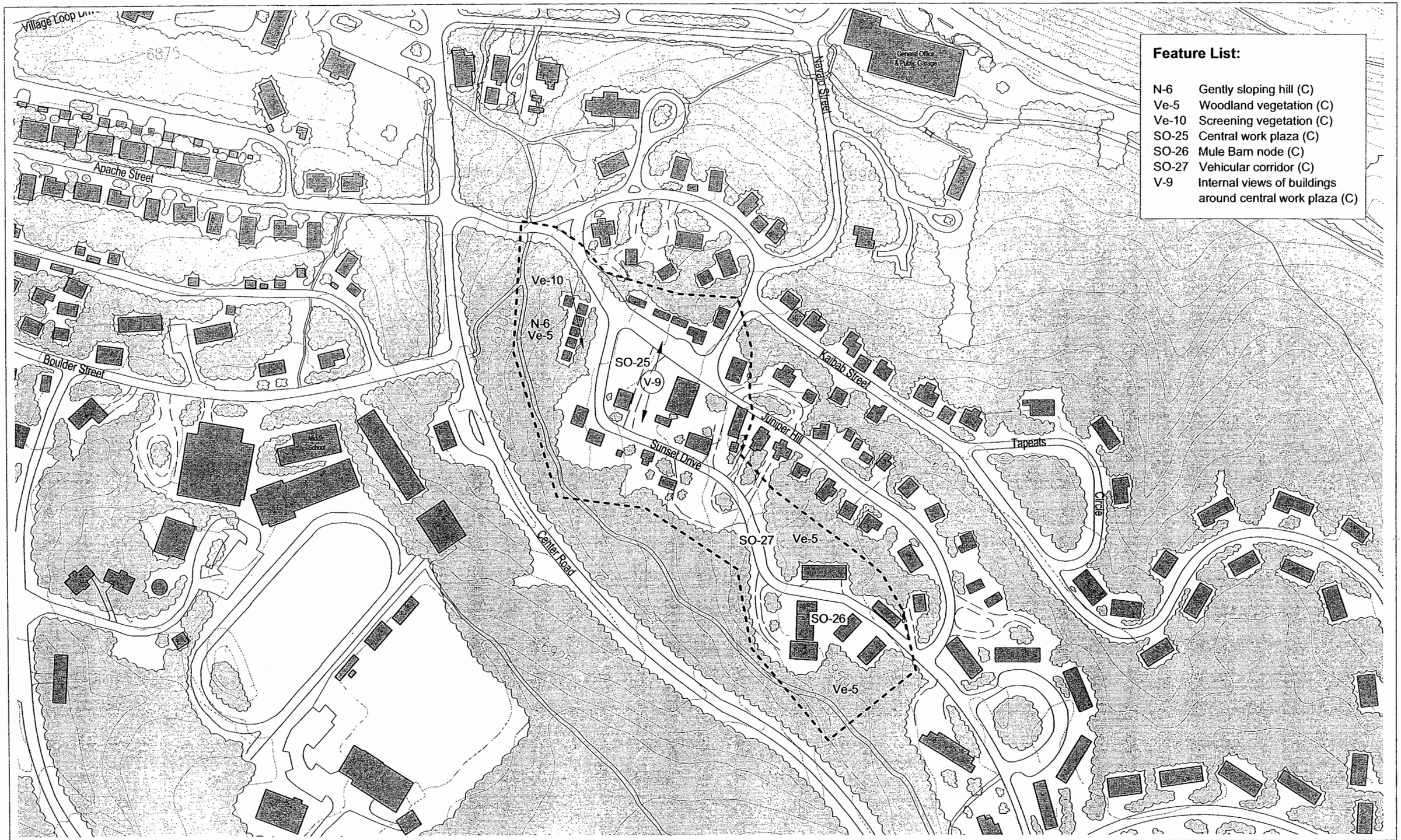
Under the open-sided roofed area in front of the old NPS Gas Station, there are two **abandoned gas pumps** (*Photograph 188*). A third pump is located just to the southeast. A **portable toilet** also stands near the Gas Station.

Storage containers, horse trailers, and other equipment are found here—as well as scattered around the edges of the plaza (*Photograph 187*). Just west of the mule corral and pole barns, in the southeastern corner of the character area, are **materials piles**.

Lighting in the NPS Service Area includes contemporary **overhead parking lights** affixed to tall wood utility poles (*Photograph 187*).

Signage is minimal and includes standard green reflective **street signs** on poles (*Photograph 186*). An example is found on the corner of Kaibab Street and Tonto Street.

Other small-scale features in the NPS Service Area include **trash receptacles**, such as the plastic trash cans found on the north side of the 1926 Warehouse (*Photograph 189*); **dumpsters**, such as the one located beside the Jail (*Photograph 186*); and **fuel or propane tanks**, such as the one located near the Mule Barn and north of the Paint Shop. **Satellite dishes** are found just south of the Lumber Shed in the space enclosed by chain-link fencing (*Photograph 194*).



Feature List:

N-6	Gently sloping hill (C)
Ve-5	Woodland vegetation (C)
Ve-10	Screening vegetation (C)
SO-25	Central work plaza (C)
SO-26	Mule Barn node (C)
SO-27	Vehicular corridor (C)
V-9	Internal views of buildings around central work plaza (C)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. I

NPS SERVICE AREA

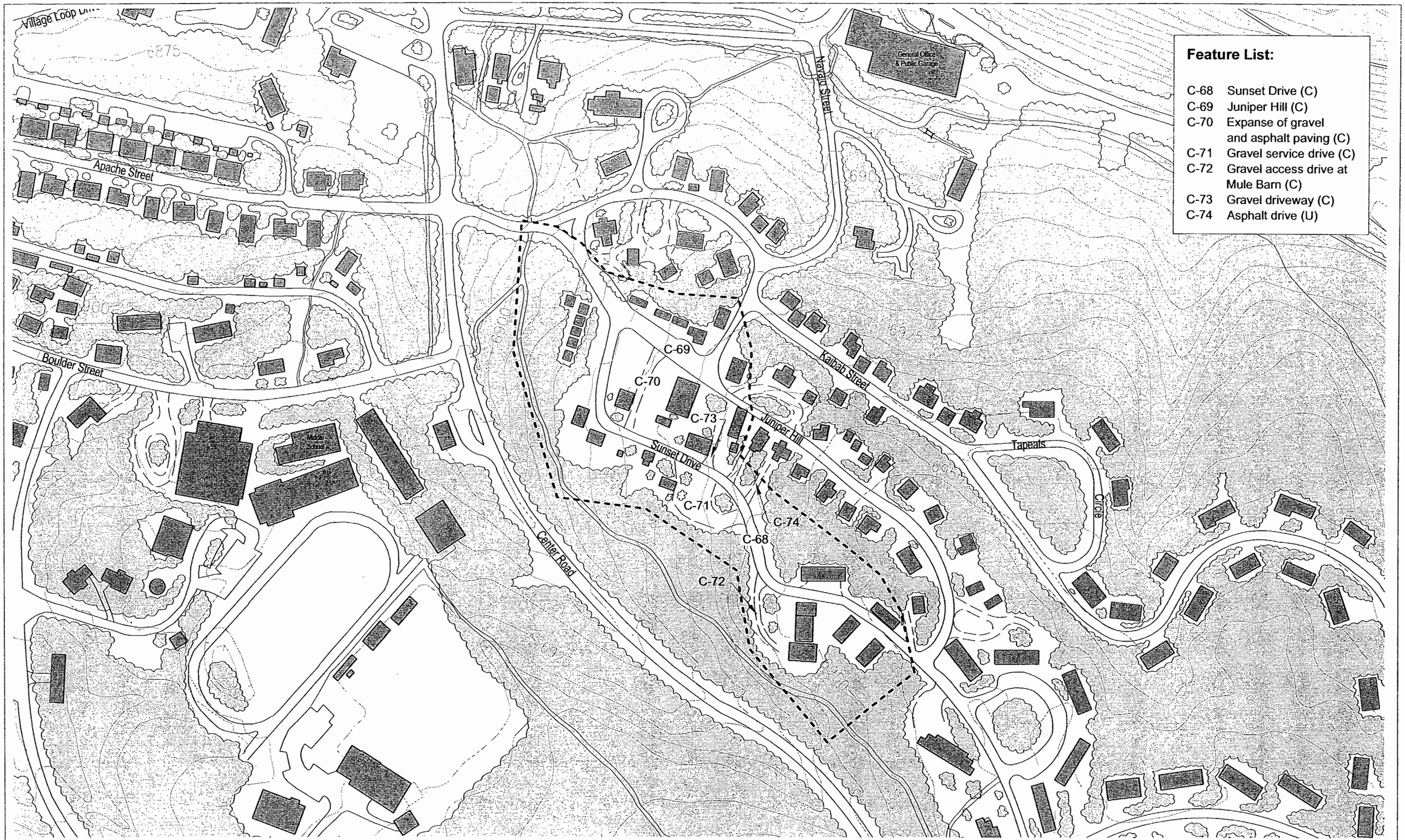
NATURAL SYSTEMS & FEATURES
VEGETATION
SPATIAL ORGANIZATION
VIEWS & VISTAS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 24 OF 67



A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
1

NPS SERVICE AREA

CIRCULATION

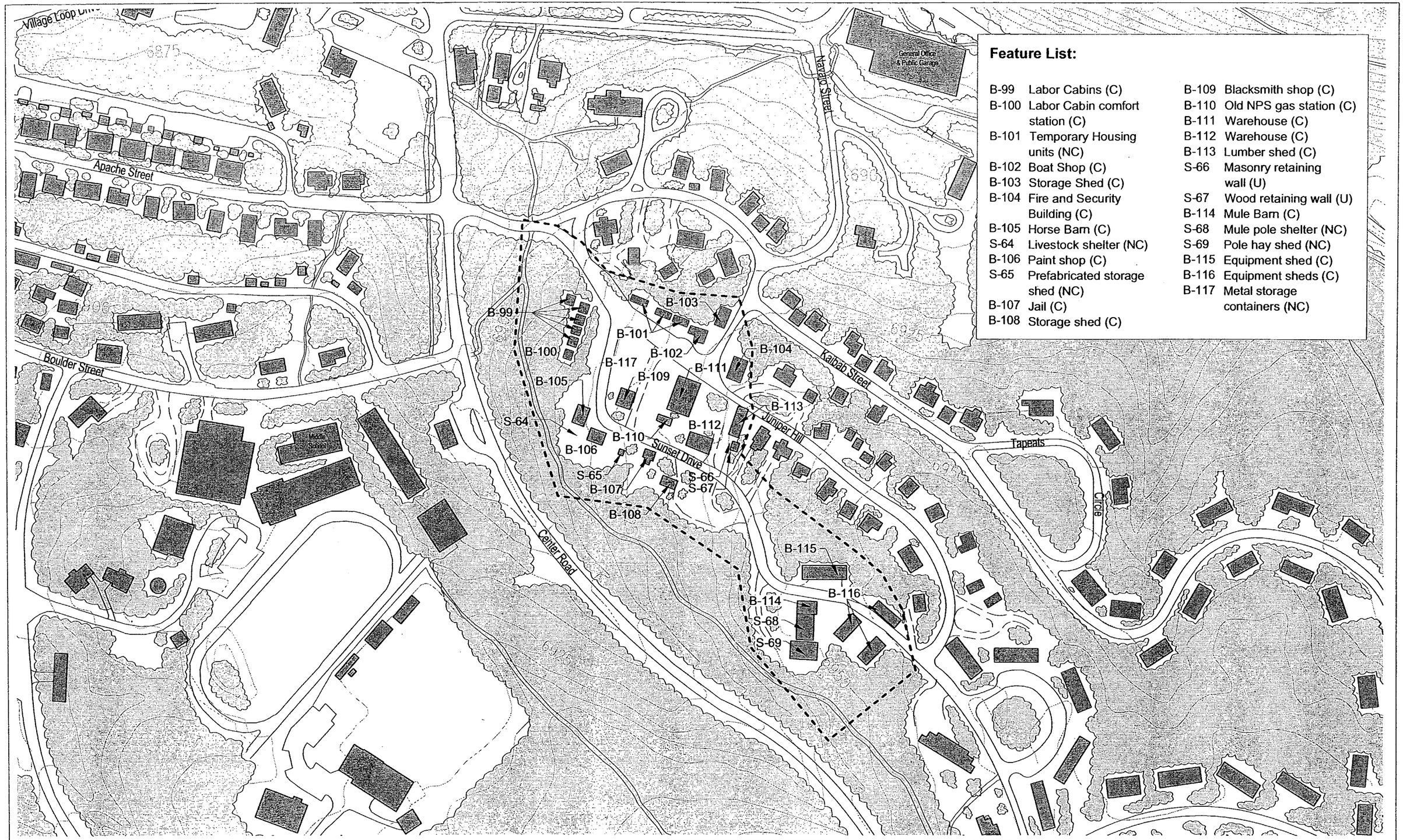
GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
25

OF 67



Feature List:

- B-99 Labor Cabins (C)
- B-100 Labor Cabin comfort station (C)
- B-101 Temporary Housing units (NC)
- B-102 Boat Shop (C)
- B-103 Storage Shed (C)
- B-104 Fire and Security Building (C)
- B-105 Horse Barn (C)
- S-64 Livestock shelter (NC)
- B-106 Paint shop (C)
- S-65 Prefabricated storage shed (NC)
- B-107 Jail (C)
- B-108 Storage shed (C)
- B-109 Blacksmith shop (C)
- B-110 Old NPS gas station (C)
- B-111 Warehouse (C)
- B-112 Warehouse (C)
- B-113 Lumber shed (C)
- S-66 Masonry retaining wall (U)
- S-67 Wood retaining wall (U)
- B-114 Mule Barn (C)
- S-68 Mule pole shelter (NC)
- S-69 Pole hay shed (NC)
- B-115 Equipment shed (C)
- B-116 Equipment sheds (C)
- B-117 Metal storage containers (NC)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. 1

NPS SERVICE AREA

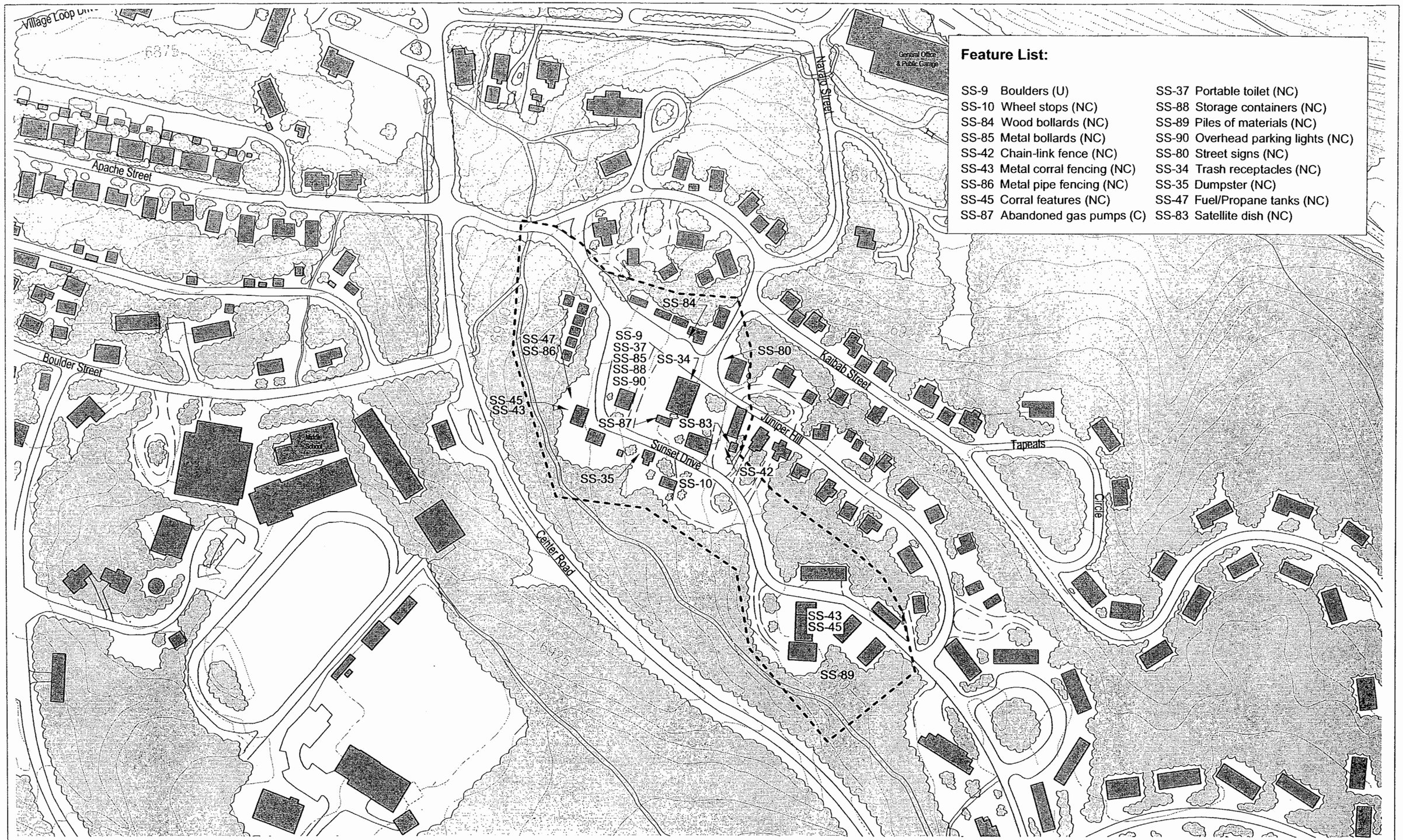
BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 26 OF 67



Feature List:

SS-9 Boulders (U)	SS-37 Portable toilet (NC)
SS-10 Wheel stops (NC)	SS-88 Storage containers (NC)
SS-84 Wood bollards (NC)	SS-89 Piles of materials (NC)
SS-85 Metal bollards (NC)	SS-90 Overhead parking lights (NC)
SS-42 Chain-link fence (NC)	SS-80 Street signs (NC)
SS-43 Metal corral fencing (NC)	SS-34 Trash receptacles (NC)
SS-86 Metal pipe fencing (NC)	SS-35 Dumpster (NC)
SS-45 Corral features (NC)	SS-47 Fuel/Propane tanks (NC)
SS-87 Abandoned gas pumps (C)	SS-83 Satellite dish (NC)

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

NPS SERVICE AREA

SMALL-SCALE FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 27 OF 67

Concessionaire Housing Area

The Concessionaire Housing Area accommodates persons who work for the NPS or private concessionaires within the Village. The character area is bounded to the north by the Utility Area and associated woodland; to the east by Center Road and a wooded buffer strip; to the south by the edge of the Village Historic District boundary and housing areas; and to the west by the Village Historic District boundary and Coconino Street.

Natural Systems and Features

The Concessionaire Housing Area occupies the **gently sloping hill** to the west of the Center Road ravine.

Spatial Organization

In the Concessionaire Housing Area, space is primarily defined by circulation corridors and building façades, although vegetation helps to reinforce spaces defined by these two elements.

The system of alleys and roads forms **vehicular corridors** edged with residences, garages, and sheds. Masses of vegetation help to reinforce these corridors. Within the woodland, **pockets of space** exist due to the positioning of buildings within the vegetation (*Photograph 195*). Between Boulder Alley and Boulder Street, residences are clustered with their façades facing internally rather than solely toward the street. This clustering creates **interior yard spaces** that are defined by building relationships. Towards the eastern portion of the character area, a **pedestrian corridor** runs from north to south (*Photograph 196*). The corridor is edged with vegetation and ultimately defined by the width of the footpath within.

Land use

Land use in this area is primarily residential.

Circulation

Vehicular circulation in this area consists of street and alley systems, along with driveways and parking spaces. Asphalt and earthen pedestrian paths provide access between roads and houses.

A short portion of **Coconino Street** runs along the western edge of the Concessionaire Housing Area (*Photograph 197*). Coconino Street is a two-way, asphalt street. Portions of the street have stone curbing, while other sections have eroded asphalt edges. **Apache Street** is a one-way asphalt street with concrete curb and gutter; it is the northernmost street in the area and stretches from Coconino Street on the west to Center Road on the east (*Photograph 198*). The curb bumps out to create parallel-parking stalls, or "**neck-down parking**," along both edges of the street.

Apache Alley runs parallel to, and north of, Apache Street (*Photograph 199*). Accessed from Village Loop Drive, the alley is paved with asphalt and has no curb. To the east, the alley terminates in a dead-end before Coconino Street. The alley extends west before curving south to terminate into Apache Street.

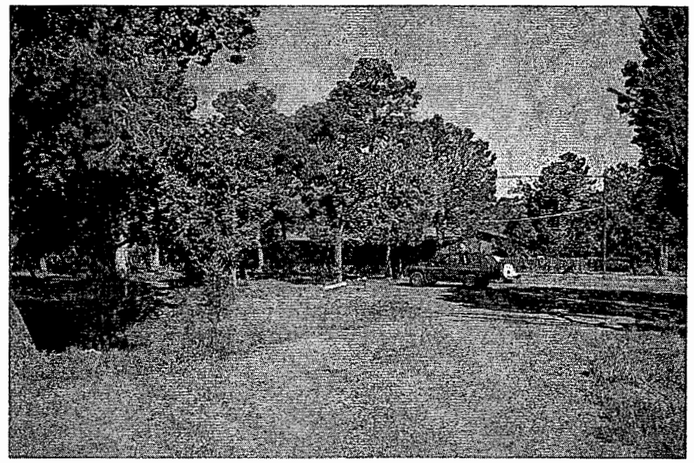
Boulder Street is a two-way eroded asphalt street with no curb (*Photograph 200*). The street runs along the southern boundaries of both the Concessionaire Housing Area and Village Historic District, stretching from Coconino Street on the west to Center Road on the east.

Boulder Alley is a narrow, unstriped asphalt road with no curb that runs parallel to Boulder Street. The alley provides access to garages and sheds (*Photograph 201*). The alley begins at Coconino Street and extends east before curving south to terminate into Boulder Street, just west of Juniper Hill.

A rutted, short, narrow **gravel driveway**, partially edged in loose stones, is located off of Boulder Street and between Bldgs. #849 and #850.

Parking, both informal and designated, is located throughout the character area along alleys and streets. Along both alleys, **gravel parking spaces** are located at the edge of the alley and between garages and sheds. Each parking area consists of loose gravel and allows parking for a small number of cars. Between Bldgs. #325 and #326, a more defined **gravel drive and parking lot** is accessed from Apache Street. The rectangular parking lot holds eight to ten vehicles and has concrete wheel stops.

Narrow **concrete sidewalks** extend to and around residences from the road and parking spaces (*Photograph 202*). A narrow **asphalt path** curves through the eastern portion of the Concessionaire Housing Area, extending from Apache Street to Boulder Street; another asphalt path extends south from Apache Street between Bldgs. #0819 and #0818 (*Photograph 203*). An **earthen path**, most likely a desire path, begins just east of the asphalt path and extends through the wooded area, terminating at Boulder Street (*Photograph 204*).



Photograph 195. Pockets of space within woodland, created by duplexes tucked into woods. (JMA, 2001)



Photograph 196. Pedestrian corridor. (JMA, 2001)

Vegetation

Vegetation in the Concessionaire Housing Area is predominantly **Ponderosa pine and pinyon-juniper woods** (*Photograph 204*). Dense vegetation generally surrounds this area, with small man-made clearings that are residential in scale. **Ornamental vegetation** in this character area consists of native plants placed in or near house yards (*Photograph 205*). Some residences are surrounded by **grasses**; it is not known if these grasses are native or exotic (*Photograph 206*).

Buildings and Structures

Buildings and structures in the Concessionaire Housing Area are solely residential or support residential uses. They include single family residences, duplexes, garages, and sheds.

Buildings and structures within this character area are described below, generally in the order they occur from west to east. Because numerous buildings entitled "single family residence" or "duplex" exist in this area, they are described first using their street address, then with the Denver Service Center- or LCS-assigned building number in parentheses.

Because the buildings and structures within the area were all generally built during the same time period and also by the Fred Harvey and Atchison, Topeka, and Santa Fe companies as employee housing, they share very similar architectural styles and exterior characteristics. Single family residences and duplexes were constructed, loosely, in the Swiss-Rustic style. They typically have gable roofs with stone chimneys and cornice brackets. The upper two-thirds of exterior walls are covered in brown clapboard while the lower third is clad in a stone façade up to the window sill. Windows have multiple lights and green trim. Front entrances face the street. Within the area, there are also two recurring types of outbuildings: storage sheds and garages. The storage sheds are narrow, rectangular structures with shed roofs and doors located on the south façades. Garages have green gable roofs and brown board-and-batten siding. Two sets of double doors are located on the northern elevations. Unless otherwise stated, the residences, duplexes, storage sheds, and garages appear as described above.



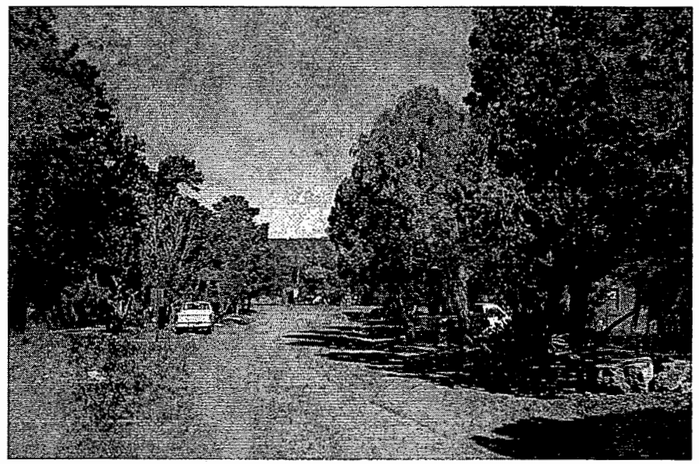
Photograph 197. Coconino Street section with curb. (JMA, 2001)



Photograph 198. Apache Street, with neck-down parking. (JMA, 2001)



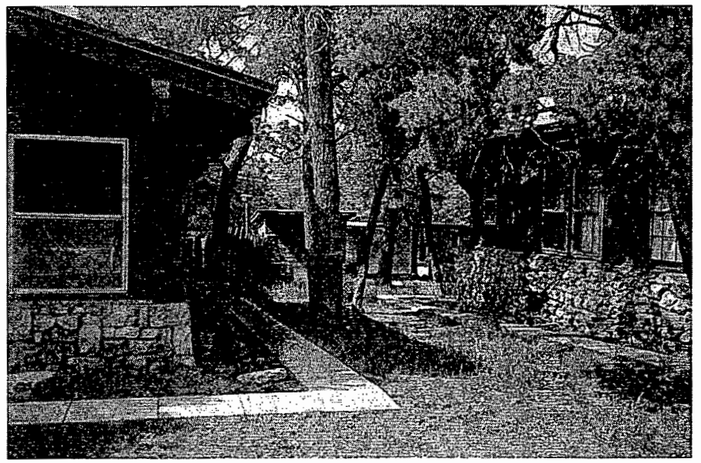
Photograph 199. Apache Alley. (JMA, 2001)



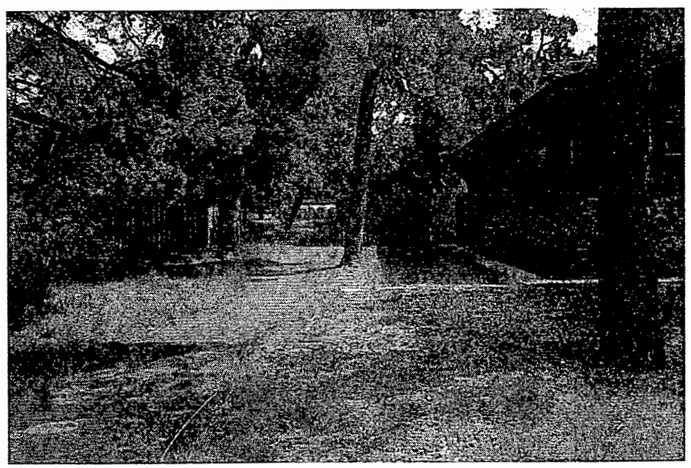
Photograph 200. Boulder Street. (JMA, 2001)



Photograph 201. Boulder Alley. (JMA, 2001)



Photograph 202. Concrete sidewalk. (JMA, 2001)



Photograph 203. Asphalt path between Bldgs. #0819 and #0818. (JMA, 2001)



Photograph 204. Packed-earth path. (JMA, 2001)

Single family residence #26 Apache St. (Bldg. #SRQ0799) was built in 1927 and is located on the northeast corner of the Coconino Street and Apache Street intersection (*Photograph 207*). The building has a gable roof with exposed rafter tails and two stone chimneys located along the roof ridgeline. The associated **garage** (Bldg. #SRB0790) is located on Apache Alley and north of the residence (*Photograph 207*). A **stone pier** is located northwest of this residence. It was once part of a wooden fence design shown on 1929 construction drawings for the residences. The three-foot-by-three-foot coursed rubble pier has a decorative opening near the pier's rounded top (*Photograph 208*).

Single family residence #24 Apache St. (Bldg. #SRQ0800) is located east of Residence #26 on Apache Street. The 1927 building has a gable roof with exaggerated cornice brackets, boxed eaves, and corner brackets that extend from the roofline to the uncoursed stone siding that comprises the lower third of the wall. Two stone chimneys are located along the roof ridgeline. The south elevation consists mostly of window walls broken in the center by the front door. The associated **storage shed** (Bldg. #SRB0777) is located northwest of the residence and has a green gable roof, brown board-and-batten siding, and a set of double doors on the west elevation. A low **stone planter wall** encloses the back yard to the west of the residence and ends in a stone pier abutting the storage shed.

Duplexes #20 A/B and #22 A/B Apache St. (Bldg. #SRQ0802 and Bldg. #SRQ0801) are located east of Bldg. #SRQ0800. The buildings have gently-pitched gable roofs with decorative cornice brackets and weather-board, as well as two stone chimneys. The entrances to each unit are located beneath a gable roof porch overhang supported by two exaggerated brackets. Most windows are eight-over-two double hung with green trim. The associated **garage** (Bldg. #SRB0791) is located north of Bldg. #SRQ0801. Two **storage sheds** (Bldg. #SRB0779 and Bldg. #SRB0792) are also located to the north of, and in between, the two duplexes.

Single family residence #18 Apache St. (Bldg. #SRQ0803) is typical of other single family residences on Apache Street. The associated **garage** (Bldg. #SRB0793) and **storage shed** (Bldg. #SRB0780) are located to the north of the residence (*Photograph 209*).

Duplexes #16 A/B and **#14 A/B Apache St.** (Bldg. #SRQ0804 and Bldg. #SRQ0805) were built in 1929 and are located on Apache Street, east of Bldg. #SRQ0803. They are similar in style to Bldg. #SRQ0802 and Bldg. #SRQ0801. The associated **storage sheds** (Bldg. #SRB0781 and Bldg. #SRB0783) and two **garages** (Bldg. #SRB0794 and Bldg. #SRB0795) are located to the north of, and in between, the two duplexes.

Single family residence #12 Apache St. (Bldg. #SRQ0806) shares the typical characteristics of the other residences described earlier. The associated **garage** (Bldg. #SRB0796) is located to the north of the residence.

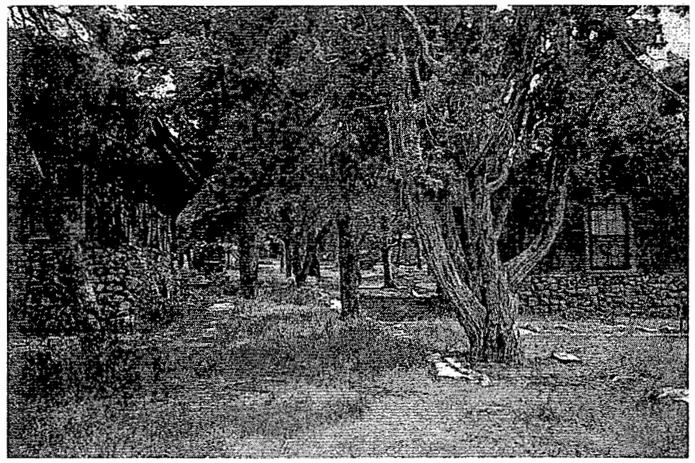
Duplexes #10 A/B and **#8 A/B Apache St.** (Bldg. #SRQ0807 and Bldg. #SRQ0808) were built in 1929 and are located near the intersection of Apache Street and Apache Alley (*Photograph 210*). Although Bldg. #SRQ0807 possesses a slightly larger square-footage—1,529 square feet versus 765 square feet—than other duplexes, both buildings have exterior characteristics similar to those of other duplexes on Apache Street. The associated **garages** (Bldg. #SRB0797 and Bldg. #SRB0798) are located to the north of the duplexes, as are two **storage sheds** (Bldg. #SRB0788 and Bldg. #SRB0789).

Single family residences #4 and #2 Apache St. (Bldg. #SRQ0809 and Bldg. #SRQ0810) were built in 1934 as postal employee housing and are located on the north side of Apache Street and east of the Apache Alley/Apache Street intersection. Bldg. #SRQ0809 has a gable roof with brown clapboard siding on the upper two-thirds of the exterior wall while the lower third is clad in wider clapboard siding. The foundation is constructed of coursed stone. Windows are either two-by-two squares, or three-by-three located in bays of two. Windows have green-painted trim. Bldg. #SRQ0810 is a rectangular building whose long axis is parallel to the pavement (*Photograph 211*). The gable roof is has wood shingles. The upper two-thirds of the exterior walls are sheathed in brown wood clapboard siding while the lower third has wider clapboard siding. The entrance is located beneath a gable-roofed porch supported by light-blue colored square posts and located on the south elevation. A bump-out addition is located on the east elevation. Windows are three-by-three windows located in bays of two. The front door has sidelights on both sides.

Single family residences #29 and **#25 Apache St.** (Bldg. #0812 and Bldg. #0814) and **Duplex #27 A/B Apache St.** (Bldg. #0813) are located on the south side of Apache Street and near the intersection of Apache and Coconino Streets. Built in 1927, they all share exterior architectural characteristics with the residences and duplexes described above and on the north side of Apache Street. An associated **coal shed** (Bldg. #0835) is located on Boulder Alley, south of Bldg. #0812. The coal shed is similar in style to the Apache Alley garages, having a gable roof, brown board-and-batten siding, and a set of wood double doors on the south elevation. A second **coal shed** (Bldg. #0827) is located south of Bldg. #0814 and on the north side of Boulder Alley. The coal shed is a rectangular structure placed parallel to the pavement that has a shed roof and brown wood siding. An entrance is located on the west elevation.



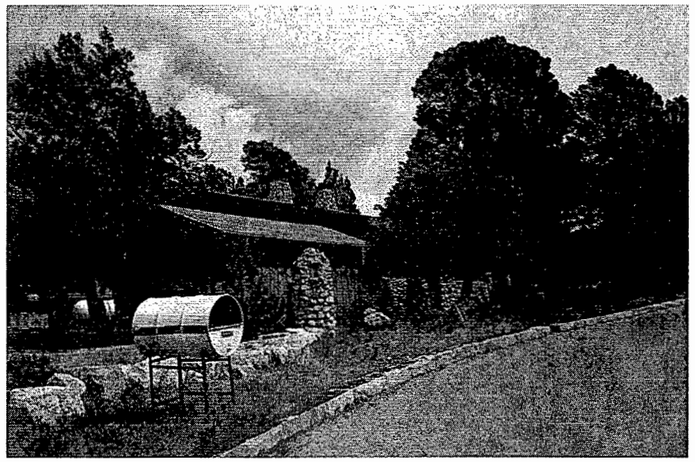
Photograph 205. Residence #5 Apache Street (Bldg. #0822), with ornamental vegetation in yard. (JMA, 2001)



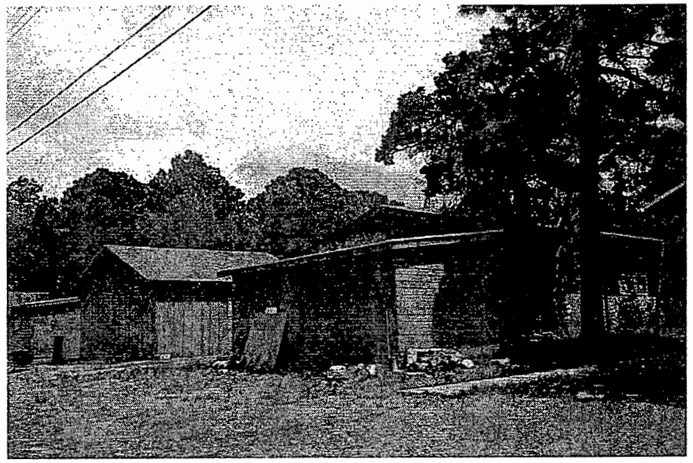
Photograph 206. Grass lawn. (JMA, 2001)



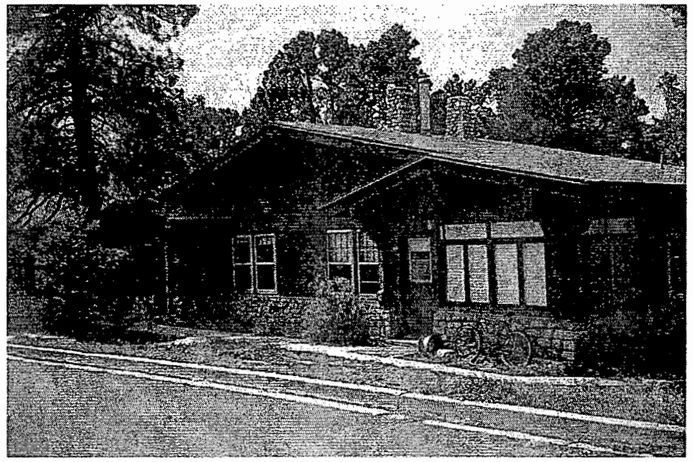
Photograph 207. Single family residence #26 Apache St. (Bldg. #SRQ0799) and garage. (JMA, 2001)



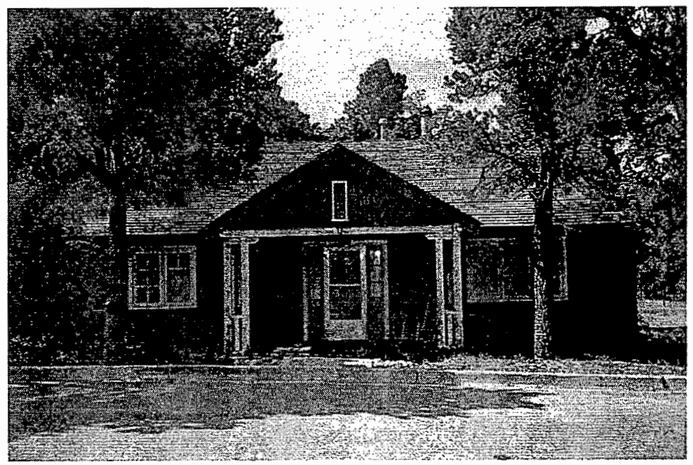
Photograph 208. Remnant stone pier, boulders, and metal drum container near intersection of Apache and Coconino Street. (JMA, 2001)



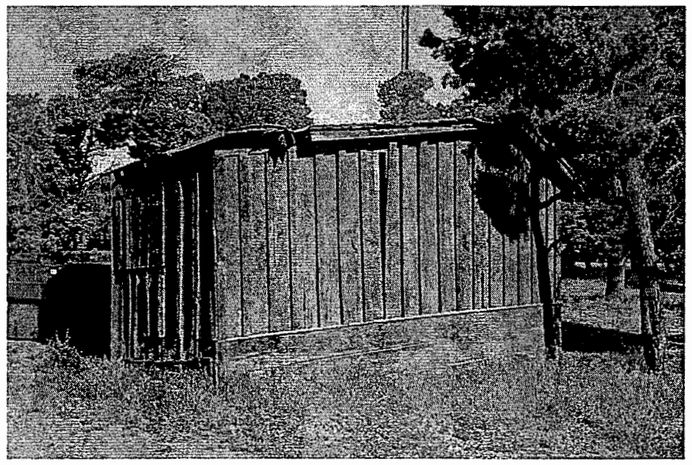
Photograph 209. Garage and storage shed at Single family residence #18 Apache St. (Bldg #SRQ0803). (JMA, 2001)



Photograph 210. Duplex #8 Apache St. (Bldg. #SRQ0808). (JMA, 2001)



Photograph 211. Single family residence #2 Apache St. (Bldg. #SRQ0810). (JMA, 2001)



Photograph 212. Garage (Bldg. #0837) behind Duplex #21 Apache St. (Bldg. #SQR040). (JMA, 2001)

Duplex #21 Apache St. (Bldg. #SRQ040), built in 1924 and located east of Bldg. #0814, was once used as a teacherage but currently serves as the new Trail Crew Bunkhouse. Of slightly different construction and style, the duplex does not match the typical housing type in the character area. The low, rectangular building has a gable roof and narrow, horizontal, wood strip siding. The entrance is located beneath a gable roof porch addition located on the north elevation. The porch roof is supported by four square posts. Windows and doors are boarded over with plywood. The associated 1927 **garage** (Bldg. #0837) is a small, square structure with a shed roof, board-and-batten siding, and a small, square, hatch-like door on the south elevation (*Photograph 212*).

Single family residence #19 Apache St. (Bldg. #0815)(*Photograph 213*) and **Duplex #17 A/B Apache St.** (Bldg. #0816) were built in 1927 and are located on the south side of Apache Street and east of Bldg. #SRQ040. The two buildings share characteristics similar to other residences and duplexes along Apache Street, as described above. Two **garages** (Bldg. #0839 and Bldg. #0840) and a **coal shed** (Bldg. #0829) are located south of Bldg. #0815 and Bldg. #0817.

Single family residences #15, #13, #11, #9, and #7 Apache St. (Bldgs. #0817-0821) were all built in 1927 and are located on the south side of Apache Street. All three buildings share Swiss-Rustic details and architectural styles similar to other residences along Apache Street. A tall **stone wall** is located near the eastern corner of Bldg. #0821. The wall is approximately five feet to six feet in height and consists of both uncoursed rubble stone and coursed cut stone that steps down along the west edge to meet grade. A **garage** (Bldg. #0841) is located to the south of Bldg. #0820.

Single family residence #5 Apache St. (Bldg. #0822) was built in 1927 and is located on the south side of Apache Street—across from the Apache Street and Apache Alley intersection (*Photograph 205*). The residence shares the same detailing as other buildings along Apache Street. An elevated wood deck with a hand rail and trellis framework overhang is located on the north elevation. Two **garages** (Bldgs. #0842 and #0843) are located to the south of residences Bldg. #0820 and Bldg. #0822, along Boulder Alley.

Single family residence #3 Apache St. (Bldg. #0823) was built in 1927 and is located between Bldg. #0822 and Center Road. The building shares similar characteristics with other residences on Apache Street, yet has an elevated wood deck on the north elevation that runs the length of the building. A small **shed** (Bldg. #0823a) is located south and west of the residence. The shed has brown wood siding and a gable roof with an HVAC unit and pipe vent. The shed's date of construction and purpose is unknown. A metal **prefabricated shed** is located west of, and adjacent to, the wood shed.

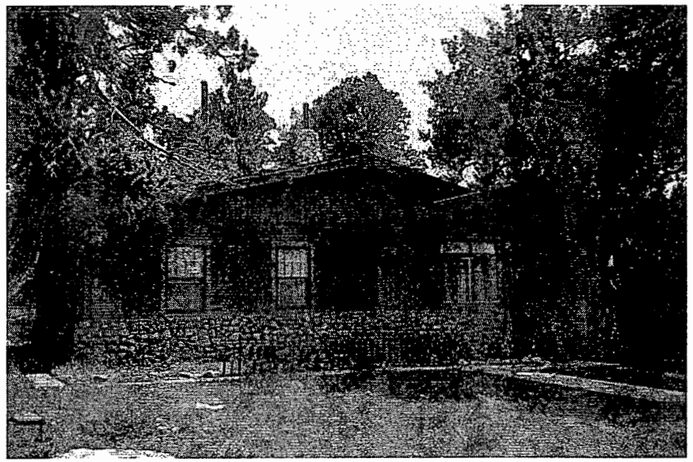
Single family residence #1 Apache St. (Bldg. #SRQ0824) was built in 1927 and rehabilitated by the NPS in 1996 (*Photograph 214*). The low, rectangular building has a gable roof with boxed eaves. Square attic vents are located at the gable ends. The exterior walls are sided with faded brown clapboard siding. Windows are one-over-one with rectangular lights. A rear gable-roof addition is located on the south elevation. A **coal shed** (Bldg. #SRB0834) is located south of the residence and consists of a short, rectangular structure with a shed roof and clapboard siding. A make-shift window is located on the south elevation while a door is located on the west elevation. A **garage** (Bldg. #SRB0844) is located to the south and east of the residence. The garage has a gable roof and wood clapboard siding. A set of double garage doors is located on the west elevation.

Buildings and structures along Boulder Street and Boulder Alley were constructed later, in the late 1930s and early 1940s, than those along Apache Street and Alley. Many of the buildings were constructed at the same time as employee housing and therefore share similar characteristics.

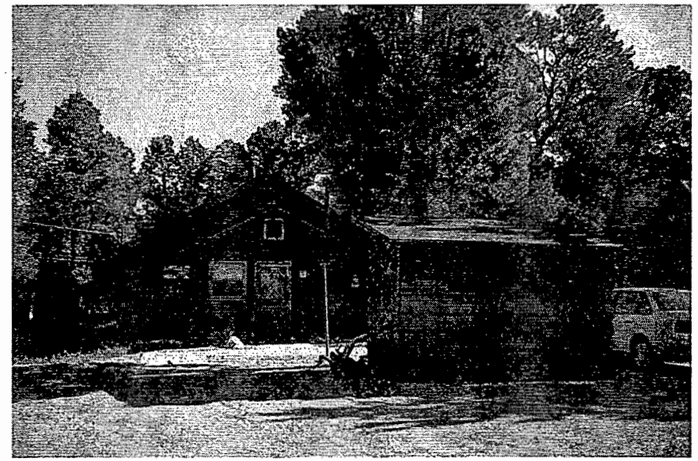
Single family residences #35, #37-44, and #46 Boulder St. (Bldgs. #847-#856) were all built in 1940 and are located between Boulder Alley and Boulder Street. The residences are rectangular buildings with asphalt-shingled gable roofs and exposed rafter tails. The exterior walls consist of vertical board siding. The foundations, stoops, and entrance steps are all constructed of mortared, rough-cut stone. Windows are generally of contemporary construction and consist of double-hung windows with no mullions and green trim. Each building is 781 square feet in size.

Single family residence #33 Boulder St. (Bldg. #846) appears to be similar in construction to the typical residences but has a smaller footprint of 735 square feet.

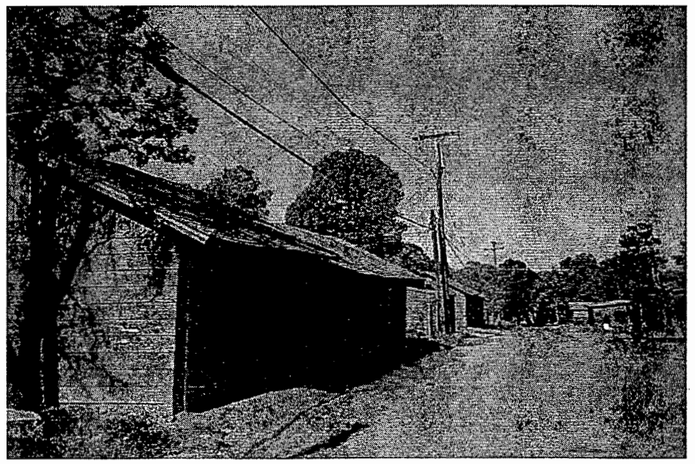
The **garages** and **coal sheds** associated with these residences are located north of the buildings and along Boulder Alley. The two **garages** (Bldgs. #0857 and #0858) were built in 1932. The split-level garages have multi-level gable roofs whose number and location of splits depend on the topography upon which the garage was built. Roofs are covered in wood shingles. The exterior walls are sheathed in brown clapboard siding and have vertical weatherboard at the gable ends. Typically, six roll-up garage doors are located on the north elevation of the garages, facing the alley. **Coal sheds** (Bldgs. #859, #860, and #861) were built in 1940 and are interspersed with the garages along Boulder Alley (*Photograph 215*). The structures have shed roofs and brown wood siding. Doors are located on the south elevations.



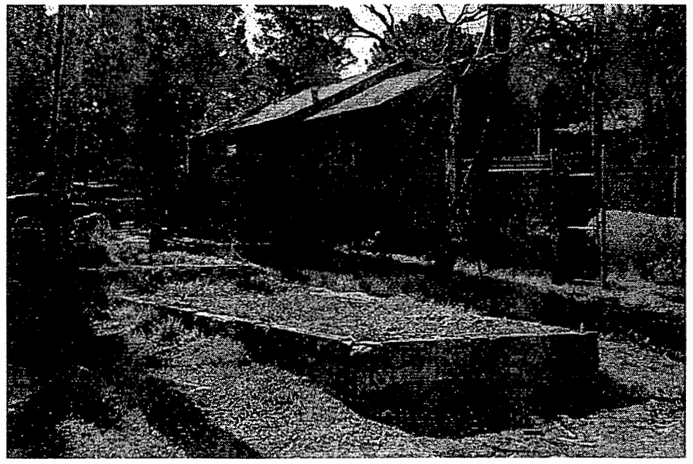
Photograph 213. Single family residence #19 Apache St. (Bldg. #0815). (JMA, 2001)



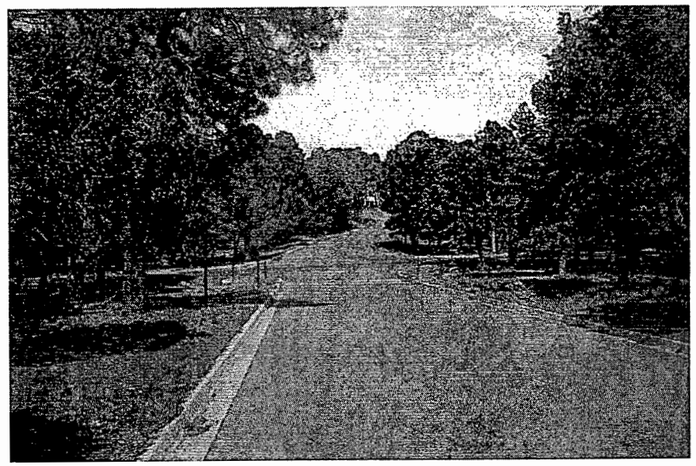
Photograph 214. Single family residence #1 Apache St. (Bldg. #SRQ0824) with coal shed in foreground. (JMA, 2001)



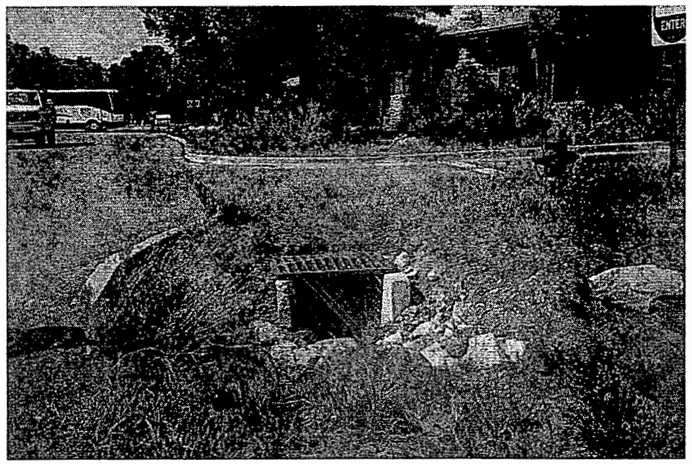
Photograph 215. Coal sheds, garages along Boulder Alley. (JMA, 2001)



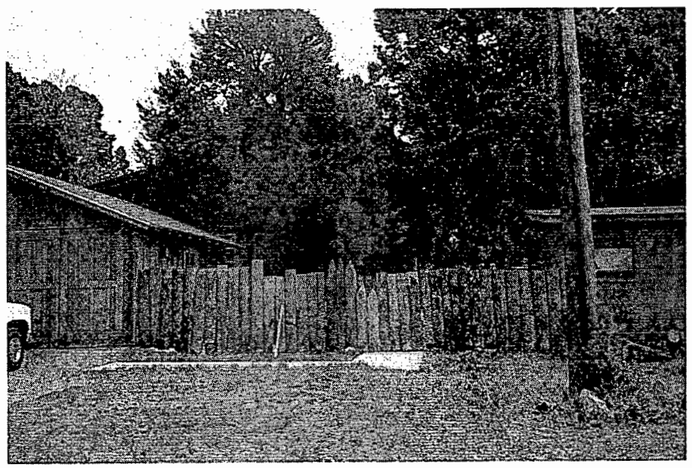
Photograph 216. Stone foundations along Boulder Alley note propane tank with chain-link fence on right. (JMA, 2001)



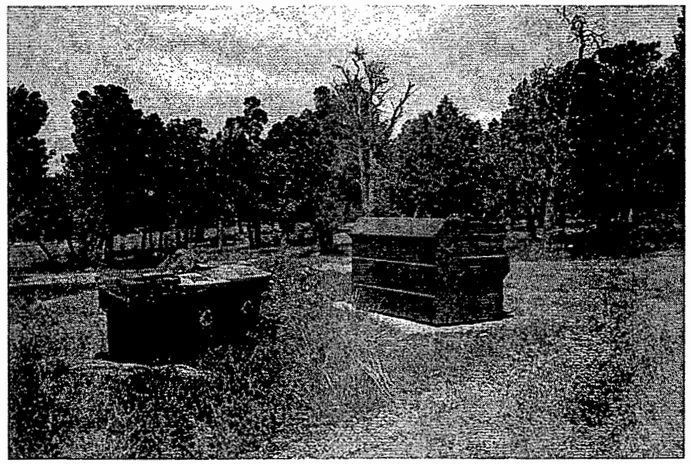
Photograph 217. Concrete curbing along Apache Street. (JMA, 2001)



Photograph 218. Culvert with metal grate and fire hydrant. (JMA, 2001)



Photograph 219. Log stave fence along Apache Alley. (JMA, 2001)



Photograph 220. Dumpster and trash receptacles along Apache Alley. (JMA, 2001)

Single family residence #31 Boulder St. (Bldg. #845) is an exception to the typical housing type in this portion of the Concessionaire Housing Area. Built in 1940 and measuring 782 square feet in size, the building is located near the intersection of Coconino Street and Boulder Alley. It has an asphalt-shingled gable roof with brown horizontal clapboard siding and vertical weatherboard at the gable ends. The foundation and steps consist of mortared stone. The windows appear to be contemporary in construction and consist of double-hung windows with no mullions. A small shed addition is located on the east elevation while a wall bump-out is located on the west side.

Single family residence #45 Boulder St. (Bldg. #1376) was built in 1980. The contemporary, attached-garage, rectangular building has an asphalt-shingled gable roof with beige-colored clapboard siding on a concrete foundation. The aluminum windows have green trim. A garage door is located on the west end of the south elevation.

Duplexes #47 A/B and #49 A/B Boulder St. (Bldgs. #325 and #326) were built in 1953. The low, long, rectangular buildings have gently-pitched gable roofs with asphalt shingles and brown clapboard siding. The entrances to each unit face the interior macadam parking lot located between the two duplexes. An associated **storage shed** is located Bldg. #326. The shed has a gable roof with a variety of siding including narrow, faux split-log siding with square outlookers, horizontal boards, and wide clapboard weatherboard. A door is located on the west elevation while a square window is located on the south elevation. A **prefabricated wood shed** is located between the storage shed and duplex. The shed has a gable roof with beige-colored vertical board siding.

Duplex #53 A/B Boulder St. (Bldg. #322) was built in 1953 and is located near the intersection of Boulder Street and Boulder Alley. The low, rectangular building has an asphalt-shingled gable roof and narrow horizontal board siding. Two bays of multi-light windows, creating a window wall, are located next to the front entrances on the south elevation.

Single family residence #55 Boulder St. (Bldg. #506) was built in 1948 and is located at the intersection of Boulder Street and Alley. The building has an asphalt-shingled hipped roof and red clapboard siding. Two square stone pillars, with attached stone wall, support a porch on the south elevation. The foundation is constructed of stone. Windows come in various sizes and shapes, yet all have white trim.

Two **stone foundations** consisting of twelve-to-fourteen-inch stone walls are located to the north of Bldg. #856 and along Boulder Alley (*Photograph 216*). The foundations are the remnants of Bldgs. #778 and #778a.

Views and Vistas

Due to the density of vegetation and its location well back from the canyon rim, there are no distinct views and vistas available within the Concessionaire Housing Area.

Small-scale Features

Coconino Street is lined with **cut stone curbing**. Boulder and Apache Streets are have poured **concrete curbing** (*Photograph 217*). Small **stone edging** is used along garden borders, such as the one in front (south) of Bldg. #SRQ0801. **Boulders** are found along the eastern side of Coconino Street, at its northern part, and divide the street from the parking spaces on adjacent Apache Alley (*Photograph 210*).

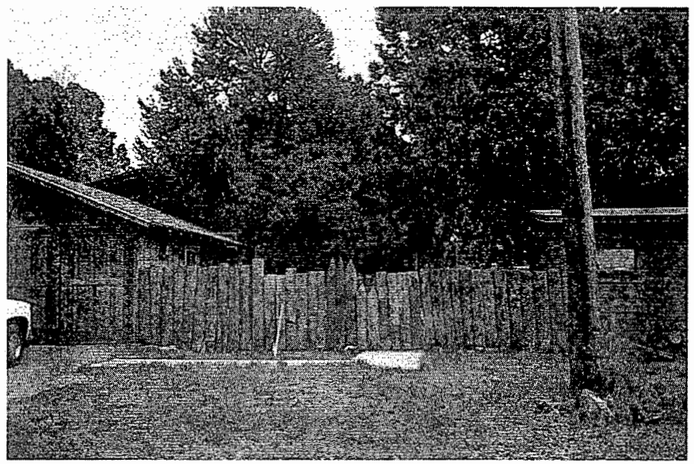
Drainage-related features in the Concessionaire Housing Area include **culverts** and **metal drainage grates**. An example of a typical culvert with a grate covering can be found on the north and south sides of the intersection of Apache and Coconino Streets (*Photograph 218*). The concrete box culvert is topped by a grate, and stone riprap retains the soil at its opening.

The domestic qualities of this character area are reinforced by various types of fencing surrounding yards. Wooden fence types include a rustic **log stave fence** along the alley between certain garages (*Photograph 219*); a short stretch of unpainted **picket fence** along the walkway in front (north) of Bldg. #0815; and **painted wood privacy fence** between Bldgs. #0813 and #0815. **Chain-link fence** is less common, but can be seen surrounding the fuel/propane tank on Boulder Alley north of Bldg. #856 (*Photograph 216*).

Signage in this residential area is minimal. Standard green **street signs** and **vehicular traffic signs**, described in previous sections, are located along roadways.

Located along the east side of Coconino Street is a red and white painted **metal drum container** on a stand (*Photograph 208*).

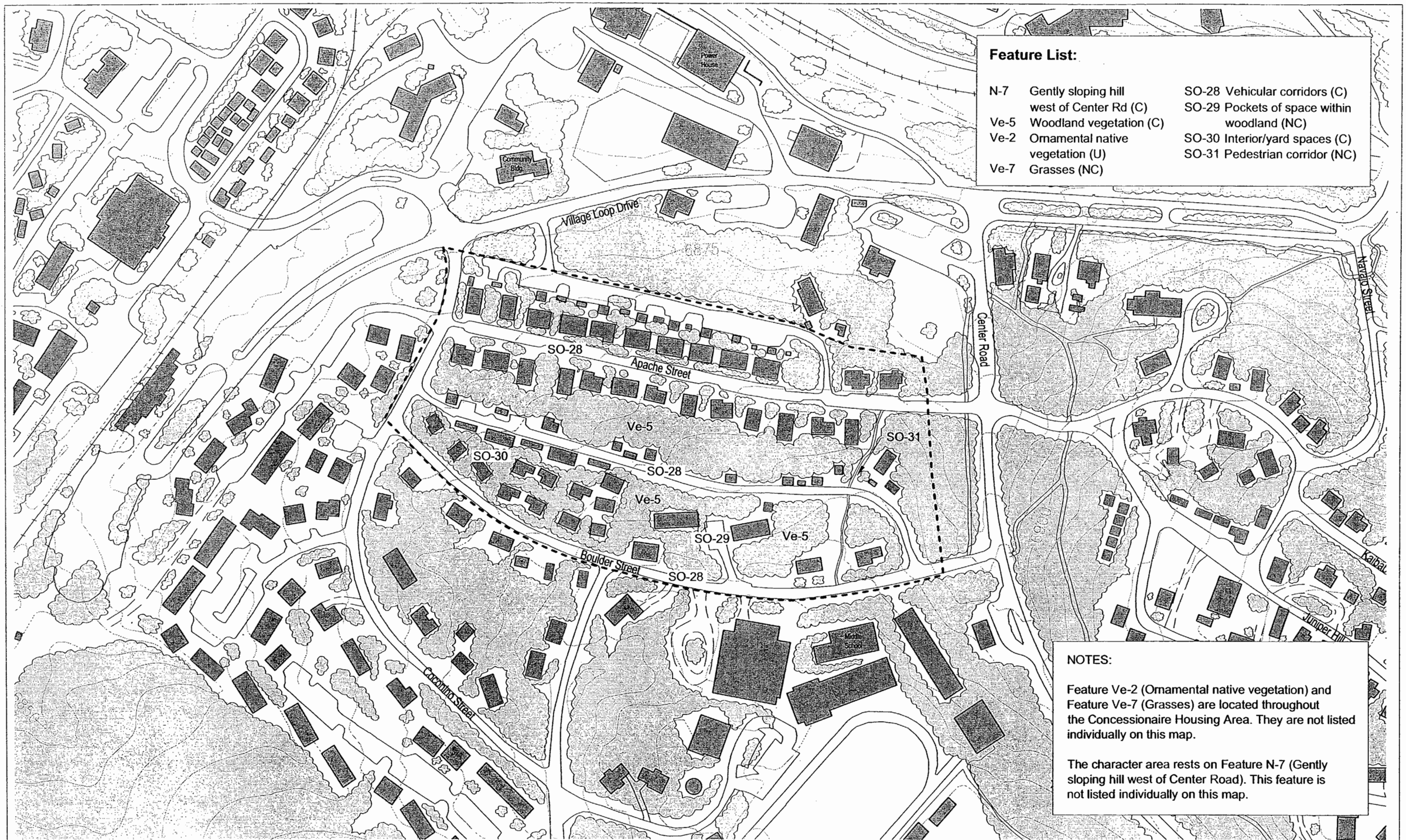
Service and utility features, such as **trash receptacles** and **dumpsters**, are located along the alleys (*Photograph 220*). The trash receptacles and dumpsters are similar to those found elsewhere in the Village Historic District. **Picnic tables** are also found along the alley and behind houses. **Propane tanks** provide fuel to residences—a fuel tank is visible on Boulder Alley, just north of Residence #46 (*Photograph 216*). A small **woodpile** occupies part of the parking yard behind (north of) Bldg. #SRQ0801. Doghouses, swing sets, satellite dishes, hammocks, and clotheslines are among the typical domestic small-scale features found in this area in and around house yards.



Photograph 219. Log stave fence along Apache Alley. (JMA, 2001)



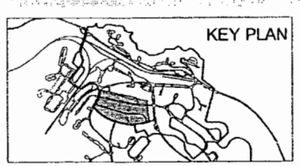
Photograph 220. Dumpster and trash receptacles along Apache Alley. (JMA, 2001)



NOTES:

Feature Ve-2 (Ornamental native vegetation) and Feature Ve-7 (Grasses) are located throughout the Concessionaire Housing Area. They are not listed individually on this map.

The character area rests on Feature N-7 (Gently sloping hill west of Center Road). This feature is not listed individually on this map.



SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

CONCESSIONAIRE HOUSING AREA

NATURAL SYSTEMS & FEATURES SPATIAL ORGANIZATION VEGETATION

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO.

SHEET 28 OF 67

Feature List:

C-75	Coconino Street (C)	C-84	Concrete sidewalks (C)	SS-42	Chain-link fence (NC)
C-76	Apache Street (C)	C-85	Asphalt path (C)	SS-32	Vehicular traffic signs (NC)
C-77	"Neck-down" street parking (NC)	C-86	Earthen path (NC)	SS-80	Street signs (NC)
C-78	Apache Alley (C)	SS-7	Cut stone curbing (C)	SS-94	Metal drum container (NC)
C-79	Boulder Street (C)	SS-91	Concrete curbing (NC)	SS-34	Trash receptacles (NC)
C-80	Boulder Alley (C)	SS-8	Stone edging (C)	SS-35	Dumpsters (NC)
C-81	Gravel driveway off Boulder Street (NC)	SS-9	Boulders (U)	SS-51	Picnic tables (NC)
C-82	Gravel parking in alleys (C)	SS-92	Culverts (U)	SS-47	Fuel/Propane tanks (NC)
C-83	Gravel drive and parking lot between duplexes (NC)	SS-93	Log stave fence (U)	SS-95	Woodpile (NC)
		SS-70	Picket fence (U)		
		SS-15	Painted wood privacy fence (NC)		

NOTES:

Feature C-84 (Concrete sidewalks) are located around most of the residential buildings in this character area and therefore not labeled individually.

KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

CONCESSIONAIRE HOUSING AREA

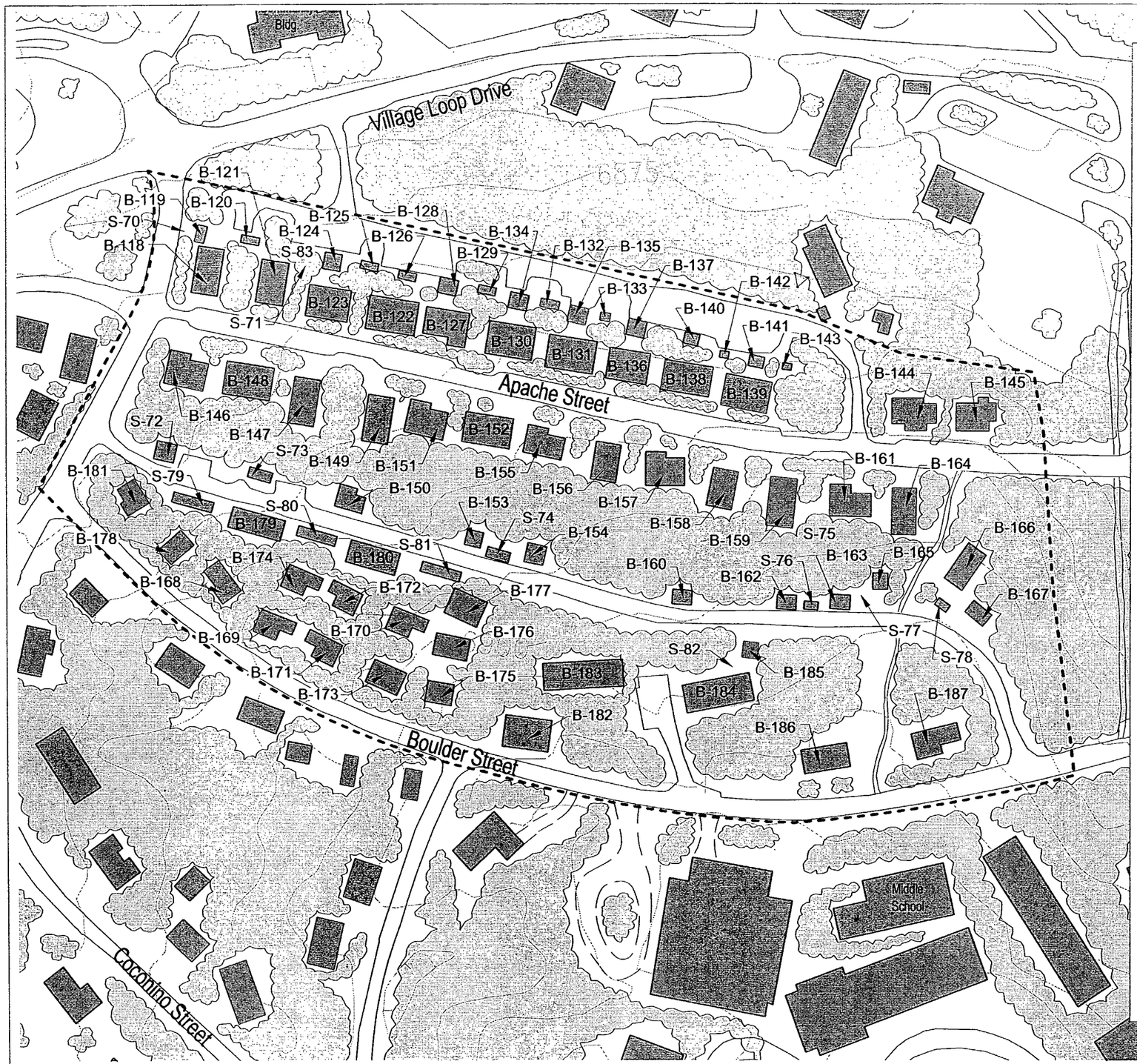
CIRCULATION
SMALL-SCALE FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 29 OF 67



Feature List:

B-118 SFR #26 Apache St (C)
S-70 Stone pier (C)
B-119 Garage (C)
B-120 SFR #24 Apache St (C)
B-121 Storage shed (C)
S-71 Stone planter walls (U)
B-122 Duplex #20 A/B Apache St (C)
B-123 Duplex #22 A/B Apache St (C)
B-124 Garage (C)
B-125 Storage shed (C)
B-126 Storage shed (C)
B-127 SFR #18 Apache St (C)
B-128 Garage (C)
B-129 Storage shed (C)
B-130 Duplex #16 A/B Apache St (C)
B-131 Duplex #14 A/B Apache St (C)
B-132 Storage shed (C)
B-133 Storage shed (C)
B-134 Garage (C)
B-135 Garage (C)
B-136 SFR #12 Apache St (C)
B-137 Garage (C)
B-138 Duplex #10 A/B Apache St (C)
B-139 Duplex #8 A/B Apache St (C)
B-140 Garage (C)
B-141 Garage (C)
B-142 Storage shed (C)
B-143 Storage shed (C)
B-144 SFR #4 Apache St (C)
B-145 SFR #2 Apache St (C)
B-146 SFR #29 Apache St (C)
B-147 SFR #25 Apache St (C)
B-148 Duplex #27 A/B Apache St (C)
S-72 Coal shed (C)
S-73 Coal shed (C)
B-149 Duplex #21 Apache St (C)
B-150 Garage (C)
B-151 SFR #19 Apache St (C)
B-152 Duplex #17 A/B Apache St (C)
B-153 Garage (C)
B-154 Garage (C)
S-74 Coal shed (C)
B-155 SFR #15 Apache St (C)
B-156 SFR #13 Apache St (C)
B-157 SFR #11 Apache St (C)
B-166 SFR #1 Apache St (C)
S-78 Coal shed (C)
B-167 Garage (C)
B-168 SFR #35 Boulder St (C)
B-169 SFR #37 Boulder St (C)
B-170 SFR #38 Boulder St (C)
B-171 SFR #39 Boulder St (C)
B-172 SFR #40 Boulder St (C)
B-173 SFR #41 Boulder St (C)
B-174 SFR #42 Boulder St (C)
B-175 SFR #43 Boulder St (C)
B-176 SFR #44 Boulder St (C)
B-158 SFR #9 Apache St (C)
B-159 SFR #7 Apache St (C)
S-75 Stone wall behind #7 (C)
B-160 Garage (C)
B-161 SFR #5 Apache St (C)
B-162 Garage (C)
B-163 Garage (C)
S-76 Coal shed (C)
B-164 SFR #3 Apache St (C)
B-165 Shed (NC)
S-77 Prefab. storage shed (NC)
B-177 SFR #46 Boulder St (C)
B-178 SFR #33 Boulder St (C)
B-179 Garage (C)
B-180 Garage (C)
S-79 Coal shed (C)
S-80 Coal shed (C)
S-81 Coal shed (C)
B-181 SFR #31 Boulder St (C)
B-182 SFR #45 Boulder St (NC)
B-183 Duplex #47 A/B Boulder St (NC)
B-184 Duplex #49 A/B Boulder St (NC)
B-185 Storage shed (NC)
S-82 Prefab. storage shed (NC)
B-186 Duplex #53 A/B Boulder St (NC)
B-187 SFR #55 Boulder St (NC)
S-83 Stone foundations (C)

KEY PLAN

NOT TO SCALE N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

CONCESSIONAIRE HOUSING AREA

BUILDINGS & STRUCTURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223
PKG. NO. —
SHEET 30
OF 67

Community School Area

The Community School Area contains the Grand Canyon Middle School and Elementary School. Boulder Road edges this character area to the north, while Center Road and the School Maintenance Building form the eastern boundary. The boundary of the Village Historic District and the high school edges the area to the west and south.

Natural Systems and Features

There are no distinctive natural systems or features within the Community School Area.

Spatial Organization

This small area is characterized by the Middle and Elementary School buildings and the spaces between them. The area is defined, and given a sense of enclosure, by woodland masses. Pedestrian paths cut circulation corridors through the trees. Small gathering spaces, defined by cleared vegetation and sidewalk pavement widths, are located at or near the entrances of the school buildings.

Land use

The primary land use of the School Area is community services, in the form of education.

Circulation

Pedestrian paths and walks form the circulation patterns in the Community School Area. A system of un-edged **asphalt paths** winds through the northern part of the area, leading to and from buildings and roads (*Photograph 221*). A five feet to six feet-wide **concrete sidewalk** leads from Boulder Street to the Middle School entrance (*Photograph 222*). The sidewalk splits into two walks that run along the front of the building.

Vegetation

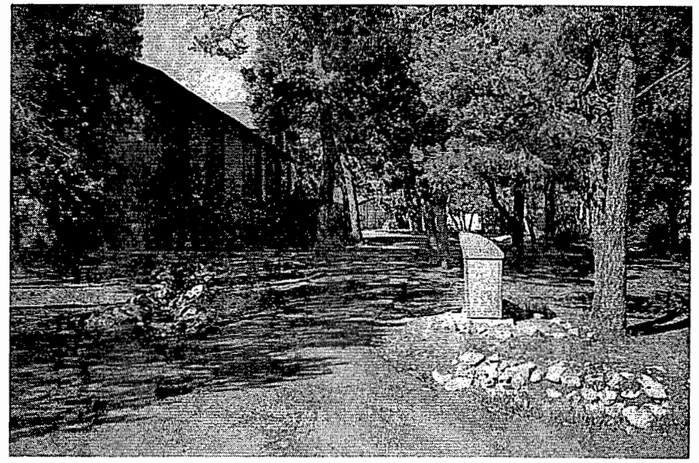
The Community School Area is shaded by **ponderosa pine trees**, which surround the school buildings and buffer them from the street (*Photograph 223*). **Ornamental plantings** of native species, such as several agaves, are planted near the stone-lined swale (*Photograph 224*). The ground cover in this area is comprised of patches of **grass**.

Buildings and Structures

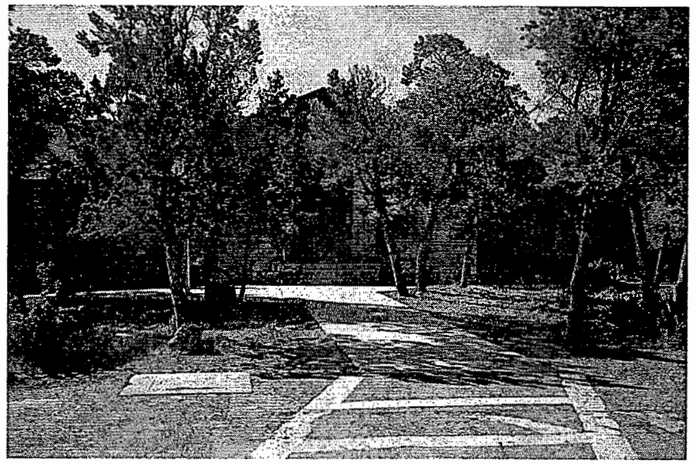
Only two buildings exist within the Community School Area: the Grand Canyon Middle School and Elementary School.

The **Grand Canyon Middle School** (Bldg. #0227) was built in 1939 and is located along Boulder Street and along the western edge of the area (*Photograph 225*). The building has a cross-gable roof. The cut-stone exterior walls are punctuated by tall, wide windows that reach almost from the roof to the ground. The main entrance is on the north façade that faces Boulder Street. The double doors are located beneath a grand cross gable with stone pilasters reaching from the concrete patio to the roofline. A stone wall wraps around the entrance steps and patio.

Grand Canyon Elementary School (Bldg. #323) was built in 1953 and is located east of the Middle School and near the intersection of Boulder Street and Center Road (*Photograph 226, 223*). The long rectangular building has a gable roof. The exterior walls have a variety of siding treatments. The majority of the walls are sheathed with vertical board siding on the upper two-thirds while the lower third has horizontal board siding. The west façade is clad in cut stone from roof to ground. A loggia runs along the south elevation of the building.



Photograph 221. Asphalt path between school buildings, with stone-lined swale, culvert, and trash receptacle. (JMA, 2001)



Photograph 222. Concrete sidewalk to Middle School entrance. (JMA, 2001)

Views and Vistas

Due to its position far from the canyon rim, and the density of vegetation, there are no distinct views available within the Community School Area.

Small-scale Features

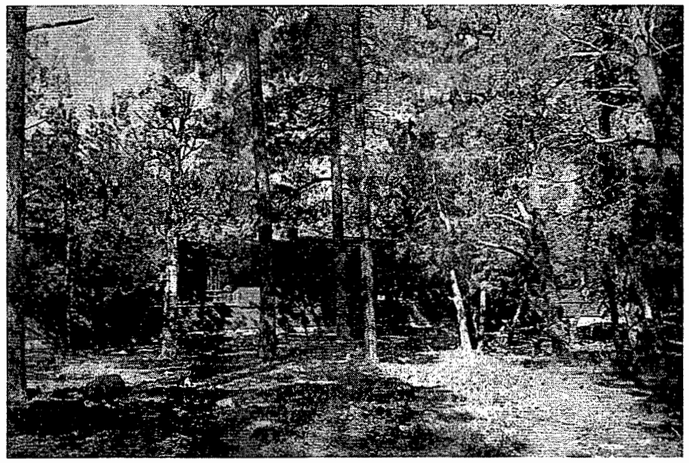
Northwest of the Grand Canyon Middle School, **boulders** line the asphalt path to the building, while smaller **stone edging** encircle planting beds and create curving forms along the lawn area near the building (*Photograph 227*).

Features associated with drainage in the Community School Area include several small **stone-lined swales** that carry stormwater and roof runoff away from the buildings and into culverts beneath the asphalt paths in this area (*Photograph 224*). **Metal pipe culverts** are located near the northeast and northwest corners of the Elementary School building.

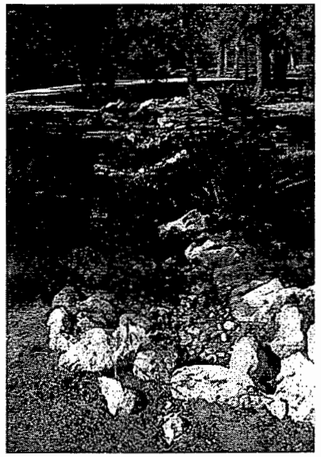
Brown-painted **metal railings** frame the steps to the north and east entrances at the Grand Canyon Middle School (*Photograph 226*).

Signage includes **vehicular traffic signs**, most of which caution drivers to slow down in the school zone, and **brown and white painted NPS signs**; all these signs are located along the edge of Boulder Street on the northern perimeter of the Community School Area.

Trash receptacles in the Community School Area include brown-painted metal drums present elsewhere in the Village. There are also four-sided trash receptacles of gray-painted metal with paneling on the sides, as seen northeast of the Elementary School (*Photograph 221*). There is a contemporary plastic **compost bin** on the east side of the Elementary School (*Photograph 228*).



Photograph 223. Ponderosa pines shading school site. (JMA, 2001)



Photograph 224. Ornamental plantings along stone-lined swale with larger stone edging. (JMA, 2001)



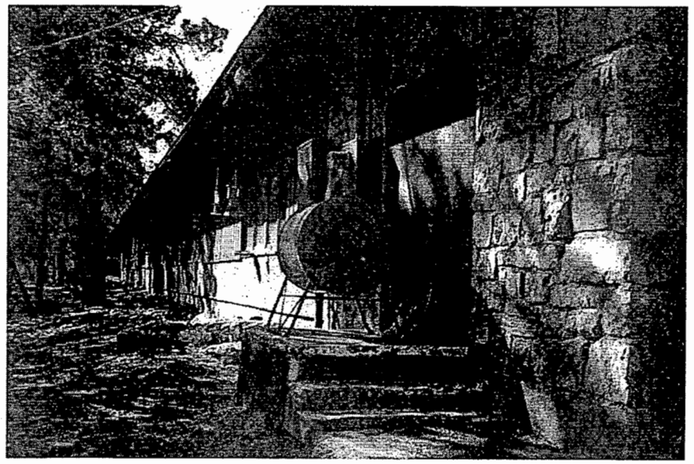
Photograph 225. Grand Canyon Middle School. Note pipe handrail on stair. (JMA, 2001)



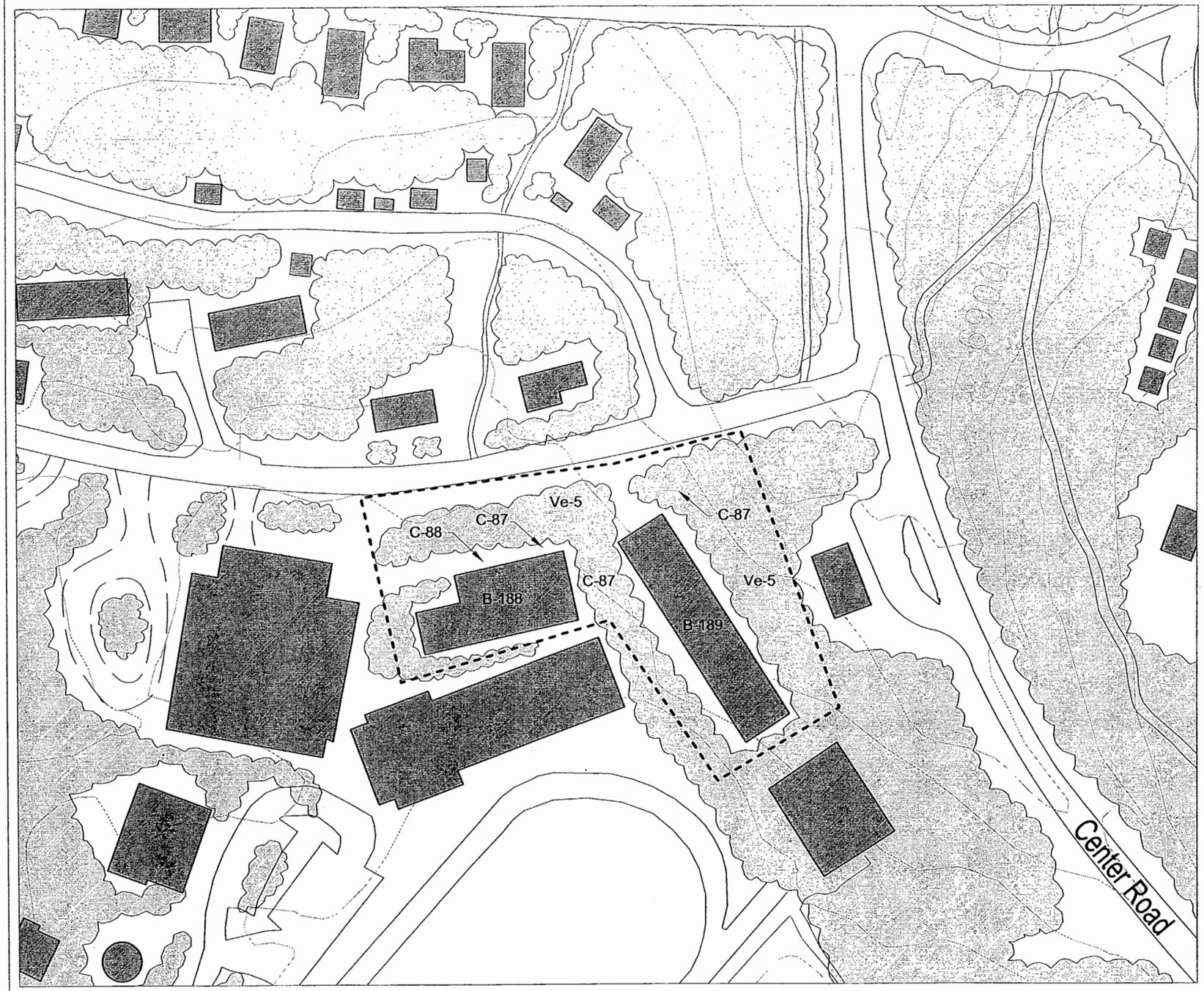
Photograph 226. Grand Canyon Elementary School. (JMA, 2001)



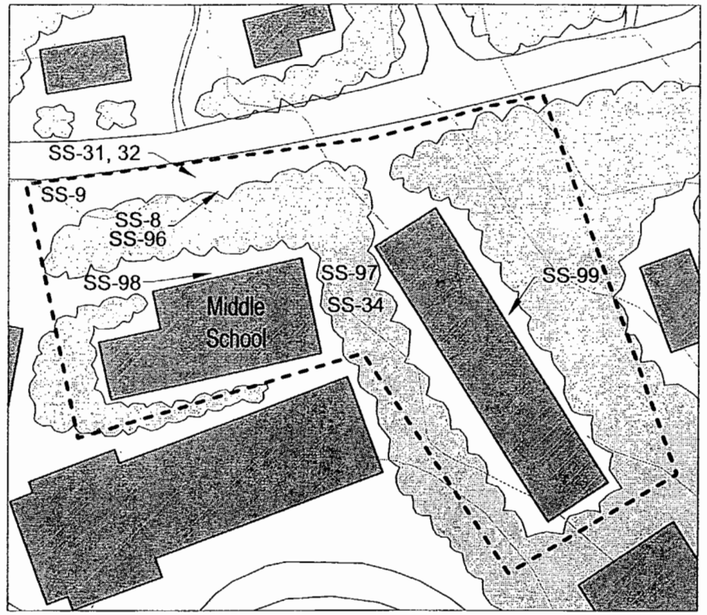
Photograph 227. Rough stone edging. (JMA, 2001)



Photograph 228. Compost bin on east side of Elementary School. (JMA, 2001)



CIRCULATION, VEGETATION, and BUILDINGS & STRUCTURES



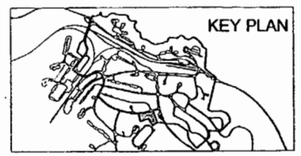
SMALL-SCALE FEATURES

Feature List:

C-87	Asphalt paths (C)	SS-8	Stone edging (C)
C-88	Concrete sidewalks (C)	SS-9	Boulders (U)
Ve-5	Woodland vegetation (C)	SS-96	Stone-lined swales (U)
Ve-2	Ornamental native plantings (U)	SS-97	Culverts (U)
Ve-7	Grasses (NC)	SS-98	Metal railings (NC)
B-188	Grand Canyon Middle School (C)	SS-32	Vehicular traffic signs (NC)
		SS-31	Brown and white NPS signs (NC)
B-189	Grand Canyon Elementary School (NC)	SS-34	Trash receptacles (NC)
		SS-99	Compost bin (NC)

NOTES:

Feature Ve-2 (Ornamental native plantings) and Feature Ve-7 (Grasses) are located throughout the Community School Area and are not listed individually.



SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. I

COMMUNITY SCHOOL AREA

ALL FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 31 OF 67

Camp Area

The Camp Area contains the Maswik Cabins and is associated with Maswik Lodge. This character area is bounded to the north by woodlands within the Railroad Area wye; to the east by a spur of the Grand Canyon Railroad; and to the south and west by the Village Historic District boundary.

An access road branches from Village Loop Drive and is the major circulation artery through this area. Parking for individual cabins is located directly off this road, and near the individual buildings. Informal pedestrian paths link the access road and buildings to the Loop Drive and the larger system of paved paths within the Village Historic District. The paved plaza in front of the entrance to the Maswik Lodge, west of the cabins, is also considered a part of this area. Many of the nineteen cabins and service/utility buildings that form this character area are of exposed frame construction.

Natural Systems and Features

Natural features and systems associated with the Camp Area are typical of the surrounding areas within the Village Historic District, and there are no distinctive natural features within this area.

Spatial Organization

As with many other character areas within the Village Historic District, spaces within the Camp Area are defined primarily by building façades and circulation corridors, as well as masses of vegetation.

The most prominent spatial elements within the area are the **vehicular corridors**. These corridors consist of pavement—Village Loop Drive and an access drive—edged by buildings. Cabins are clustered together between these corridors, creating **interstitial spaces**. These spaces are created by the relationships between buildings that act as gathering spaces or passageways for persons utilizing the cabins. In the northern portion of the area, **woodland masses** create space and define the Village Loop Drive vehicular corridor. The western woodland once contained an amphitheater but currently exists as **gravel-floored open space** used for informal parking.

Land use

Land uses in the Camp Area are residential and visitor services, ranging from housing for long-term employee use to short-term visitor accommodations.

Circulation

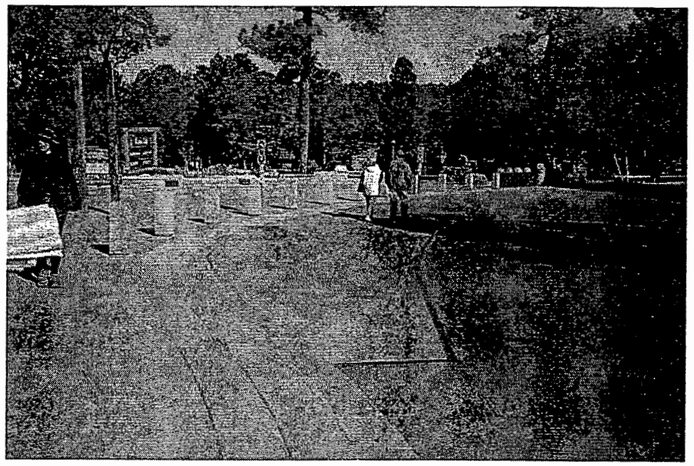
Village Loop Drive is the primary vehicular circulation route through the Cabin Area (*Photograph 229*). In this character area, Village Loop Drive is a two-way asphalt road with cut stone curb. It extends from the southeast corner of the area, near the Grand Canyon Railroad tracks, to the northern area boundary. A **concrete drop-off lane** is located in front of Maswik Lodge and is part of Village Loop Drive (*Photograph 230*). A secondary **access road** runs through the Maswik Cabin cluster (*Photograph 231*). This narrow, one-lane eroded asphalt and gravel road runs from Village Loop Drive north, through the cabins, then turns west to meet Village Loop Drive again. The road has gravel shoulders that extend to the building facades.

Parking is very informal and somewhat opportunistic. **Gravel parking spaces** are located in between cabins and along the road shoulders (*Photograph 232*).

Pedestrian circulation consists of earthen paths, asphalt sidewalks, and gravel paths. An **asphalt sidewalk**, with stone edging, runs along the western edge of Village Loop Drive (*Photograph 233*). This sidewalk is similar to those that run throughout the rest of the Grand Canyon Village. An **asphalt path** extends along the southern edge of the former amphitheater space and consists of a two-to-three-foot-wide surface edged by small cut stones (*Photograph 234*). A second **asphalt path** extends from Village Loop Drive along the northern edge of the former amphitheater site. It consists of a highly deteriorated, two-to-three-foot-wide asphalt surface with cut stone edging.



Photograph 229. Village Loop Drive. (JMA, 2001)



Photograph 230. Concrete drop-off lane in front of Maswik Lodge, with concrete bollards. (JMA, 2001)

Vegetation

In the Camp Area, little vegetation exists aside from **stands of Ponderosa pines** and associated tree species, which function to screen the cabins from Village Loop Drive, the railroad tracks, and the Utility Area (*Photograph 235*).

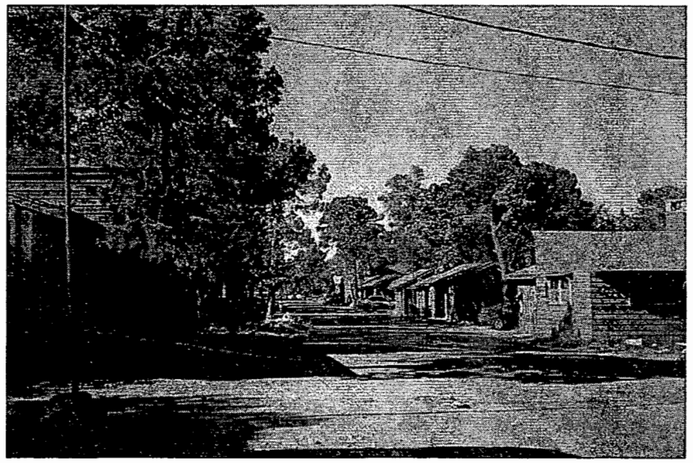
Buildings and Structures

There are three clusters of buildings and structures within the Camp Area, determined by cabin type. The first cabin type is the one-room residential cabin which is found in a cluster between Village Loop Drive and the access road. The second cabin type is a two-room residential cabin found in a cluster located in the southeast corner of the area, mainly along the east side of the access road. The third cabin type is a four-room public lodging cabin found in a cluster located near the northern intersection of Village Loop Drive and the access drive.

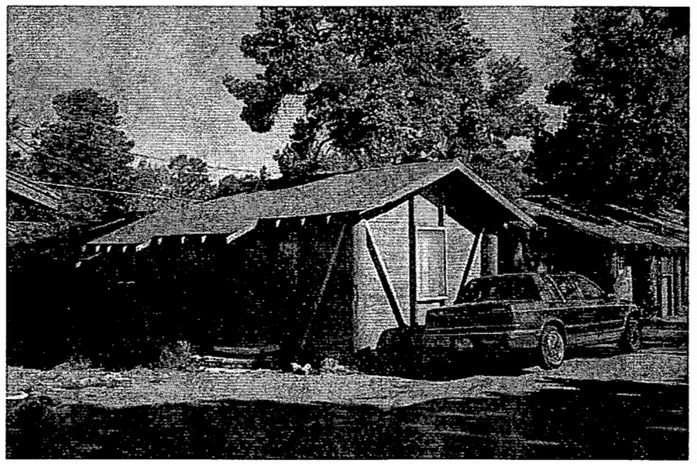
One-room **Maswik Cabins** (Bldgs. #0595-#0606) share similar architectural style and construction methods. Built in 1927, the cabins have gable roofs and exposed-framing extending between thick, round log posts. The cabins rest on stone foundations. Windows have multiple lights and green trim. Bathrooms are located in small gable-roofed additions. Stone and/or concrete steps lead to the front entrances.

Two-room **Maswik Employee Cabins** (Bldgs. #0607 and #0610-#616) also share similar styles and characteristics to the one-room cabins. Built in 1927, the cabins have gable roofs, exposed-framing and external thick log post supports. Multiple-light windows have green trim. Stone and/or concrete steps lead to the front entrances (*Photographs 237*). These cabins currently house NPS employees.

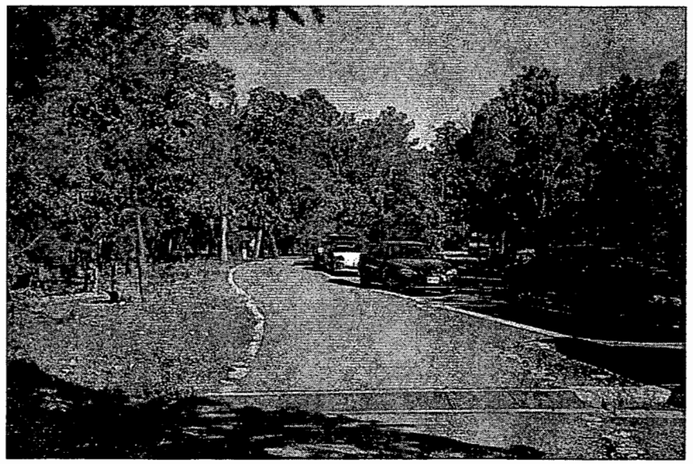
Four-room **Maswik Quad Cabins** (Bldgs. #0581-#0587) were built in 1940. All cabins share similar characteristics. Each cabin consists of four shed-roofed rooms set perpendicular to each other to form somewhat of a pin-wheel design. Each room has either board-and-batten or clapboard siding and two sets of double windows on each elevation. Windows not below an eave have a tiny shed-roof lintel. A square brick chimney rises from the center of the building (*Photograph 237*).



Photograph 231. Access road to cabin cluster. (JMA, 2001)



Photograph 232. Gravel parking spaces among cabins. (JMA, 2001)



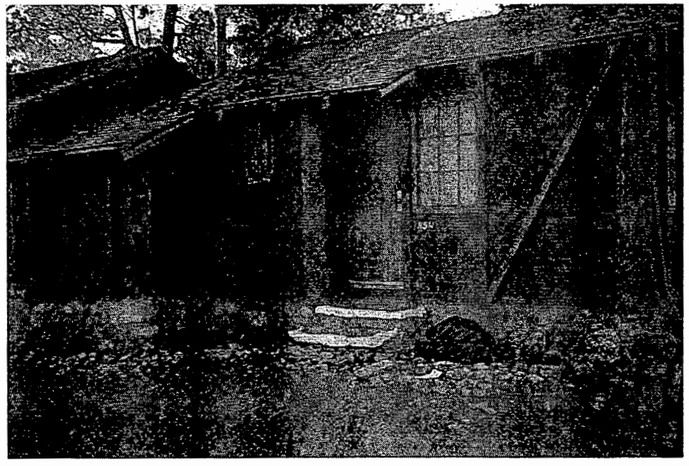
Photograph 233. Asphalt sidewalk with trench drain and stone curbing along Village Loop Drive. (JMA, 2001)



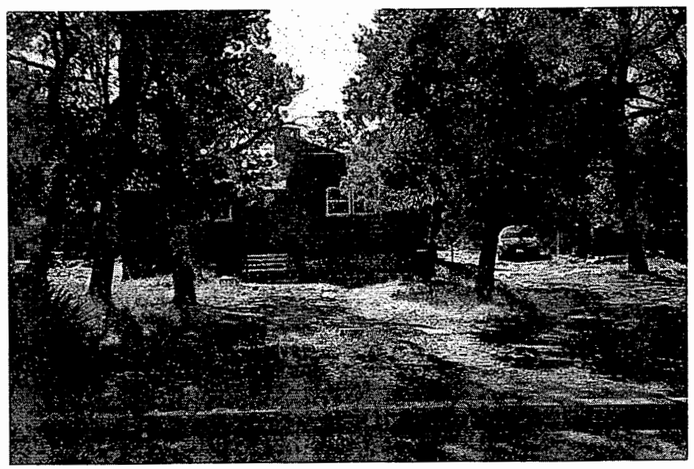
Photograph 234. Macadam path with stone edging. (JMA, 2001)



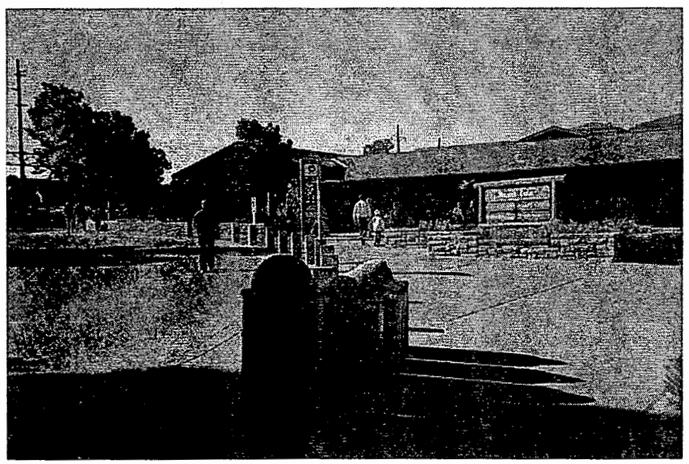
Photograph 235. Ponderosa pine vegetation. (JMA, 2001)



Photograph 236. Maswik cabins. (JMA, 2001)



Photograph 237. Maswik quad cabin. (JMA, 2001)



Photograph 238. Cut-stone planter wall near Maswik Lodge in background, with wood sign; trash receptacles in foreground. (JMA, 2001)

Another **Maswik Cabin** (Bldg. #0588) appears to be of similar construction and detailing as the four-room cabins. Although this cabin has the same square-footage as the four-room cabins, it has eight rooms and is used as an equipment shed and employee laundry.

The **Maswik Cabins Comfort Station** (Bldg. #0589) is also known as a Utility Cabin, the Laundry Building, and a Fred Harvey Auto Camp Comfort Station. Its Rustic-style design was based on earlier designs for the Bright Angel Lodge cabins. Built in 1939, this one-story frame cabin has a gable roof with exposed rafters and composition shingles. Horizontal tongue-and-groove siding covers the interior of the external timber framing. The cabin rests on a concrete foundation.

A second **Maswik Cabin Comfort Station** (Bldg. #0609) is also known as a Utility Cabin, the P-2 Shower House, and a Fred Harvey Auto Camp Comfort Station. Completed in 1927, this one-story wood frame cabin has a gable roof with exposed rafters and composition shingles. Horizontal wood drop siding covers the interior of the external timber framing. The cabin has clerestory windows, a wood batten door, and a concrete slab foundation.

In the southwestern corner of the character area, and west of the Maswik Lodge shuttle bus drop-off, a **cut-stone planter wall** sits in the midst of a plaza and creates a planter bed and seat wall (*Photograph 238*).

Views and Vistas

There are no distinct views within the Camp Area.

Small-scale Features

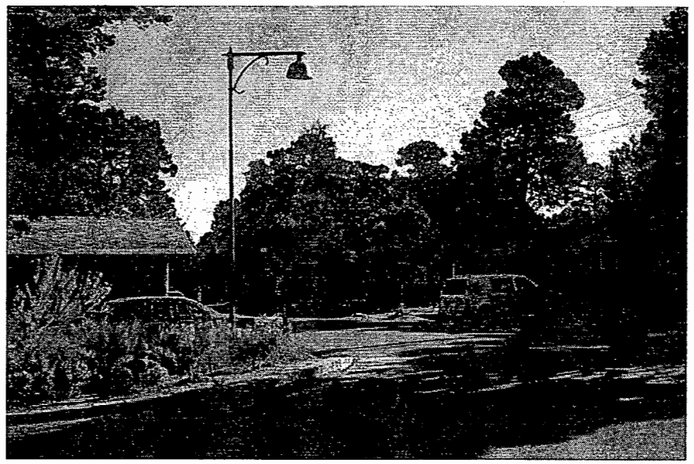
In general, small-scale features in the Camp Area are typical of the Village. **Stone edging** lines the asphalt and unpaved paths in the area. Uneven **boulder** and stone edging is found along sections of the road through the cabins, although the edges of the road are generally informal here. **Cut stone curbing** is found along both sides of Village Loop Drive (*Photograph 233*). As Village Loop Drive approaches Maswik Lodge on the southern perimeter of the character area, contemporary **concrete bollards** line the road edge (*Photograph 238*).

Small-scale features associated with drainage include metal slabs over stone **trench-style storm drains** that cross the sidewalk just north of the cabins (*Photograph 233*). **Metal grates** cover drop inlets along the southern segment of Village Loop Drive roadway in the Camp Area.

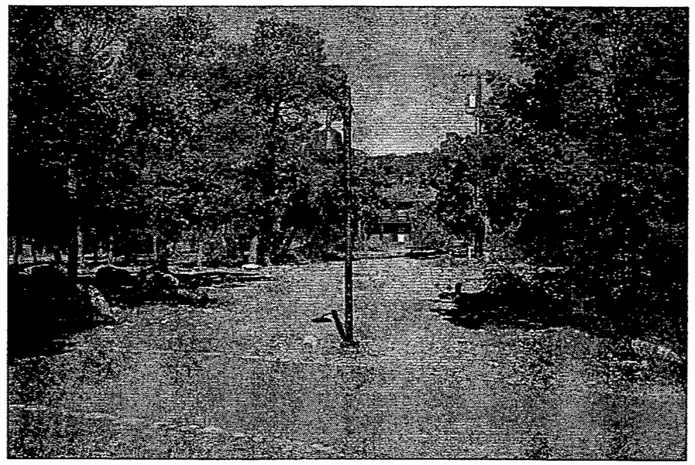
Lights in the Camp Area include **green-painted metal street lights**, similar to those located near the Bright Angel Cabins: mounted on eighteen-feet-tall poles, with a curving lamp arm and ornamented by a metal bracket with curled ends (*Photograph 239*). Other **lighting standards** the area are also of green-painted metal but shorter and without ornament, and appear to be contemporary (*Photograph 240*).

Signage is typical of the Village at large, and includes **brown and white NPS signs**, **vehicular traffic regulation signs**. At the bus stop near Maswik Lodge are typical **bus system orientation signs**. These types of signage are described in previous sections. A large **wooden sign** identifying the adjacent Maswik Lodge is located just within the Camp Area boundary (*Photograph 238*).

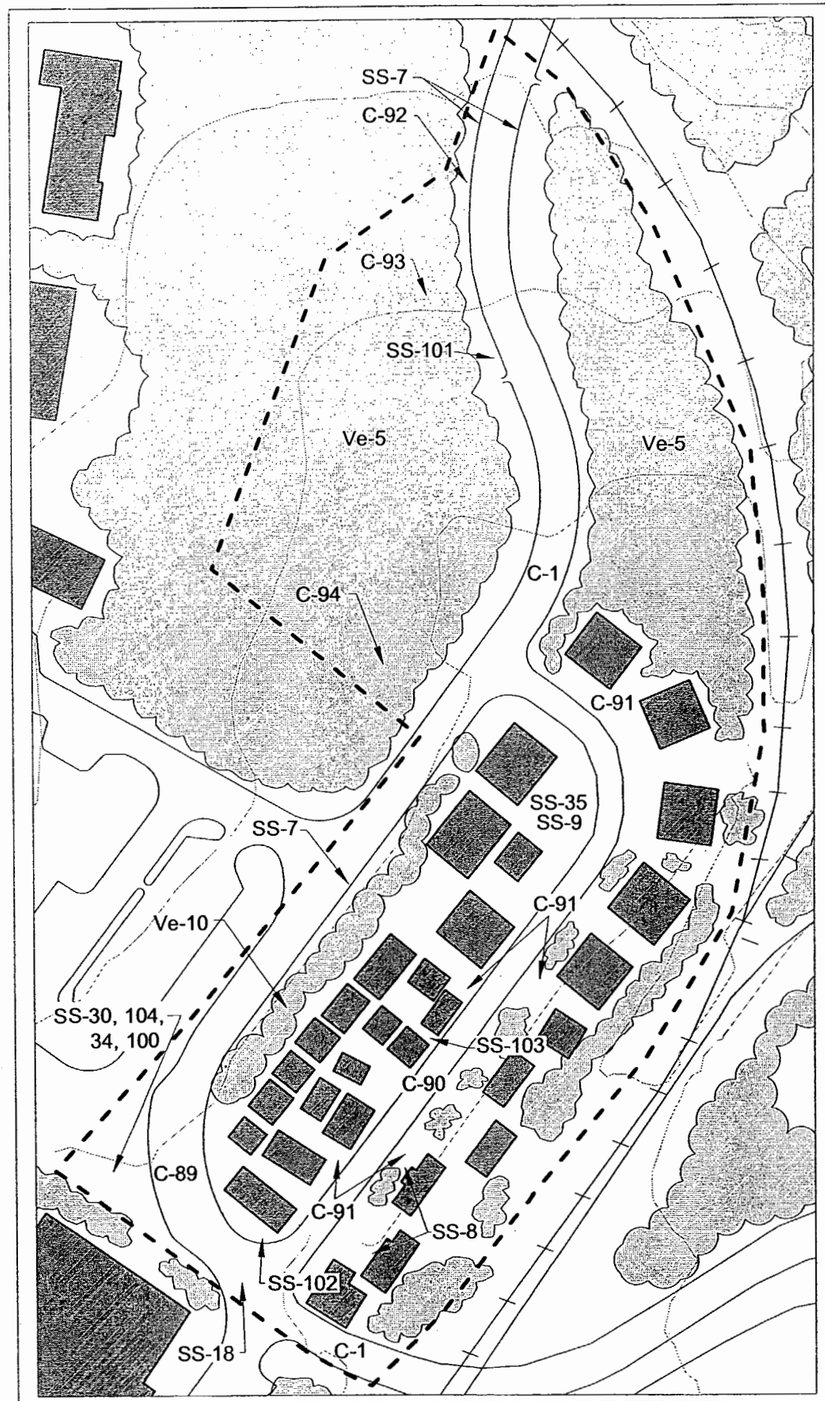
Trash receptacles in the Camp Area include brown-painted metal drums and wood-slat type containers. A green-painted metal **dumpster** is located north of Maswik Cabin #0589 along the curve of the cabin access road.



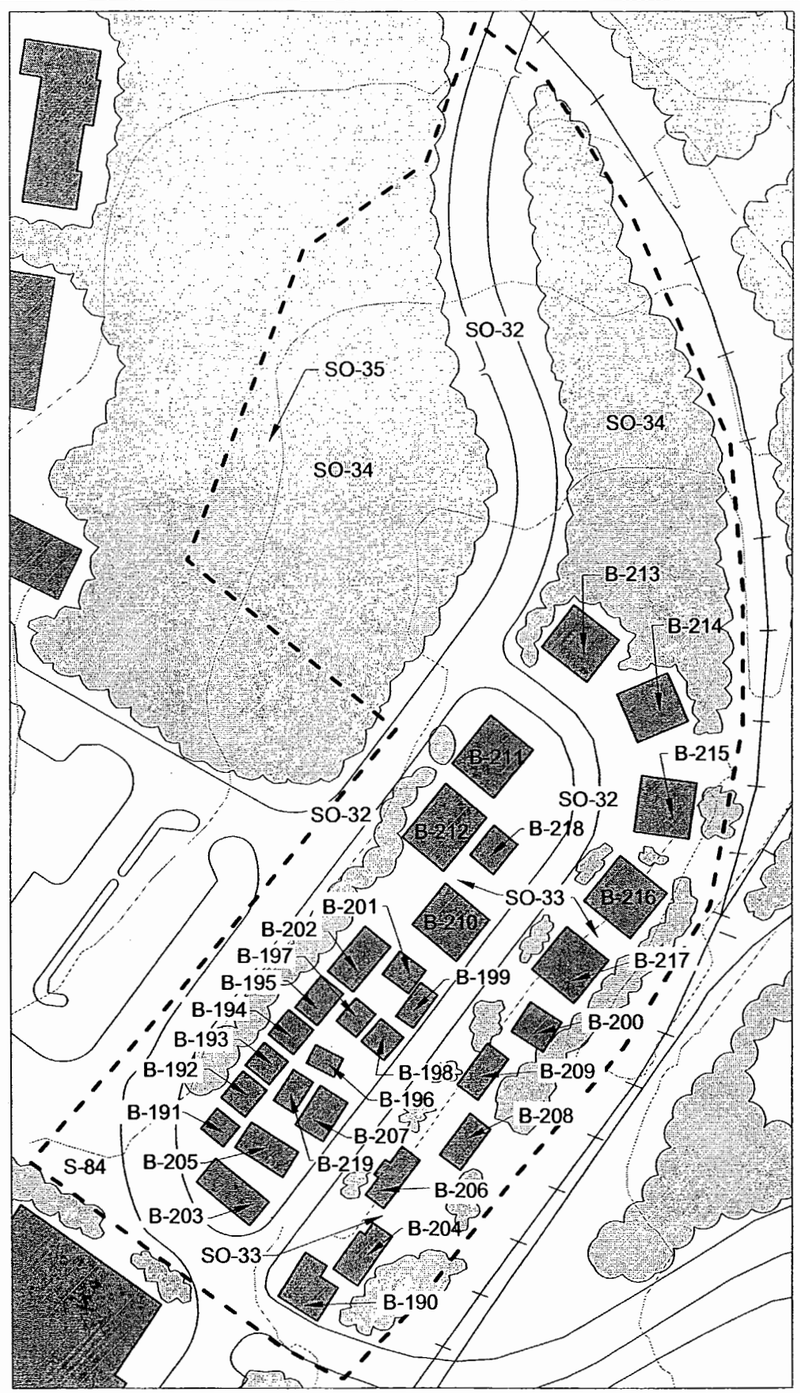
Photograph 239. Lighting at Camp Area. (JMA, 2001)



Photograph 240. Other lighting along an asphalt path. (JMA, 2001)



CIRCULATION, VEGETATION, and SMALL-SCALE FEATURES



SPATIAL ORGANIZATION and BUILDINGS & STRUCTURES

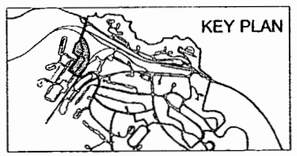
Feature List:

SO-32	Vehicular corridors (C)	B-209	MEC 115N & 117N (C)
SO-33	Interstitial cabin spaces (C)	B-210	MQC 6711-14 (C)
		B-211	MQC 6735-38 (C)
SO-34	Woodland masses (C)	B-212	MQC 6731-34 (C)
SO-35	Gravel-floor open space (C)	B-213	MQC 6727-30 (C)
		B-214	MQC 6723-26 (C)
C-1	Village Loop Drive (C)	B-215	MQC 6719-22 (C)
C-89	Concrete drop-off lane (NC)	B-216	MQC 6715-18 (C)
		B-217	Storage Cabin (C)
C-90	Access road through Maswik Cabins (C)	B-218	Maswick Cabin Comfort Station (C)
C-91	Gravel parking spaces (C)	B-219	Maswick Cabin Comfort Station (C)
C-92	Asphalt sidewalks (C)	S-84	Cut-stone planter wall (NC)
C-93	Northern amphitheater asphalt path (U)	SS-8	Stone edging (C)
		SS-9	Boulders (U)
C-94	Southern amphitheater asphalt path (U)	SS-7	Cut stone curbing (C)
		SS-100	Concrete bollards (NC)
Ve-5	Woodland vegetation (C)	SS-101	Trench-style storm drains (NC)
Ve-10	Screening vegetation (C)		
B-190	Maswik Cabin 101N (C)	SS-18	Drainage grates (U)
B-191	Maswik Cabin 210N (C)	SS-102	Green-painted metal street lights (C)
B-192	Maswik Cabin 203N (C)		
B-193	Maswik Cabin 205N (C)	SS-103	Other lighting standards (U)
B-194	Maswik Cabin 207N (C)		
B-195	Maswik Cabin 209N (C)	SS-31	Brown and white NPS signs (NC)
B-196	Maswik Cabin 112N (C)		
B-197	Maswik Cabin 114N (C)	SS-32	Vehicular traffic signs (NC)
B-198	Maswik Cabin 116N (C)		
B-199	Maswik Cabin 118N (C)	SS-30	Orientation signs at bus stops (NC)
B-200	Maswik Cabin 119N (C)		
B-201	Maswik Cabin 120N (C)	SS-104	Maswik Lodge sign (NC)
B-202	MEC 221N & 213N (C)		
B-203	MEC 100N & 102N (C)	SS-34	Trash receptacles (NC)
B-204	MEC 103N & 105N (C)	SS-35	Dumpsters (NC)
B-205	MEC 104N & 106N (C)		
B-206	MEC 107N & 109N (C)		
B-207	MEC 108N & 110N (C)		
B-208	MEC 111N & 113N (C)		

NOTES:

Feature SS-31 (NPS signage) and Feature SS-32 (Vehicular traffic signange) are located throughout the Camp Area and are not listed individually.

Maswick Employee Cabin is abbreviated "MEC."
Maswick Quad Cabin is abbreviated "MQC."



SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. 1

CAMP AREA

ALL FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO. —

SHEET 32 OF 67

Condition Assessments

Introduction

This condition assessment describes the physical condition of landscape features within the Village Historic District using standards established by the NPS in such texts as the *Resources Management Plan Guideline* and *A Guide To Cultural Landscape Reports*. These texts establish four standards for defining the condition of cultural landscape features: Good, Fair, Poor, and Unknown. These standards are described as follows:

> *Good* – indicates the cultural landscape shows no clear evidence of major negative disturbances and deterioration by natural and/or human forces. The cultural landscape's historical and natural values are as well preserved as can be expected under the given environmental conditions. No immediate action is required.
>
> *Fair* – indicates the cultural landscape shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within three to five years to prevent further harm. If the current condition is not corrected, the landscape will deteriorate into a poor condition.
>
> *Poor* – indicates the cultural landscape shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural areas.
>
> *Unknown* – indicates that not enough information is available to make an evaluation.

This section of the CLR discusses inventoried features which have a Fair, Poor, or Unknown assessment. For each of these features, a rationale is given for its rating. Features that are assessed as being in good condition are not described in detail. A complete listing of inventoried features and their condition is located in the appendix to this report.

Fair Condition

Rim Area

Kachina Lodge/Colter Hall parking lots
- The asphalt surface is deteriorating.

Bright Angel Lodge parking and service area
- The asphalt surface is deteriorating and weedy vegetation is growing beneath the curbing.

Rim Cabin Parking
- Parking is random and confusing; the earthen surface is eroding and exposing boulders.

Bright Angel Lodge circular drop-off
- The gravel drive is deteriorating and in need of repair.

Rim Trail
- The trail surface is degraded. It is in poor condition around the Bright Angel Cabins and fair in all other places.

Bright Angel Trailhead
- The bare earth surface of the trailhead is likely prone to erosion, especially with its heavy foot traffic. There is little seating for visitors.

Mule path
- The earthen path is eroding; the edges are failing as the stone edging separates from the trail. The trail tread has apparently been filled severaltimes so the surface is becoming higher than the stone edging.

Native vegetation
- There is evidence of dieback and some hazard trees in need of removal. Disturbed areas may require revegetation. Excessive vegetative overgrowth occurs at the Kolb Studio, onto some earthen paths, and around Colter Hall. Some grasses may be invasive.

Kolb Studio Garage
- The siding appears to be deteriorated and may require painting.

Kolb Studio retaining walls
- The walls may have structural or mortar-related problems.

Concrete and stone arch with metal gate
- The arch appears to have structural problems and to be missing stones.

Wood plank steps
- The wood steps have split and may need repair.

Stone edging
- Stone edging is separating from paths or missing in places such as the mule path and southeast of Buckey O'Neill Cabin.

Metal bollards
- The bollards near the Bright Angel Cabins are leaning, and do little to protect the fire hydrant around which they are placed.

Drainage grates
- There are early signs of clogging and sinking into the surrounding asphalt.

Drinking fountains
- The fountain near the Bright Angel Cabins has a rusted metal plate.

Dumpsters
- Certain dumpsters are rusted and dented.

Utility Area

Victor Hall/Community Building parking lots
- The Community Building parking lot has an eroding gravel surface and inadequate curb height. The Victor Hall parking lot has an eroding asphalt surface.

Gravel service roads
- Vegetation is encroaching upon the edges of the road, whose surfaces have ruts and dips.

GCNPL/Blacksmith Shop parking lot
- The Blacksmith Shop portion of the parking lot shows deteriorating and broken edges.

Concrete steps and pad
- The feature has cracked and/or missing concrete with eroding concrete cheek walls.

Stone edging
- Stones are sinking or becoming covered in earth or gravel in places, such as near the Community Building.

Drainage grates
- Certain grates are sinking, tilted, and becoming clogged with pine needles.

Outdoor grill
- The grill is rusting.

Railroad Area

Bright Angel Wash
- The northern and southern slopes of the Wash are eroding and slumping, likely due to inadequate retaining walls and visitors who walk down the slopes rather than the stairs.

Drainage ditch
- The ditch slopes have eroded and the ditch is becoming filled with silt and debris, reducing its usefulness for carrying water.

Small median north of Depot
- The median has a cluttered appearance due to numerous signs and utility poles within its curbs. The grasses on the median may be invasive.

Wood Plank Bridge
- The bridge has warped wood members and is blocked to pedestrian traffic by sawhorses.

Asphalt vehicular bridge
- The asphalt edges are deteriorating.

Stone foundation
- The edges of the foundation appear to be deteriorating.

Pipe culvert (large)
- Unsupported earth around the pipe is beginning to erode away.

Visitor and Community Services Area

Residential asphalt loop drive
- The drive has a cracked asphalt surface and eroding edges.

Public Garage parking lot
- The parking lot has some potholes and early signs of deterioration.

Gravel paths
- The stone edging is sinking and/or separating from the path.

Woodland vegetation
- There are dead trees and dieback on certain live trees, especially near buildings. In places, vehicles are parking very close to unprotected tree trunks.

Concrete masonry unit structure
- The roof of the structure may be deteriorating and the walls are stained.

Log retaining wall
- The wall may be failing and may need to be replaced or rehabilitated.

Concrete-lined swale
- The swale is becoming overgrown with vegetation—along the edges and through cracks in the concrete.

Stone/concrete drainage structure
- The structure is partially clogged with debris.

NPS Housing Area

Tapeats Circle
- The road surface and edges are eroding.

WODC/Library access drive
- The road surface and edges are eroding.

Building #7 gravel driveway
- The loose gravel surface has no defined edges which allows for random parking.

Woodland vegetation
- Some evidence of dieback exists on certain live trees.

Ornamental native vegetation
- The ornamental vegetation appears randomly placed and may not reflect the original intent of the NPS and CCC crews who transplanted the vegetation to this character area.

Garage and shed (Bldg. #SRB0006C)
- The original wood siding has been covered by aluminum siding.

Single family residence #53 Juniper Hill (Bldg. #SRQ0053)
- The siding is deteriorating—the paint or stain is failing.

Drainage grates
- The concrete member is deteriorating.

NPS Service Area

Sunset Drive
- The asphalt surface is slightly deteriorated, being cracked and patched.

Gravel access drive - Mule Barn
- Although the drive appears to have been newly graveled, vegetation is encroaching upon the edges.

Gravel drive - behind Lumber Shed
- The drive has a somewhat eroded surface and edges.

Temporary Housing units
vCertain units need to be rehabilitated.

Boat Shop
- The siding and window casements appear to be warped and the paint/stain is failing.

Storage Shed
- The wood at ground level has water damage.

Mule Barn
- The paint is failing and the corrugated metal siding is warped.

Wheel stops
- The railroad tie wheel stops are randomly placed and their wood is deteriorating.

Wood bollards
- Certain bollards are leaning.

Metal bollards
- The reflective tape is peeling from the bollard, which serves little purpose in its current location.

Metal pipe fencing
- Portions of the fence are rusted and bent.

Concessionaire Housing Area

Apache Alley
- The asphalt surface and edges are eroding while vegetation is encroaching upon the pavement.

Gravel parking in alleys
- The gravel surfaces are deteriorated and poorly defined.

Gravel drive and parking lot between duplexes
- The asphalt surface and edges are eroding while vegetation is encroaching upon the pavement.

Garages, Storage sheds, and Coal sheds
- According to field observations and information within certain List of Classified Structures reports, it is likely that all outbuildings in the Concessionaire Housing Area are in fair condition due to deteriorating wood, paint, and roofing materials.

Culverts
- The concrete around certain culverts is deteriorating.

Log stave fence
- The paint on the fence is peeling and faded.

Community School Area

Asphalt paths
- The path edges are deteriorating.

Camp Area

Gravel-floored open space (former amphitheater)
- The space no longer retains its original use and is becoming grown over with vegetation. It is unknown if this space is being revegetated or if the intent is to maintain the open space.

Gravel parking spaces
- Poorly-defined parking spaces allow for random parking, often too close to buildings and trees.

Poor Condition

Rim Area

Thunderbird Lodge access loop
- The asphalt surface is heavily deteriorated. No edge remains along the southern portion of the pavement.

Circular road within Bright Angel Cabins
- The asphalt surface is heavily eroded and, in certain sections, missing.

Kolb Studio asphalt path
- The asphalt surface is heavily eroded and not open to the public.

Utility Area

Substation space
- The space was historically more open than at present.

Service road through Utility Area
- The asphalt surface and edges are heavily eroded.

Old Village Bypass Road
- The edges of the road are heavily deteriorated.

Gravel parking
- Gravel parking areas have potholes and eroding surfaces. They increase damage to the edges of adjacent asphalt pavement as vehicles continually drive over the edges to reach the gravel spaces.

Maintenance Shop parking lot
- The parking lot has both deteriorated and missing asphalt pavement and rutted earth and gravel surfaces.

Asphalt access drive
- The asphalt surface and edges are heavily eroded.

Community Building paths
- The un-edged asphalt path is deteriorating. Stones along edged paths are sinking or separating from the path. Gravel-surfaced paths are eroding.

Earthen paths
- These desire paths have worn away vegetation to bare earth, likely contribute to erosion, and are unsightly.

Basketball court
- The court has an eroded asphalt surface and failing edges.

Heating plant
- The doors and roof appear to need repairs.

Storage Building (former Carpentry Shop)
- The building appears dilapidated, with failing metal siding, warped window frames, broken steps, and warped wall and roof structures.

Concrete steps
- The steps are heavily eroded and deteriorated.

Concrete and asphalt ramp
- The asphalt is cracked and missing over most of the ramp. The cheek walls are deteriorating.

Painted wood privacy fence
- The fence is leaning and currently buttressed by angled supports.

Piles of materials
- Piles of stone, wood, refuse, and abandoned appliances are visible throughout the character area.

Railroad Area

Old Village Bypass Road
- The edges of the road are heavily deteriorated.

Air Conditioning Building
- The building has peeling paint, mismatched doors, and a generally abandoned appearance.

Wood and asphalt bridge
- The bridge structure is blocked from pedestrian traffic due to apparent structural failure.

Rubble retaining wall (Jesus Morales)
- The wall is heavily deteriorated and failing. Stones are missing along some portions.

Concrete-lined swale
- Silt has accumulated in the base of the swale. Vegetation is growing through cracks in the concrete.

Decorative cut stone arch
- The sides of the arch are eroding.

Stone-lined swale
- Silt has accumulated in the bottom of the swale, the swale slopes are failing, and vegetation is growing through cracks in the swale surface.

Visitor and Community Services Area

Gravel and macadam drive
- The pavement is heavily deteriorated and missing in places.

General Office parking lot
- The asphalt surface is heavily eroded while the edges are damaged and deteriorated.

Concrete sidewalks
- Vegetation is growing through cracks in some of the concrete sidewalks, especially near Bldg. #0554.

Terra cotta culvert
- The culvert is crushed and needs to be repaired.

NPS Housing Area

Gravel parking (Single family residence #49)
- Vegetation is growing through the gravel surface and encroaching on the edges.

Stone wall - Navajo Street
- The wall is failing and stones have fallen or are missing.

Wheel stops
- The wood wheel stops are deteriorating.

NPS Service Area

Expanse of gravel and asphalt pavement
- The pavement is heavily eroded, patched, and missing in places. The edges are worn.

Gravel service drive
- Undefined circulation patterns allow vehicles to park randomly, often too close to trees. The gravel surface is worn.

Masonry retaining wall
- The wall is heavily deteriorated and appears to be failing in places, especially where soil no longer abuts the wall—leaving the masonry exposed and unsupported.

Wood retaining wall
- The wall is tilted, sinking, and does little to retain earth.

Abandoned gas pumps
- The pumps are rusted, defunct, and abandoned.

Concessionaire Housing Area

Coconino Street
- The asphalt surface and edges are eroded. Vehicles were observed parking along the road shoulders.

Boulder Street
- The asphalt surface is cracked and has been patched. The edges are highly eroded and no shoulder is obvious.

Boulder Alley
- The asphalt surface and edges are eroded.

Gravel driveway off of Boulder Street
- The driveway surface is heavily rutted.

Camp Area

Access road through Maswik Cabins
- The pavement surface and edges are heavily eroded and have been patched.

Eastern amphitheater asphalt path
- The asphalt path is heavily eroded, cracking, and missing portions of its stone edging.

Unknown Condition

Rim Area

El Tovar asphalt parking; and El Tovar gravel parking and service area
- The condition of this feature was not assessed during fieldwork.

Storage shed
- The original condition of this feature is not known, nor is the correct condition. Therefore, no condition assessment can be made for the Storage shed.

Utility Area

Grasses; Electrical substation; Utility poles and power lines; and Fuel/Propane tanks
- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.

Office/storage structure
- The condition of this feature was not assessed during fieldwork.

Railroad Area

Railroad tracks
- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.

Peach tree behind Air Conditioning Building
- The condition of this feature was not assessed during fieldwork.

Stone riprap
- The condition of this feature was not assessed during fieldwork.

Metal standpipe
- The original condition of this feature is not known, nor is the correct condition. Therefore, no condition assessment can be made for the standpipe.

Visitor and Community Services Area

Grasses and Fuel/Propane tanks
- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.

NPS Housing Area

Grasses; Fuel/Propane tanks; and Lithic scatter

- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.

Stone pedestrian bridge

- The condition of this feature was not assessed in this CLR.

NPS Service Area

Fuel/Propane tanks and Satellite dish

- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.

Concessionaire Housing Area

Interior/yard spaces

- It is not known how the yard spaces are used at present, or if they continue to be used as they were historically. Therefore, the condition of these spaces cannot be assessed.

Grasses; and Fuel/Propane tanks

- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.

Community School Area

Grasses

- It is beyond the scope of this CLR, and the expertise of the CLR team, to assess the condition of these features.



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600

N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
P

RIM AREA

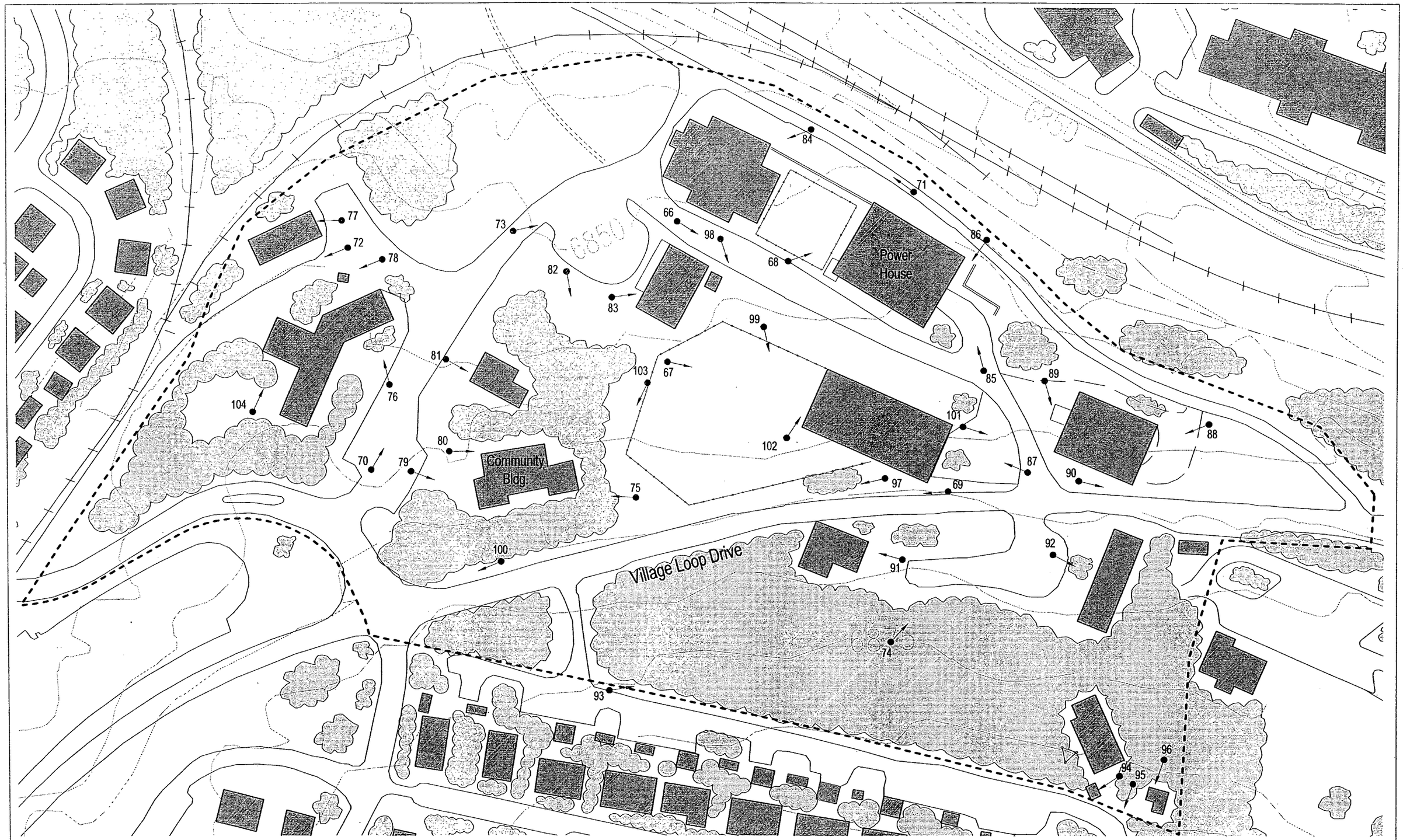
PHOTOGRAPHIC STATION POINTS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
33
OF 67



KEY PLAN

SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
P

UTILITY AREA

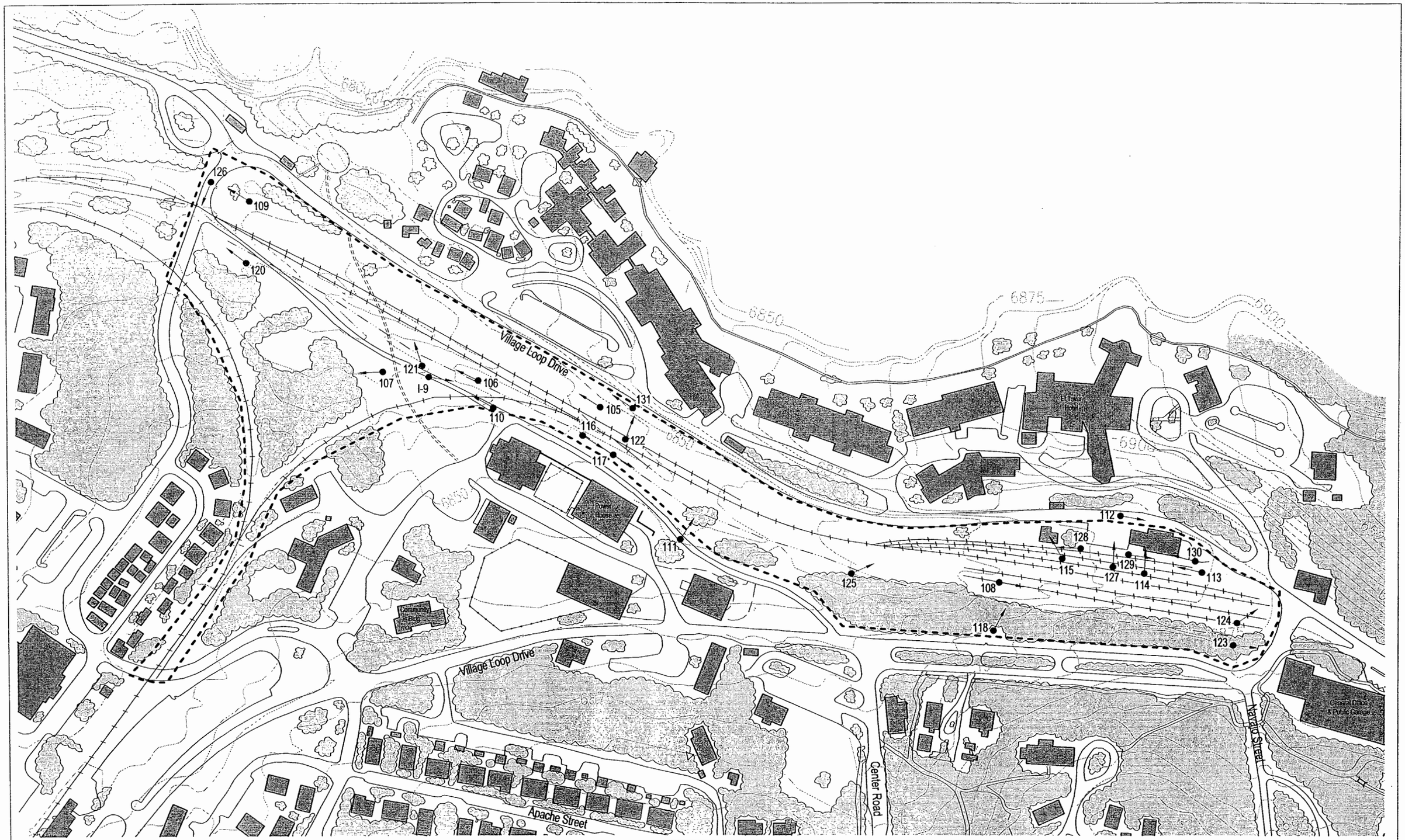
PHOTOGRAPHIC STATION POINTS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
34
OF 67



KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
P

RAILROAD AREA

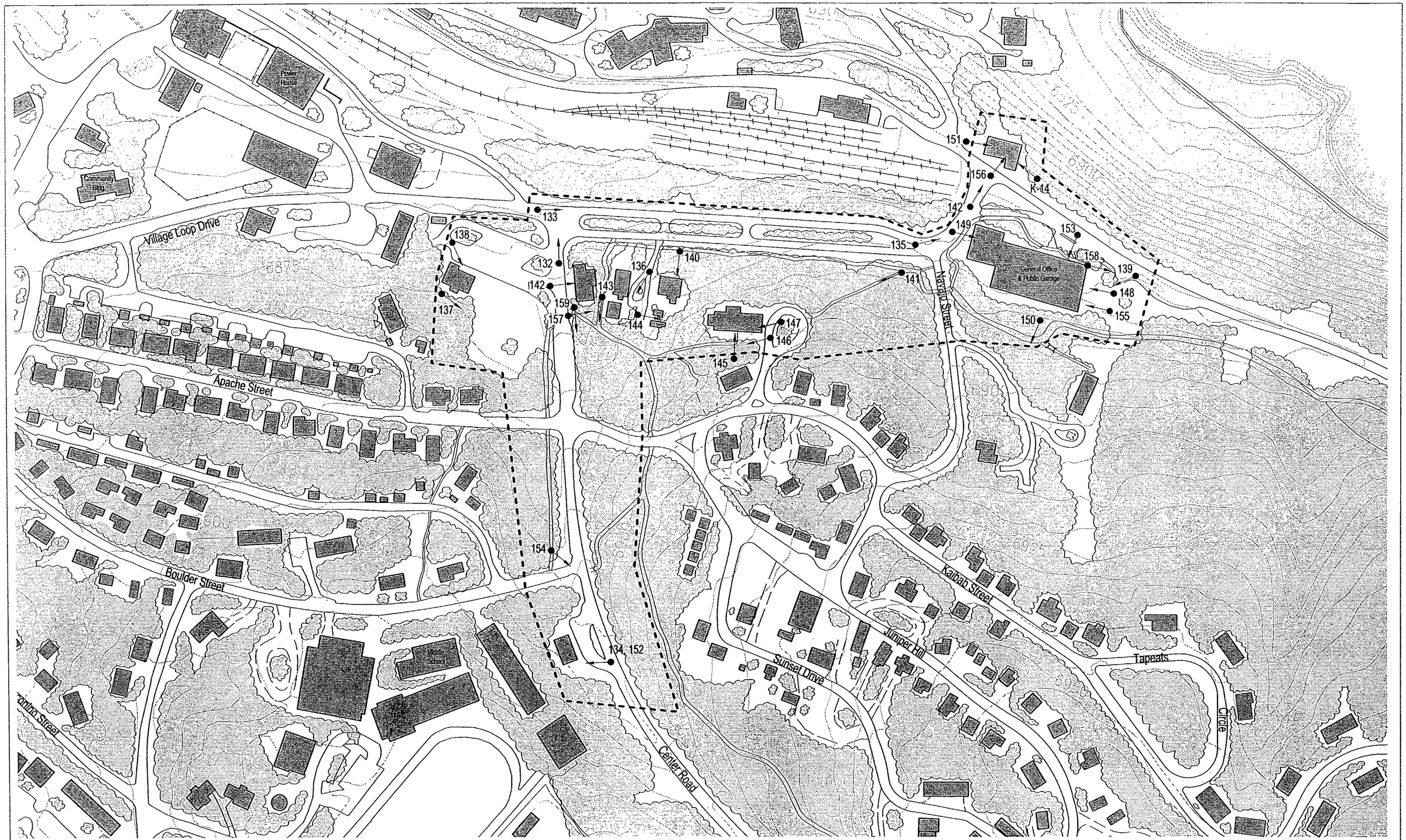
PHOTOGRAPHIC STATION POINTS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
35
OF 67

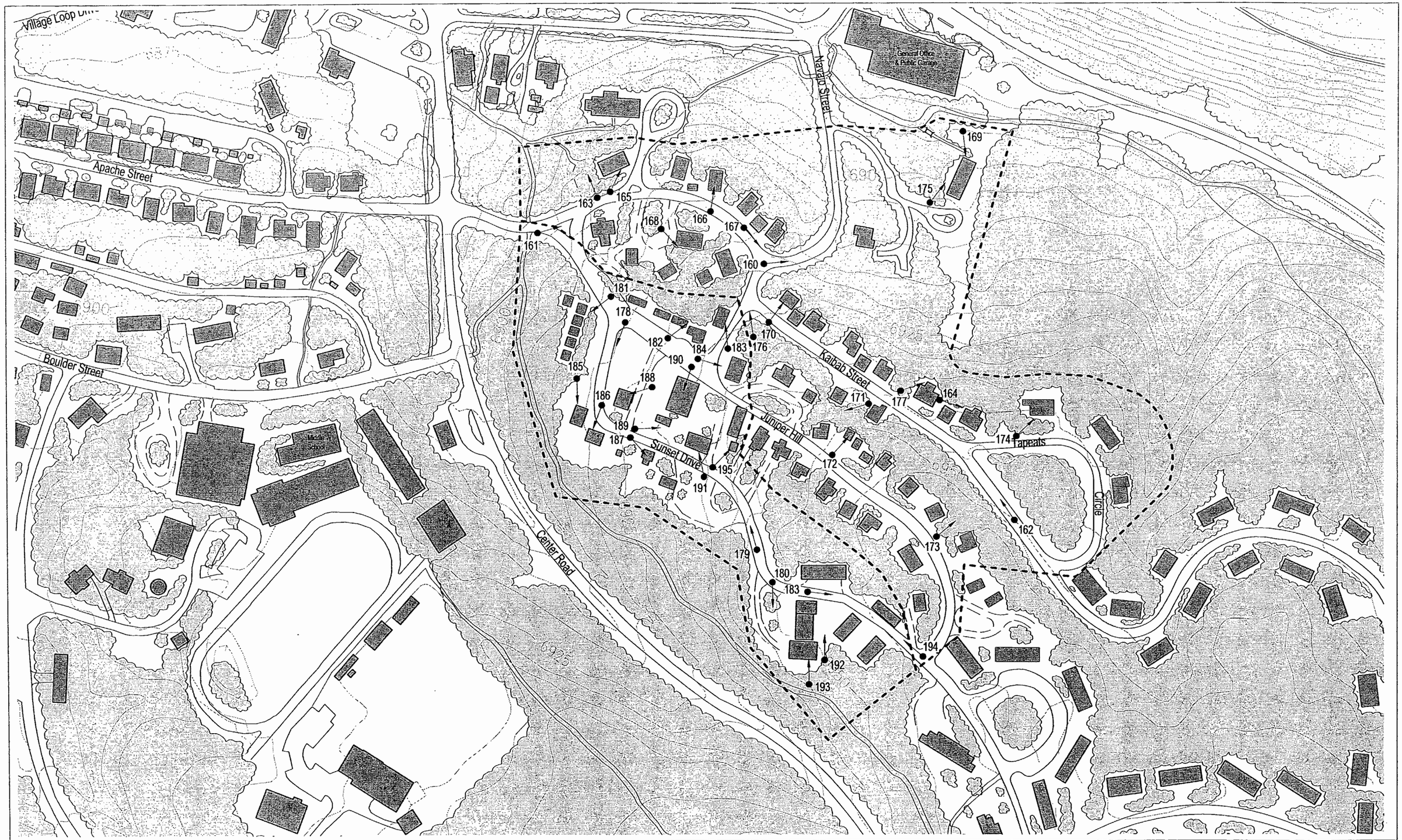


KEY PLAN

SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. P	VISITOR AND COMMUNITY SERVICES AREA PHOTOGRAPHIC STATION POINTS GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. SHEET 36 OF 67



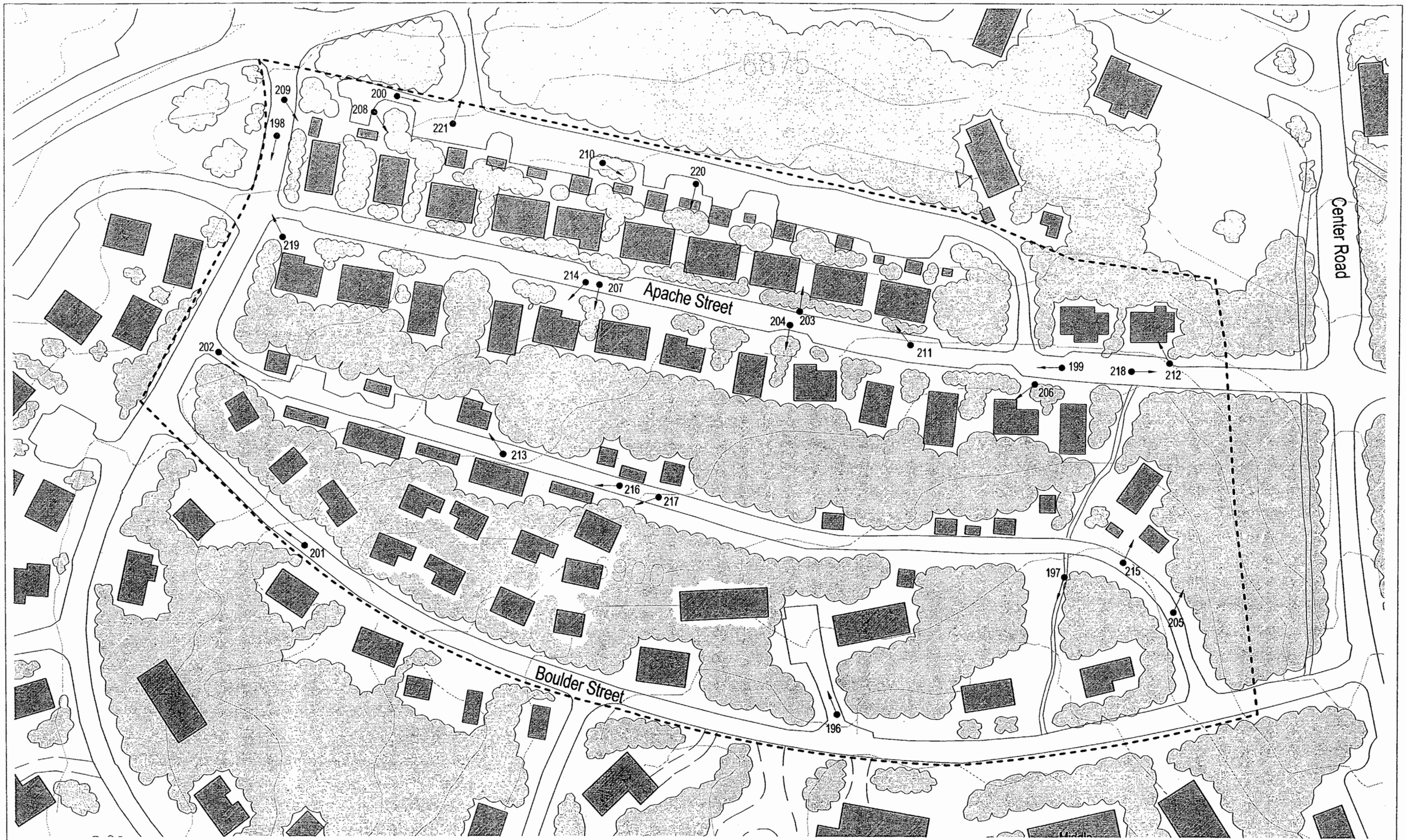
KEY PLAN

SCALE: 1" =200'

0 100 200 400 600

N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. P	NPS HOUSING AREA NPS SERVICE AREA PHOTOGRAPHIC STATION POINTS GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. SHEET 37 OF 67



KEY PLAN

SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

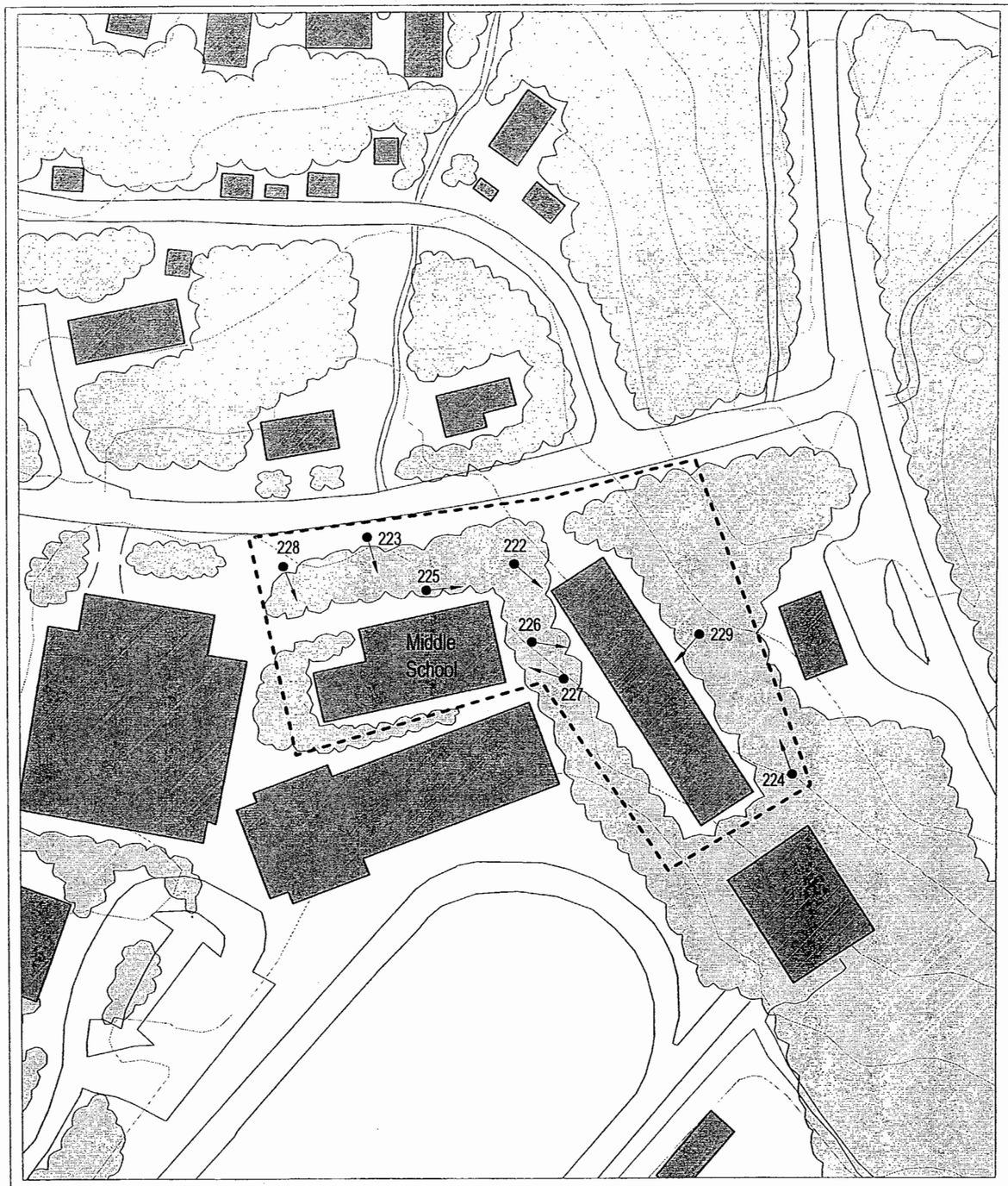
SUB SHEET NO.
P

CONCESSIONAIRE AREA

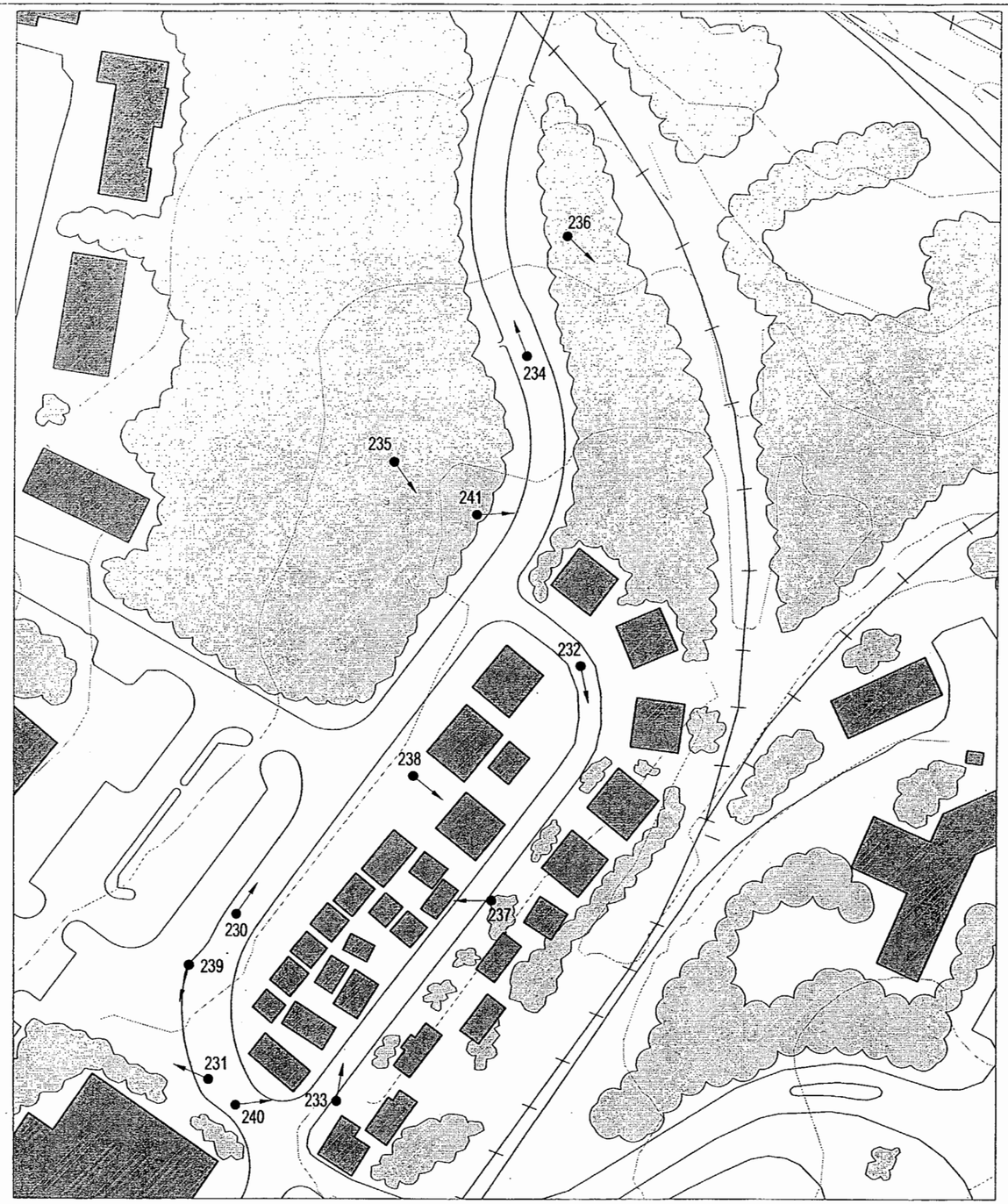
PHOTOGRAPHIC STATION POINTS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

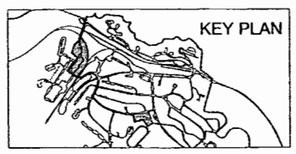
DRAWING NO. 113/20223
PKG. NO.
SHEET 38
OF 67



COMMUNITY SCHOOL AREA



CAMP AREA



SCALE: 1" =100'

0 50 100 200 300 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
P

COMMUNITY SCHOOL AREA
CAMP AREA

PHOTOGRAPHIC STATION POINTS

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
39
OF 67

Chapter Four
Landscape Analysis and Evaluation

Chapter IV • Landscape Analysis and Evaluation

Introduction

The Grand Canyon Village National Historic Landmark District (Village Historic District) is a designed landscape representative of master planning, landscape architectural, architectural, and engineering efforts of the National Park Service (NPS), the Civilian Conservation Corps (CCC), and park concessionaires between the years of 1897 and 1942. As a major component of Grand Canyon National Park (GRCA), the Village Historic District is associated with broader national trends that unfolded during the early-to-mid parts of the twentieth century concerning conservation, tourism, federal programs, architecture, and landscape architecture.

This chapter begins by providing a summary of existing international and national documentation of the significance of the South Rim and Village Historic District landscapes. A preliminary evaluation of the historic significance of the cultural landscapes located within the project area follows. The next component of the chapter compares existing and historic landscape conditions and characteristics to analyze change over time. The chapter concludes with an integrity assessment of the Village Historic District landscape.

Based upon provisions within the project scope of work, the landscape analysis that follows was founded upon primary research conducted at the GRCA archives, as well as extensive historical secondary sources and documentation.

This Cultural Landscape Report (CLR) contains a preliminary statement of significance that details the relationship between the cultural landscape, its specific historic contexts, the criteria set forth by the National Register of Historic Places, and periods of significance. This approach is based upon A Guide to Cultural Landscape Reports: Contents, Process, and Techniques which suggests that "defining the significance of a landscape involves relating findings from the site history and existing conditions to the historic context associated with the landscape."[1] Within this process, individual landscape characteristics and features are defined in the context of the landscape as a whole.

Significance and integrity were evaluated according to criteria set forth by the National Register of Historic Places. To be eligible for the National Register, a cultural landscape must be associated with one or more of the following criteria: relating to events contributing to broad patterns of history; people who made significant contributions in history; design styles or methodology and/or works produced by masters; or yielding historical or prehistorical information.

How well the landscape continues to convey its significance at present relates to its level of historic integrity. Landscape characteristics, associated features, and spatial qualities that shaped the landscape during the significant historic periods were assessed to determine how well they reflect historic landscape conditions at present. As is the case with all cultural landscapes, the project area landscape has changed over time, thus resulting in a complex assessment of integrity.

1 Robert R. Page, Cathy A. Gilbert and Susan A. Dolan, *A Guide To Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, DC: U.S. Department of Interior, National Park Service, Cultural Resource Stewardship and Partnerships, Park Historic Structures and Cultural Landscapes Program, 1998), 71.

International and National Recognition

GRCA is recognized nationally and globally as a site important to our collective heritage. First protected as a forest reserve in 1893 and then as a game reserve in 1906, the Grand Canyon was established as a national monument in 1908. Eleven years later, in 1919, the Grand Canyon was declared a national park. By 1979 the site was inscribed on the World Heritage List.

These numerous accolades illuminate the rich cultural and natural heritage embodied in the Grand Canyon. The Village Historic District is but a part of this resource recognized for its "exceptional value or quality in illustrating and interpreting the heritage of the United States."[2]

The following text will examine this district in the context of the Grand Canyon as a World Heritage Site, as a nationally-significant district, and in terms of its individually significant and National Register-listed resources.

Grand Canyon National Park: World Heritage Site

Nominated in October of 1979 as a World Heritage Site, the Grand Canyon is "recognized as a place of universal value, containing superlative natural and cultural features that should be preserved as part of the heritage of all people."[3] According to the World Heritage List nomination, Grand Canyon National Park is exceptional in meeting both natural and cultural resource criteria for designation as a world heritage site.

According to the 1995 General Management Plan (GMP), several facets of the Grand Canyon help to reinforce this designation. The Grand Canyon has exceptionally diverse biology and multiple life zones, serves as an ecological refuge, and displays rich and diverse geologic and fossil records. American Indian groups have close and sacred ties to the Grand Canyon, which has been occupied by humans for over 4,500 years. The natural scenery, quiet, and solitude offered in the park is remarkable. Unsurpassed and unique recreational opportunities, including trails, wilderness experiences, and whitewater rafting on the Colorado River are also available in the park.[4] These are just a few of the qualities that make the Grand Canyon National Park an international jewel.

As part of the Grand Canyon World Heritage Site, the Village Historic District shares these qualities and helps to promote and sustain the traits that both educate and inspire visitors.

National Register of Historic Places Properties on the South Rim

The Grand Canyon Village has been well-documented on the National Register of Historic Places. Several properties listed on the National Register of Historic Places are located within, or in the vicinity of the Grand Canyon Village. This wealth of nominated and eligible historic properties can be attributed to the innovative design principles set forth by past planners, landscape architects, and architects as well as the high level of integrity present in the Village Historic District and other nearby properties.

The Grand Canyon Village National Historic Landmark District

Located adjacent to the South Rim of the canyon, approximately five miles north of the park's southern boundary, the Village Historic District was first entered into the National Register of Historic Places in 1975 and included 39 contributing features. The nomination was amended in 1982 to include Bright Angel Lodge, which added a total of 25 contributing buildings. A third amendment, made in 1995, extended the district boundaries to encompass the majority of the Village Historic District in accordance with the 1924 town plan and later master plans. A portion of the Grand Canyon auto camp, the adjacent NPS public campground, and the area south of Boulder Street were excluded from the historic district due to lack of integrity. In 1997, the Village was designated as a National Historic Landmark (NHL); the nomination included 247 buildings, 55 landscape structures, and 3 sites. Two cemeteries, both discontiguous sites listed in the 1995 National Register nomination, were not included in the NHL district nomination.

National Historic Landmarks within the Village Historic District

Other features within the Village Historic District were listed separately as NHL properties. Buildings listed as part of the 1987 Mary Jane Colter National Historic Landmark District, including the Hopi House and Lookout Studio, are located within the boundary of the Village Historic District. Also listed individually as NHLs are the Grand Canyon Railroad Depot (1910), El Tovar Hotel (1905), Grand Canyon Park Operations Building (1929), and Grand Canyon Power House (1926).

National Register of Historic Places-listed Properties

Additionally, other properties were individually listed on the National Register of Historic Places, although not as NHLs. These include the Buckey O'Neill Cabin (1896/7), the El Tovar Stables District including the Mule Barn, Horse Stable, and Blacksmith Shop (1904), the Ranger's Dormitory (1921), and the Grand Canyon Railway District (1901). Many additional resources, although not individually listed, contribute to the significance of the Village Historic District.

2 U.S Department of the Interior, National Park Service, 18 April 2003, *National Historic Landmarks Program*, <http://www.cr.nps.gov/nhl/>.

3 United States, Department of the Interior, National Park Service, *Draft Grand Canyon National Park General Management Plan* (Grand Canyon, AZ: Grand Canyon National Park, March 1995), 4.

4 1995 Draft GMP, 7-8.

Preliminary Statement of Significance

Introduction

Properties listed on the National Register of Historic Places must be significant to American history, architecture, archeology, engineering, or culture, and must exhibit this significance in districts, sites, buildings, and structures that retain integrity of location, design, setting, materials, workmanship, feeling, and association. To be eligible for the National Register a cultural landscape must meet one or more of the following criteria:

A. Be associated with events that have made a significant contribution to the broad patterns of our history; or

B. Be associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may likely yield, information important in prehistory and history. The ability of the landscape to convey its significance relates to its level of historic integrity.

The Village Historic District has been listed on the National Register and as a National Historic Landmark. The following pages summarize and synthesize the findings of the 1995 National Register nomination and the 1997 NHL nomination in order to present a holistic statement of significance for the Village Historic District.

JMÀ, in conjunction with contributing consultants, found the Village Historic District to be a significant cultural and historic landscape and generally concur with the findings of the two nominations.

Statement of Significance

According to the 1997 NHL nomination, the Village Historic District has been determined significant under **National Historic Landmark Criterion 1** for its association with the American park movement and under **Criterion 4** as an exceptionally valuable example of American landscape architecture, specifically as the most significant and intact example of NPS town planning.[5]

As discussed by the 1995 National Register nomination, the Village Historic District possesses significance according to **National Register of Historic Places Criterion A**, for its important association with the development of GRCA, and **Criterion C**, as an example of community planning within a national park and as a comprehensive illustration of NPS Rustic architecture and landscape architecture which harmonizes with nature. The areas of significance associated with the landscape are Landscape Architecture, Architecture, Community Planning and Development, Tourism, and Politics/Government.

The Village Historic District illustrates the origins, growth, and development of the Village as the hub of tourist and transportation related activities at the South Rim of the Grand Canyon between the dates 1897–1942.

5 NHL Criterion 1 embodies "events that have made a significant contribution to, or are identified with, or that outstandingly represent, the broad patterns of United States history and from which an understanding and appreciation of those patterns might be gained."; NHL Criterion 4 embodies "the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style or method of construction, or that represent a significant, distinctive, and exceptional entity whose components may lack individual distinction."

Criterion A

Under Criterion A, the Village Historic District possesses significance in the areas of Politics/Government and Tourism and is important for its association with the holistic development of GRCA.

Within the area of Politics and Government, the Village Historic District is significant for its association with the Civilian Conservation Corps (CCC). Up to four CCC camps were located in the Grand Canyon from 1933 to 1942, two of which were based in the Village. The sheer number of workers and the increased governmental funding for projects during this era led to a great deal of construction and improvements in the Village. CCC projects included constructing stone walls, roads, log seating, walkways and paths, headwalls, culverts, utility lines, and re-vegetation efforts.

Within the area of Tourism, the Village Historic District is significant as a representation of the construction and design of tourist-related communities in the nation's most scenic natural areas prior to the creation of the NPS. For more than two decades prior to the Grand Canyon's transfer to the NPS, tourism thrived at the South Rim thanks to early entrepreneurs who settled and operated facilities. The 1901 completion of the Grand Canyon Railway further increased tourism at the South Rim and is a reflection of typical transportation methods of the time. Grand Canyon tourism also reflected the growing mobility of the American population due to the rise in automobile ownership and an increase in leisure time.

Criterion C

Under Criterion C, the Village Historic District is significant within the areas of Community Planning and Development, Landscape Architecture, and Architecture.

The Village is significant within the area of Community Planning and Development due to the early park master planning efforts of people such as Aldo Leopold, Frank Waugh, and Daniel Hull. These planners and landscape architects combined town planning principles, such as zoning, with an appreciation and sensitivity toward the natural landscape to create a village where human construction was harmonized with existing topography, vegetation, and other natural features.

> The town plan for Grand Canyon divided the village into discrete residential, commercial, and civic areas. It also included a consistent architectural idiom, a hierarchy of street sections, and a central plaza with the village's major public buildings sited around it. These and other features of the plan make it not only an exceptional example of NPS town planning, but a highly significant example of American town planning in the 1920s in general. No other example of NPS planning from this era combines the historic associations, size, artistic significance, and excellent state of preservation as does the Grand Canyon Village.[6]

Within the areas of Landscape Architecture and Architecture, the Village Historic District is exemplary of the evolution of the Rustic style of architecture and naturalistic design common to many state and national parks throughout the country. It is one of the first NPS villages designed according to these principles and its success helped to initiate similar planning efforts in the national park system.

Within the areas of Landscape Architecture and Architecture, the Village Historic District is significant as a prime example of NPS Park Rustic design. Rustic design attempted to harmonize constructed features with the existing natural landscape. NPS architects and landscape architects designed their buildings and landscapes as extensions of nature, whereby native materials, such as wood and stone, were used to complement the Grand Canyon landscape. Typical design elements used were native stone building façades, gently curving roads that conformed to topography, earth-tone color schemes of brown, beige, and green, and retention of existing vegetation or use of transplanted native vegetation.

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6 U.S Department of the Interior, National Park Service, 18 April 2003, *National Historic Landmarks Program*, <http://www.cr.nps.gov/nhl/>.

Other Issues of Significance

The preliminary evaluation of significance included in this CLR focuses on the period associated with the development of the Village Historic District by the NPS and concessionaires to support tourism and recreational use spanning from the 1897 until 1942. The following information pertains to aspects of the CLR that require additional consideration as part of future research and planning efforts.

Issue of Ethnographic Documentation

After a review of available research materials, it is clear that the Village Historic District, as part of the larger Grand Canyon landscape, is also associated with prehistoric and American Indian use and occupation. However, owing to scope limitations, the documentation and evaluation of the significance of the Village Historic District, with regards to American Indians, was not undertaken. In addition, according to Park Chief of Cultural Resources Jan Balsom, tribal associations with the canyon itself are very general and little can be extrapolated regarding a direct association with the South Rim landscape. For these reasons, issues of ethnographic significance are not presented in this CLR.

Issue of post-World War II Development

Individual features that date from the post-World War II period, between 1945 and 1956, may be sensitive to change on an individual basis. Resources that fall within this period include several 1950's-era residences and the 1953 Elementary School. After further research, these buildings, and other resources, could be re-evaluated as individually eligible for the National Register of Historic Places.

Issue of Mission 66-era Development

Mission 66 represented the largest program for park improvements ever initiated by the NPS. This ten-year improvement program was a response to increasing pressures to modernize the national park system. Under the direction of Conrad Wirth, then Director of the NPS, the program was named Mission 66 to mark what would be the fiftieth anniversary of the NPS in 1966. In addition to modernizing and expanding park facilities, Mission 66 funded the re-initiation of the Historic American Buildings Survey in 1957 and, in 1960, provided funding for the establishment of the National Historic Landmarks program.[7]

In text included at the front of every NPS unit submission for projected improvements entitled "What is Mission 66?" the NPS maintained:

> MISSION 66 is a forward-looking program for the National Park System intended to so develop and staff these priceless possessions of the American people as to permit their wisest possible use; maximum enjoyment for those who use them; and maximum protection of the scenic, scientific, wilderness, and historic resources that give them distinction.
>
> Construction is an important element of the program. Modern roads, well planned trails, utilities, camp and picnic grounds, and many kinds of structures needed for public use or administration, to the meet the requirements of an expected 80 million visitors in 1966, are necessary; but they are simply one means by which "enjoyment-without-impairment" is to be provided.
>
> Under this program, outmoded and inadequate facilities will be replaced with physical improvements adequate for expected demands but so designed and located as to reduce the impact of public services of the quality and quantity that the public is entitled to expect in its National Park System. It is intended to assure the fullest possible degree of protection, both to visitors and resources.

Some of the design and planning philosophies that informed the Mission 66 program included the use of modern design principles and materials to create functional and economical buildings, the decentralization of services and destinations in order to diminish overcrowding, and the accommodation of large numbers of visitors.

A large number of resources are located outside the Village Historic District boundary—such as typical Mission 66-style circulation patterns and building designs—that date from the Mission 66-era of NPS planning. As of the writing of this CLR, however, a landscape architectural context has not been developed to evaluate Mission 66 landscape architecture and park development at the South Rim. There is, however, a draft Multiple Property Determination of Eligibility (DOE) for the Grand Canyon Village Mission 66 Planning Effort in progress that addresses "historical layering of park resources and the inter-penetration, contiguity, and/or overlapping of historic districts, features, and periods of significance." relating to Mission 66 efforts in Grand Canyon Village.[8] This DOE may inform decisions made concerning Mission 66-era cultural landscapes. The DOE also includes information about "Parkscape U.S.A" resources that date from between 1966 and 1972.

Although Mission 66 resources are not yet evaluated or included within the scope of this CLR, it is recommended that they be protected until a definitive conclusion is made regarding their significance to American history. In the future, these resources may be eligible to be listed on the National Register of Historic Places as districts, sites, or individually-listed properties.

7 HABS was originally started in 1933 as a "make work" program for out of work architects and draftsmen. Part of the Mission 66 program was the initiation of the "National Survey of Historic Sites and Buildings," that was the precursor to the current National Historic Landmarks program. Barry Mackintosh, The National Park: Shaping the System (Washington, DC: Government Printing Office, 1985, 2000 3rd edition) "Mission 66 and the Environmental Era, 1952-1972," [n.p.]; United States, Department of the Interior, National Park Service, Mission 66 In Action [Report on the first year of Mission 66.] Washington, DC, fiscal year 1957; United States, Department of the Interior, National Park Service, Mission 66 Progress Report (Washington, DC: October 1963), 21.

8 The draft Multiple Property DOE, authored by Amanda Zeman, was presented at a May 28-29, 2003 Mission 66 Research Work Meeting in Washington, DC. The CLR team had not received a copy of this DOE prior to the submission of this draft CLR. The quote is taken from the meeting notes.

Period of Significance

Based on previous National Historic Landmark and National Register of Historic Places documentation, the period of significance for the Village Historic District spans from 1897 until 1942.

The start date of the period reflects the earliest architecture remaining in the district: the 1897 Buckey O'Neill Cabin.[9] The end date reflects the disbanding of CCC programs due to the United States involvement in World War II and their subsequent removal from the Grand Canyon.

Between 1897 and 1942, much of the contributing resources within the Village Historic District were constructed or developed. After 1942, few changes were made that considerably altered the appearance or function of the district.

Other significant dates include 1901, the date railroad lines extended to the Grand Canyon Village; 1905, the date Mary E. J. Colter completed Hopi House, the first sections of the stone wall along the rim were completed, and the El Tovar Hotel opened; 1915, the year of the World's Fair which influenced the marked increase in Grand Canyon visitation; 1919, when national park legislation for the canyon was signed; 1924, the date of Daniel Hull's approved plan for Grand Canyon Village; and 1933, the year the Public Works Administration and CCC began providing capital and labor to complete the Village.

Historical Context

The events associated with the development of the Village Historic District and its landscape did not occur in isolation, but are related to other events and developments within the region, state, and nation. These relationships are considered the historic context for the Village. According to the National Register of Historic Places, historic contexts are those patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its meaning within prehistory or history is made clear. The historic contexts, described below, were first developed as part of the 1995 Grand Canyon Village National Register of Historic Places nomination and reiterated in the 1997 Grand Canyon Village National Historic Landmark nomination. For more in-depth information about each context, please refer to the 1995 National Register nomination for the Grand Canyon Village.

Tourism and Early Development at Grand Canyon National Park: 1880s to 1919

This context describes the era which witnessed the origins of the settlement of the Grand Canyon by white Euro-American miners, ranchers, and tourism entrepreneurs; the initiation of railroad service to the South Rim; and the subsequent rapid—almost unchecked—growth of tourist and transportation related facilities in what would become the Grand Canyon Village.

The Role of the Federal Government as Community Planner in the Development of the Grand Canyon Village Historic District (including developments in Architecture and Landscape Architecture): 1919 to 1942

This context discusses the origins of master planning in the Grand Canyon Village. The rationale for initiating planning began with the realization that the ever-increasing growth of the Village, both in construction and of population, was leading to a landscape in disarray. The context describes several master planning efforts by planners and landscape architects such as Aldo Leopold, Frank Waugh, and Daniel Hull.

National Park Service Building Activity: 1919 to 1924

This context describes NPS construction completed before the first phase of the 1924 Daniel Hull Master Plan was implemented. Much of the NPS Housing Area was built between 1919 and 1924 and is discussed under this context.

National Park Service Building Activity: 1924 to 1933

The first phase of the Grand Canyon Village 1924 comprehensive Master Plan was implemented between 1924 and 1933 and was characterized by an aggressive building program by the Santa Fe Railway and NPS. This context describes the construction that occurred during this era which included many of the buildings and roads that exist in 2001.

Park Concessionaire's Building Activities: 1925 to 1933

The Santa Fe Railway's construction program between 1925 and 1929 was significant because it helped to immediately shape and define the basic physical elements of the 1924 Hull comprehensive plan. This context describes the construction efforts of the Santa Fe Railway, and other concessionaires. Notable construction efforts include the buildings in the Utility Area, the Santa Fe water pipeline from Indian Garden, and the Maswik Cabins (formerly the Fred Harvey Auto Camp).

Role of Federal Relief Programs in the Development of the Grand Canyon Village Historic District: 1933 to 1942

Within this context, the role of the CCC in national and state parks is discussed. In particular, CCC projects at the Grand Canyon Village are briefly described.

Park Development During the New Deal Years: 1933 to 1942

This context further describes, in greater detail, the types of projects completed by CCC crews in the Village. In addition to CCC crews, the context describes projects undertaken by Conservation Works Administration (CWA) and Public Works Administration (PWA) crews.

Architecture and Landscape Architecture in the Grand Canyon Village Historic District: 1896 to 1942

This context describes the architectural styles used at the Grand Canyon Village. Building styles range from the initial efforts of the Santa Fe Railway to design resort hotels and tourist accommodations in styles that evoked a romantic image of rustic authenticity and regional cultural association, to early efforts of the NPS to test its emerging policy of harmonizing the built environment with the natural setting, and finally to the sophistication and maturation of the Rustic style of architecture during the NPS building programs of the Great Depression.

9 The actual date of the Buckey O'Neill Cabin construction varies between 1896 and 1897. The 1995 National Register nomination states that the cabin was built between 1896 and 1897 while the 1997 NHL nomination states that the cabin was built in 1897.

Although this context goes into great detail regarding the evolution of architectural styles at the Village, it fails to mention landscape architectural trends taking place during the same era.

It is the opinion of JMA that the term "Landscape Architecture" should be removed from this title and a separate landscape architectural context be included in the National Register nomination. The recommended context is described below.

Historic Park Landscapes in National and State Parks: 1916 to 1942

Linda Flint McClelland's book, Building the National Parks, creates the context within which the park landscape, and landscape architecture, is significant. McClelland states that properties can be listed as members of the National Register multiple property group "Historic Park Landscapes in National and State Parks" if they meet Criteria A and/or C within one or more of the areas of Landscape Architecture, Architecture, Community Planning and Development (park), Conservation, Engineering, Politics/Government, Entertainment/Recreation, and/or Social History.[10]

To be eligible within this context, properties must also:

1. be associated with the twentieth-century movement to develop national parks for public enjoyment, to conserve natural features and scenic areas as public parks, to organize statewide systems of state or local parks, or to develop natural areas, including submarginal lands, for public recreational use.

2. retain several or all of the physical characteristics listed above which were developed for that area during or before the New Deal era (1933 - 1942)

3. reflect the following principles and practices of park landscape design developed and used by the NPS in national parks from 1916 to 1942...through ECW, CCC, PWA, or WPA projects from 1933 to 1942:

   a. protection and preservation of natural scenery and features;

   b. prohibition of exotic plants and wildlife;

   c. presentation of scenic vistas through the location of park facilities and development of overlooks;

   d. avoidance of right angles and straight lines in the design of roads, trails, and structures;

   e. use of native materials for construction and planting;

   f. use of naturalistic techniques in planting, rockwork, and logwork to harmonize constructed development with natural surroundings;

   g. adaptation of indigenous or frontier methods of construction; and

   h. transplanting and planting of native trees, shrubs, and ground covers to erase the scars of construction and earlier uses of the land.

4. possess integrity of location, setting, design, materials, workmanship, feeling, and association and overall reflect the physical appearance and condition of the landscape during the period of significance.

It is the opinion of JMA that the Village Historic District does meet the above criteria and is significant within this context. JMA also feels that this context accurately and appropriately describes the relationship of the Village Historic District to broader patterns within American history.

10 Linda Flint McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore and London: The John Hopkins University Press, 1998), 511-512.

Comparative Analysis of Historic and Existing Conditions

Introduction

In order to better understand the relationship between the 2001 Village Historic District landscape, which encompasses the CLR study boundary and project area, documented in Chapter Three and the landscape that existed during the period of significance, this report includes a comparative analysis of historic and existing conditions. In general, this analysis focused on extant features and their date of origin. Known missing features are also identified. The three primary goals for developing this comparative analysis of historic landscape features are:

- to understand which features contribute to the significance of the landscapes;
- to serve as the basis for an integrity evaluation; and
- to provide insight into the similarities and differences between historic and existing conditions that will contribute to the development of a well-grounded treatment plan for the cultural landscape.

This section also includes an overview-level identification of resources that contribute to the historic character of the landscape; resources that post-date the period of significance and therefore do not contribute to historic character; and resources that were present during the period of significance but are no longer extant.

A detailed listing of inventoried features is located in Appendix A. Within the list, each feature has been assessed, based on the comparative analysis described below, as either contributing (surviving from the period of significance), non-contributing (post-dating the period of significance), or undetermined (insufficient documentation available to assess the date of origin of the feature). Comparative photograph pairs are located within this section.

The comparative analysis is organized into nine sections, corresponding to the nine landscape character areas of the Village Historic District: Rim Area, Utility Area, Railroad Area, Visitor and Community Services Area, NPS Housing Area, NPS Service Area, Concessionaire Housing Area, Community School Area, and Camp Area. Within each section, historic landscape features are discussed according to their relationship to the landscape characteristics identified in Chapter III. These characteristics are Natural Systems and Features, Spatial Organization, Land Use, Circulation, Vegetation, Buildings and Structures, Views and Vistas,[11] and Small-scale Features.

Overview

The Grand Canyon Village began as an outpost for adventurous tourists who wanted to experience western wilderness, as well as its scenic grandeur, while retaining a modicum of comfort. Over time, and with improved transportation and mobility, the Village grew by including more accommodations and improved tourist facilities and services. The El Tovar Hotel provided relatively luxurious accommodations for wealthier tourists while the Bright Angel Hotel and Cameron tent cabins provided the common citizen with affordable lodging. With such improvements, along with "door-to-door" railroad service to the Grand Canyon from Williams, Arizona and an increasingly mobile automobile-owning public, the Grand Canyon became a tourism hotspot. The Village was forced to accommodate the influx of tourists and NPS and concessionaire employees. NPS planners and landscape architects undertook the task of master planning Village development to provide a direction for the rapid growth. Staff and employee neighborhoods were planned and built as were maintenance, mule, and administrative facilities. By the early twentieth-century, the Village had gone from backcountry to town. Today, the Village operates as a small city with schools, churches, utility infrastructure, judicial system, and many other conveniences located in typical towns and cities. Although the Village may have grown, both in size and visitation, the original draw that has brought visitors to the area for over one hundred years remains the same: the beauty and magnificence of the Grand Canyon.

Several common themes of change throughout the Village Historic District became apparent upon completion of the comparative analysis. It appears the natural systems and features remain very similar in 2001 to their qualities during the period of significance. For example, natural topography was altered very little, most likely due to the master planning efforts begun in the Village during the 1920s that conformed to existing topography.

Spatial organization continues to be defined primarily by vegetation, building relationships, and vehicular circulation patterns. The civic plaza, part of the 1924 Daniel Hull Master Plan, no longer serves its original purpose. Soon after construction, the plaza quickly became more of a parking lot than a civic space. The re-routing of traffic to the new South Entrance Road in the 1970s made the plaza even less of a gateway into the Village. Currently, the plaza has been fully converted into a parking lot.

In general, parking opportunities have increased. Roads and sidewalks have become more formal; paved and widened. Both of these trends correspond to an increase in visitation and an increase in the number of vehicles entering the Village Historic District.

Due to the efforts of CCC crews and NPS landscape architects in the 1920s and 1930s, much of the vegetation that exists in the Village Historic District today is native to the region and remains from the period of significance. Additionally, a great deal of attention was paid to the eradication of exotic species and the transplanting and revegetation of native vegetation. According to a 1993 Historic American Engineering Record report:

> The natural landscape surrounding the road-related structures...is much as it was in 1936. Old photographs of Grand Canyon Village and of road construction projects within the village indicate the same grass ground cover and the same preponderance of ponderosa pine, pinon pine, and juniper...Landscape engineers have been involved in national park roadway engineering since the early 1920s, and construction reports of the 1930s indicate that great care was exercised to disturb the landscape as little as possible during Grand Canyon Village projects.[12]

Finally, many of the land uses that exist in the Village Historic District in 2001 were present during the period of significance. This is likely due to the high retention of original buildings, structures, and the essential purpose of the Village: to accommodate visitors in their quest to see the Grand Canyon.

11 The Views and Vistas analysis for this CLR was not based on a scene area or viewshed analysis, but was based on priciples and procedures set forth in *A Guide to Preparing Cultural Landscape Reports* for documenting and evaluating existing and historic views. A scene area or viewshed analysis was not included in the contract's scope of work for this CLR.

12 Michael F. Anderson, Historic American Engineering Record, Grand Canyon National Park Roads, Grand Canyon National Park, HAER No. AZ-35 (Denver: Denver Service Center, 1993), 20.

Rim Area

(Refer to Figures 57 through 60)

Natural Systems and Features

Natural features, such as the canyon edge, plateau, and slopes, in the Rim Area have changed very little since the period of significance. Village development in this location was sited to take advantage of the natural features and views offered by the canyon edge; not to dominate the rim through construction. Although buildings, circulation features, and other features line the rim in this area, the actual geology and landform have not been altered.

Spatial Organization

During the period of significance, spatial organization was determined by two clusters of buildings and structures in the Rim Area: the western cluster of buildings, which at various times included the Bright Angel Hotel, Bright Angel Camp, and Bright Angel Lodge, and the eastern El Tovar cluster. The clusters were divided by a relatively open central space that was less developed and apparently used for parking. Linear corridors of space existed between the buildings and rim, and also between the buildings and Village Loop Drive. A node of space, which no longer exists, consisted of a mule corral east of El Tovar Hotel. The corral was relocated, during the period of significance, west of the Bright Angel Cabins.

Currently, the linear corridors are more heavily reinforced by the addition of Thunderbird and Kachina Lodges—Thunderbird Lodge now occupies the former central open space. The new lodges, built in 1968 and 1971 respectively, complete the west-to-east linear alignment of buildings and structures in the Rim Area. They also create more gathering spaces in front of buildings that, while existing during the period of significance, are more numerous and defined at present.

The western and eastern edges of the Rim Area continue to be defined by undeveloped, or less developed, wooded areas.

Land Use

Land uses in the Rim Area remain the same today as during the period of significance: recreation, food service, commercial and retail opportunities, and lodging.

Circulation

In general, the character area retains many of the same circulation patterns as it did during the period of significance. Major changes since the period involved formalizing and paving of roads and paths and the construction of more access roads and parking.

Early in the period of significance, and according to the 1917 Working Plan Map, pedestrian and vehicular circulation was unplanned and informal. Created for expediency and efficiency rather than aesthetics and comfort, circulation patterns wove between buildings, around railroad tracks, and throughout the area. Roads and paths were unpaved and consisted of hard-packed earth or wood plank sidewalks and steps.

In the early 1920s, and through the end of the period of significance, an increase in visitation and park funding allowed for the improvement and construction of roads, sidewalks, steps, and other circulation features.

Village Loop Drive was constructed between 1929 and 1935. The Rim Area portion of the road followed the alignment shown on the 1917 Working Plan Map and continues to exist along this alignment today. Parking lots have grown in number since the period of significance, although the majority existed prior to 1942. New parking lots and access roads include those that exist between the east edge of Bright Angel Lodge and west edge of El Tovar Hotel and provide access to Thunderbird and Kachina Lodges. The El Tovar circular drive and Verkamp's/Hopi House parking lot existed in loose form, prior to 1942, but were not formalized and paved until after the period of significance.

The original wood plank trail that edged the rim was paved during the period of significance and currently exists as the Rim Trail; an official part of the NPS trail system. Interior Rim Area sidewalks and paths continue to form a semi-planned network of pedestrian circulation just as they did during the period of significance.

Vegetation

As a whole, the Rim Area has always been a "cultivated" area whose vegetation, native or exotic, was manipulated through landscape design, transplanting, and revegetation. Most of these operations were performed using native plant material from the surrounding region. Efforts were made to preserve major stands of existing trees, although smaller shrubs and other plants were more apt to be removed or relocated.

According to the 1917 Working Plan Map and a narrative analysis of vegetative change entitled Vegetative Trends in Grand Canyon From 1935–1984, in general, vegetative patterns in the Rim Area have changed little since the period of significance. At present, many of the same species listed in text and on maps from the period, such as ponderosa pine, pinyon pine, and Utah juniper, still remain.

During the period of significance, it appears that little to no exotic vegetation was introduced into the landscaping within the Rim Area. This is likely due to the prevailing principles of landscape architecture in the NPS at the time that emphasized use of native vegetation that was readily available and in harmony with the existing character of the site. If exotic vegetation was used, it was likely very limited in scope. At present, exotic vegetation includes deciduous shade trees and an extensive use of turf grass lawn.

The most marked disparity regarding vegetation in the Rim Area during the period of significance and at present is the turf grass lawn around Kachina and Thunderbird Lodges and the El Tovar Hotel. There is no apparent historical basis for the presence of this lawn—the lawn was likely installed along with construction of Kachina and Thunderbird Lodges. The lawn detracts from the historic character of the Rim Area due its manicured, lush, and formal appearance. Historic photographs depict a much more organic landscape consisting of tall, ponderosa pines and twisted junipers, native shrubs, and scrub groundcover or bare earth on the ground-plane.

Buildings and Structures

Buildings and structures within the Rim Area have always supported visitor services and tourist operations by providing lodging, food, and retail opportunities.

During the period of significance, two distinct clusters of buildings existed: the Bright Angel Lodge and Cabins cluster (which, at one time, was comprised of the Bright Angel Hotel and Bright Angel Camp), and the El Tovar Hotel cluster including the Hopi House and Verkamp's store. The two clusters were separated by a relatively undeveloped open space. Currently, the addition of the 1968 Thunderbird Lodge and 1971 Kachina Lodge connects the two clusters and blurs the former spatial distinction between them. In addition, the Powell Lodge, Bright Angel Lodge, Buckey O'Neill Cabin, and Rim Cabins have been connected through dogtrots, walkways, and connected porches thereby separating them from the Bright Angel Cabins. The Bright Angel Cabins now exist as their own cluster.

At present, Thunderbird and Kachina Lodges are the only major buildings that post-date the period of significance; all other existing buildings and structures remain from the period of significance.

Over time, several features from the period of significance have been removed and are currently missing. Several small residential buildings—the Bright Angel Hotel, the Bright Angel Annex, and Cameron Hotel and tent cabins—are missing from the current Bright Angel Lodge cluster. Although these buildings are missing, those that currently exist fulfill similar visitor service and lodging needs as their predecessors. At the east end of the Rim Area, El Tovar Hotel was once surrounded by buildings and structures that supported hotel operations, such as employee dormitories, laundry, a greenhouse, and pump house. These facilities have been replaced by Kachina Lodge visitor lodging and the Colter Hall employee dormitory. Also missing are the Hopi House hogans. The open space that once existed between the building clusters is now filled by Thunderbird Lodge.

Many of the stone walls constructed during the period of significance, and by the CCC, remain. These walls include the Rim Trail wall, Lookout Studio and Kolb Studio walls, and other various freestanding and retaining walls throughout the Rim Area. The flagstone patio, north of the Bright Angel Lodge, and Kolb Studio steps—also CCC projects—continue to exist at present. In addition, the Hopi House dance platform remains from the period of significance.

Views and Vistas

Panoramic views into the Grand Canyon, the original and ever-present draw to the Village and South Rim, remain similar—regarding geologic formations—to the period of significance. However, air pollution has reduced visibility into the canyon.

Kolb and Lookout Studios continue to offer the same vantage points over the rim today as they did during the period.

Small-scale Features

Small-scale features in the Rim Area, both historically and currently, support visitor services and park operations. Many historic features remain while a number of new features have been added since the period of significance. Features that remain include telescopes, denoted on the 1917 Working Plan Map, notched log benches, CCC-era culverts, boulder edging, certain lighting standards, stone fountains, and possibly wood signage. New features include wheel stops, contemporary fences, bollards, metal signage, trash receptacles, bike racks, utility meters, and half-barrel planters. Both historic and contemporary features share similar duties, although features have been updated over time through enhanced technology and changes in the way visitors use the Rim Area facilities.

Missing features include mule mounting blocks, corral fencing, fire plugs, and utility poles. These features were lost or abandoned because they were either outdated or no longer useful.



Figure 57. 1906 photo of the Bright Angel Hotel and Buckey O'Neil Cabin on the South Rim of the Grand Canyon. (Grand Canyon Museum Collection Catalog #9828).

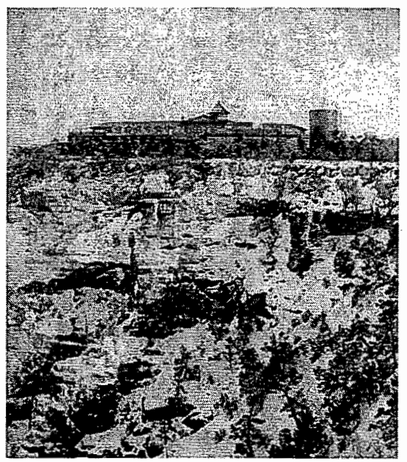


Figure 58. Circa 1910 view of El Tovar Hotel from the east. Note water tank on left side of photograph. (Grand Canyon Museum Collection Catalog #9824)



Figure 59. View of Hopi House from El Tovar Hotel, circa 1930s. Note increased amount of vegetation within the traffic island. (Grand Canyon Museum Collection Catalog #9520)



Figure 57a. 2001 view of rehabilitated Buckey O'Neill Cabin from a similar vantage point. (JMA, 2001).



Figure 58a. View of El Tovar Hotel from east. (JMA, 2001).

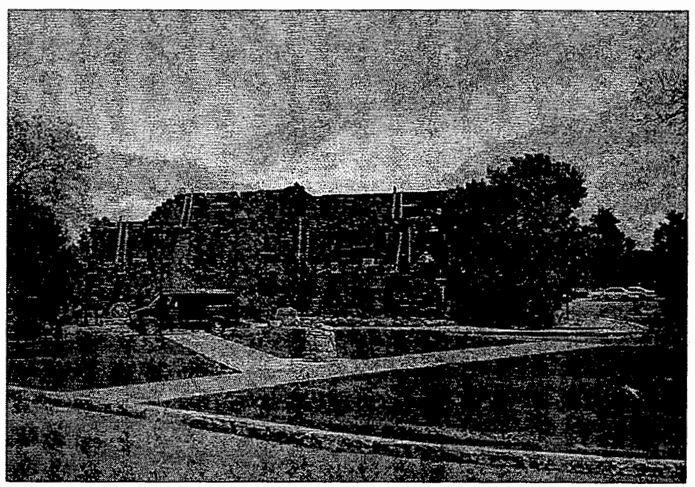


Figure 59a. Hopi House. (JMA, 2001).

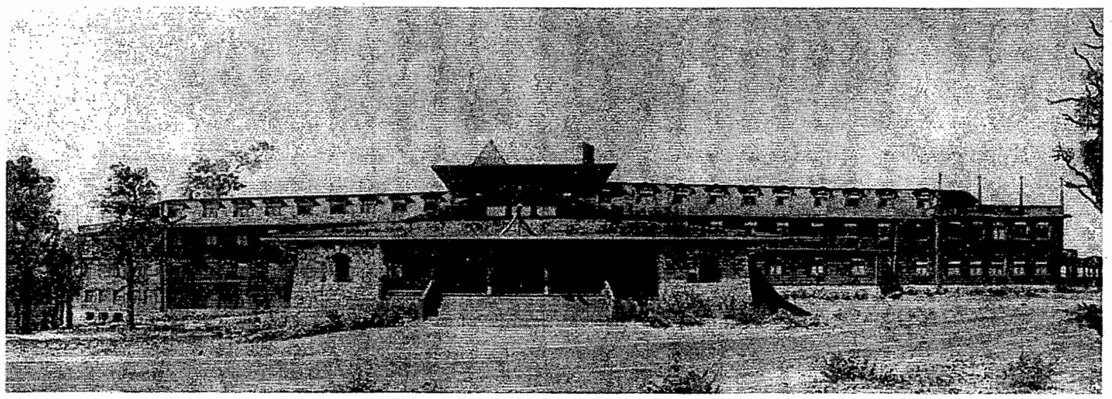


Figure 60. El Tovar Hotel, circa 1905. (Grand Canyon Museum Collection #9835).

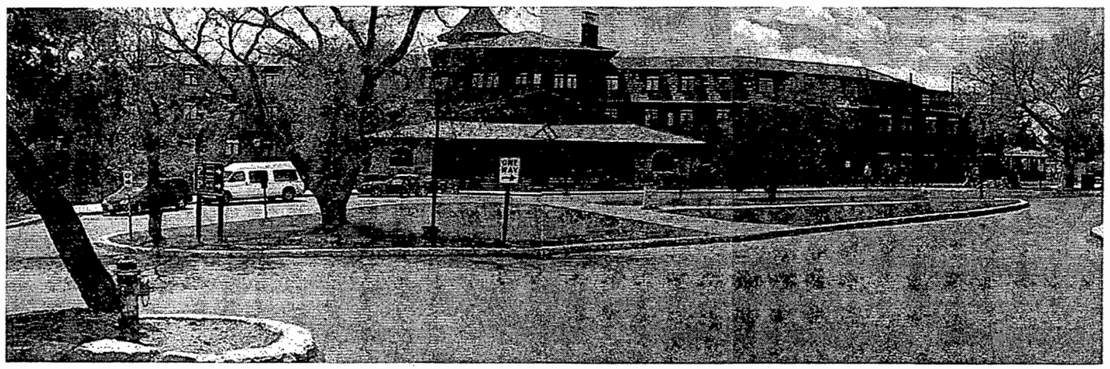


Figure 60a. El Tovar Hotel. (JMA, 2001)

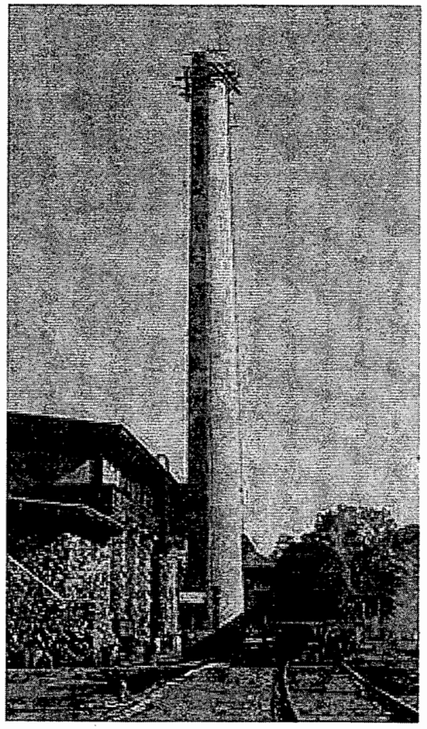


Figure 61. Power House smokestack and railroad spur in the Utility Area character area, circa 1940. (Cline Library, Local Call #NAU.PH.99.21.32).

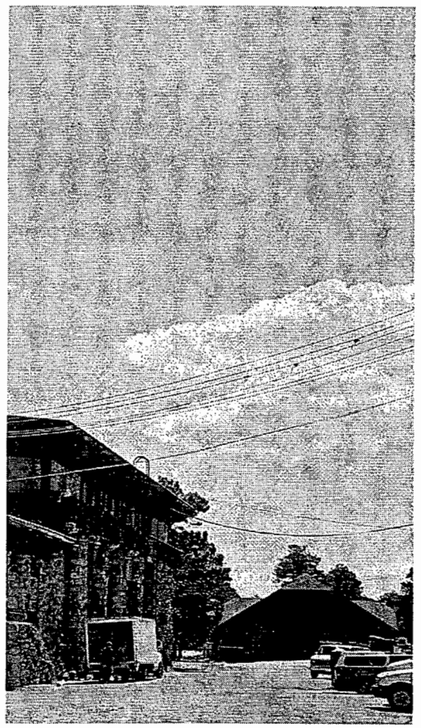


Figure 61a. Power House without smokestack or spur. (JMA, 2001).

Utility Area

(Refer to Figure 61)

Natural Systems and Features

Because the Utility Area has not changed location or been heavily altered over time, natural systems and features, such as the gently sloping land, remain the same today as they did during the period of significance.

Spatial Organization

Historically, the Utility Area contained utilitarian work spaces defined by large utility and concessionaire buildings. When Village Loop Drive was built through the area in the mid-1930s, a vehicular corridor was created. A large massing of pine trees existed south of the primary collection of utility buildings, between Village Loop Drive and Apache Alley. When the Community Building was constructed in 1935, it created a community gathering space, particularly in front of the main entrance. The relationship between the Mule Barn and Livery Stable created a passageway way and parking/gathering space for concessionaire employees who utilized the buildings.

These spaces remain similar in form and function in 2001. The current spatial organization was essentially set in 1927 when the Power House and Purchasing/Receiving Building were completed. The most marked change occurred when the spur rail track was removed from the central utility yard after the period of significance. The removal of this spur opened up the space and created more of a vehicular and pedestrian corridor.

Land Use

Land uses have not changed from the period of significance and continue to be dominated by service and maintenance operations, some residential uses, and civic uses.

Circulation

The most important changes in circulation patterns in the Utility Area are the loss of the railroad spur, which altered both the circulation and spatial organization patterns of the area, and the construction of the Old Village Bypass Road to the north of the Power House.

Village Loop Drive continues to be the primary method of vehicular circulation through the Utility Area. The road was built in the mid-1930s and has altered little from its original alignment. The southwestern portion of Village Loop Drive was re-aligned during the addition of the 1993 Maswik Transportation Center.

The service drives that access the central space of the Utility Area have existed, in some form, since the period of significance. The western drive has historically been the more developed and formal entrance into the space, containing parking lots for the area's buildings. The eastern drive was not paved and connected to the western drive until after the period of significance, likely when the rail spur was demolished. Village Loop Drive, running north of the Power House, was constructed in the 1970s.

Pedestrian circulation existed during the period of significance although the exact paths and sidewalks may have changed form and location. The asphalt sidewalk that extends from Village Loop Drive to the Community Building remains from the period of significance.

Vegetation

Vegetation patterns and composition have changed little from the period of significance. Most likely, this is due to the high retention of buildings, spatial organization, and land uses from the period of significance.

According to historic photographs, the space occupied by the main collection of utility buildings was relatively denuded of trees due to the large footprints of the buildings and associated circulation corridors. This condition continues to exist in 2001. However, the large mass of woodland between Village Loop Drive and Apache Alley remains from the period of significance and continues to provide important screening functions for residences to the south. The grove of trees surrounding the Community Building also remains from the period of significance.

Changes that have occurred in this character area include a decrease in woody vegetation due to an increase in parking and development, such as west of the Maintenance Shop where a large group of trees once stood. The appearance of potentially invasive grasses likely altered the appearance of the ground plane from bare earth or pine needles to green grass.

Buildings and Structures

In general, the composition of buildings and structures in the Utility Area has changed little since the period of significance. Over time, some buildings and structures have been altered or removed, yet the major buildings remain in their historic locations.

Missing features include several utilitarian sheds, storage structures, and the Mule Shed once located east of the Community Building; these losses do not have a large impact on the character of the Utility Area. The sewage treatment/spray ponds, once located west of the Purchasing/Receiving Building, no longer exist. These ponds do alter the spatial organization of the area and were prominent features in historic photographs. A tall smokestack was once located along the south edge of the Power House but was removed in the 1950s. Other alterations include renovations to buildings, such as removal of the western portion of the Livery Stable and portions of the GCNPL Offices.

New features include the substation between the Power House and Purchasing/Receiving Building, radio antenna, the circa 1960 Boy Scout Building and the contemporary Cell Phone Equipment Building. Only the substation has a significant impact on the character of the area due to its location in an historically open space.

Views and Vistas

The most significant change regarding views occurs in the central utility yard space. During the period of significance, the space was often filled with railroad cars that ran on the spur. At present, the yard is consistently open, allowing for long views.

Small-scale Features

Small-scale features in the Utility Area, both historically and currently, support NPS and concessionaire service and maintenance operations. Few historic features remain while a number of new features post-date the period of significance. Features that remain may include rough stone or boulder edging, certain lighting standards, and possibly manholes and drainage grates. New features include wheel stops, contemporary fences, metal signage, trash receptacles, outdoor grills, propane tanks and cut sandstone curbs. Missing features most likely supported the sewage treatment facility, Power House, and other operations that are no longer in use.

Railroad Area

Natural Systems and Features

The Bright Angel Wash has changed little since the period of significance. When originally constructed, the railroad tracks were sited in the wash to accommodate the landform. No alterations have been made to the wash since this time, although natural and human-reinforced erosional processes may have affected the wash slopes. The ditch within the wash has remained in its same location since the period of significance. However, historic photographs show that, over time, the ditch has undergone alterations in width and depth and is currently more eroded, narrow, and shallow than during the period of significance.

Spatial Organization

The current linear alignment, created by the narrow wash and parallel arrangement of railroad tracks, has existed since the period of significance. A node of space currently exists at the eastern end of the tracks, as it did during the period of significance. This node consists of the Railroad Depot, track terminus, and associated features. The wye intersection apparently moved westward during the period of significance—sometime after 1917—but has not been altered since that time.

Land Use

The predominant land use during the period of significance, and currently, was transportation.

Circulation

The railroad tracks are the primary form of circulation in the Railroad Area and, as mentioned above, have not been moved since the period of significance. The number of tracks has been reduced, however, due to decreased train ridership.

Vehicular circulation is, and was, the secondary form of circulation in the character area. The portion of Village Loop Drive following the western edge of the area remains unchanged since the period of significance. The Old Village Bypass Road post-dates the period, having been constructed sometime after the mid-1970s.

The amount of parking has increased since the period. In 1941, parking was only available directly adjacent to the Railroad Depot. Currently, that same parking exists, while a larger gravel parking lot has been added along the southern boundary of the area and east of the Power House.

Pedestrian circulation remains similar in form and frequency to that in evidence during the period of significance. Historic aerial photographs show pedestrian bridges in the wash in similar, if not the same, locations as currently exist. A pedestrian bridge crossing was built circa 1970 near the Power House. It is not known if this bridge replaced an earlier bridge in this location or if it is a completely new circulation pattern. The peeled-log bridge located north of Village Loop Drive was built in 1938 and rehabilitated in 1988, while the path leading to the bridge remains from the period of significance.

Vegetation

Ponderosa pines and other native vegetation currently exist along the Bright Angel Wash slopes and throughout the Railroad Area as they did during the period of significance. Plantings were, and continue to be, informal and loosely organized, thereby creating a naturalistic appearance.

According to historic maps and photographs, the area between the railroad tracks and Village Loop Drive was heavily wooded and remains so in 2001. This massing continues to act as a buffer between the railroad tracks and land uses to the south.

It is unknown to what extent exotic and invasive species occupied the Railroad Area. Currently, a maple tree and a peach tree are located near the Railroad Depot.

Buildings and Structures

According to the 1917 Working Plan Map, several railroad-related buildings and structures were located throughout the area that are no longer extant. These features included residences, sheds, maintenance structures, and the original Power House. During the period of significance, the number of buildings and structures steadily decreased to three or four including the Railroad Depot and freight house. Currently, only the Railroad Depot remains from the period of significance, while the circa 1950 Air Conditioning Building lies to the west of the Depot.

Pedestrian bridges, as mentioned above, have been located in the character area since at least 1927, as indicated in a 1927 aerial photograph (*Figure 25, in Chapter II*). The photograph shows bridges in similar locations as those existing at present, although most are defunct. The most significance change in pedestrian circulation was the addition of a steel staircase along the northern slope of Bright Angel Wash, and north of the Power House, in the mid 1980s.

The 1928 stone wall, built by mason Jesus Morales, remains from the period of significance, although in a deteriorated state. All other masonry features also remain from the period of significance.

Views and Vistas

Views and vistas remain similar to those available during the period of significance. The long views through the interior of Bright Angel Wash and down the railroad tracks are still intact due to the lack of development and construction within the character area. Views to the south continue to be screened by dense vegetation.

Small-scale Features

Little is known about small-scale features during the period of significance for the Railroad Area. It is likely that most features supported railroad operations while some supported passenger and tourist services located at the Railroad Depot. The 1917 Working Plan Map lists features such as an oil tank gauge, lighting, fireplugs, and fencing that are no longer extant. Period features may include concrete-lined swales, culverts, iron fencing around the Depot, lighting, and benches. Features not likely to date from the period of significance are trash receptacles, signage, and the railroad cart exhibit.

Visitor and Community Services Area

(Refer to Figure 62)

Natural Systems and Features

The ravine in which Center Road was constructed remains intact.

Spatial Organization

Historically, spatial organization and relationships were formed by the three building clusters and the linear corridors that separated them. Currently, this spatial organization remains similar to that present during the period of significance. Changes are due primarily to the loss of historic buildings.

The central civic space remains intact although the "plaza" has been fully converted to a parking lot and Babbitt's Store is missing. Because of this, the public plaza/central gathering space quality that existed during the period of significance is diminished. Additionally, the 1954 re-routing of South Entrance Road further diminished the importance of the space as all visitors entered the district from the east, rather than the south.

The Village Loop Drive boulevard corridor survives and is similar in width and character to the period of significance. An expanse of woodland continues to separate the residential buildings from the Public Garage. The Public Garage and Original Superintendent's Residence remain in their original locations and retain similar spatial relationships to surrounding roads, parking, woodland, and other features as during the period of significance.

The Center Drive corridor remains intact, having maintained its original right-of-way width. The School Maintenance Office/former Fred Harvey Service Station continues to be the only break in the corridor's mostly undeveloped edges.

Land Use

During the period of significance, land uses in the Visitor and Community Services Area included administrative, residential, commercial, and public services. With the loss of the Post Office (formerly located in the Magistrate's Building) and Babbitt's Store (burned in 1994), land uses are currently administrative and residential.

Circulation

Circulation patterns remain mostly intact from the period of significance, having undergone only slight modifications since then. Vehicular patterns remain unchanged while pedestrian circulation is more developed. Parking availability remains similar to that present during the period of significance.

The main vehicular circulation routes—Center Road and Village Loop Drive—retain their historic period alignments. A major alteration to the vehicular circulation pattern in the Village was the post-period re-routing of visitor traffic from Center Road to the South Entrance Road. Historically, all traffic entered the Village on Center Road. Currently, visitor traffic enters the Village Historic District by way of the South Entrance Road, essentially undercutting the purpose of the historic plaza at the intersection of Village Loop Drive and Center Road.

The wye drive at the intersection of South Entrance Road and Village Loop Drive, although most likely altered over time, appears to retain a similar alignment as during the period of significance.

Asphalt sidewalks extending through the area date to the period of significance and appear on the 1941 Master Plan map.

Vegetation

During the period of significance and in 2001, the area has consistently been heavily wooded with ponderosa pine community vegetation typical of the region. It is unknown what type of exotic or invasive species existed during the period of significance.

Buildings and Structures

The majority of buildings and structures that exist in the character area at present remain from the period of significance. Although the primary building relationships remain, individual building uses have undergone changes. For example, the former Post Office is now the Magistrate's Building and the Grand Canyon Association Building was once a hospital. The School Maintenance Office was once the Fred Harvey service station while the Original Superintendent's Residence is currently used as administrative offices.

New structures include a 1994 bus shelter, concrete masonry unit walls and planting beds, and concrete steps.

The most significant missing feature is Babbitt's Store which burned in 1994. The store formed a large portion of the central "plaza" edge and reinforced the public use of the area.

Views and Vistas

Views continue to be limited due to dense vegetation and the location of this character area; as they were during the period of significance.

Small-scale Features

It is difficult to compare existing versus historic small-scale features due to the lack of photographic, written, or other graphic information available. The discussion below draws on known information and educated assumptions.

Currently, small-scale features in this area support vehicular circulation and visitor services and also serve as directional aids, safety measures, and utility services. Features include wheel stops, curbing, bollards, signage, fencing, telephones, lighting, fire hydrants, picnic tables, and trash receptacles.

Features that may date to the period of significance include some types of masonry curbing, an iron gate at the Superintendent's Residence, certain light standards, boulder curbing, some fence types, culverts, and a concrete-lined swale.

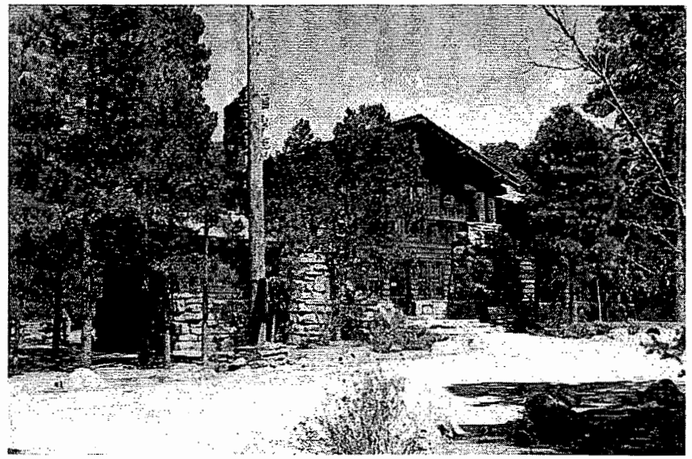


Figure 62. Ranger Operations Building, previously the park's Administration Building, circa 1935. (Grand Canyon Museum Collection Catalog #9506)

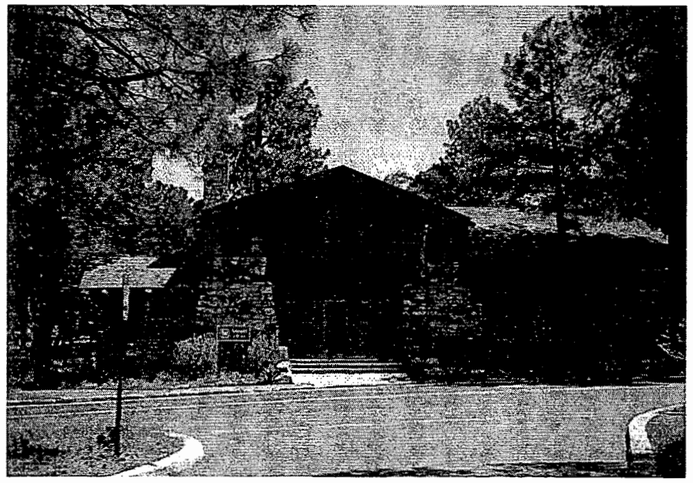


Figure 62a. Ranger Operations Building. (JMA, 2001).

NPS Housing Area

Natural Systems and Features

Similar to the period of significance, the NPS Housing Area continues to be located on gently sloping upland dominated by ponderosa pine communities.

Spatial Organization

According to the 1995 National Register nomination, houses in the NPS Housing Area were planned and built with their backs facing the streets while their front doors opened onto wooded public space and connecting paths. Historic maps support this concept. At present, however, little physical evidence remains that reflects this planning method. It appears that the front entrances of the residences currently face the street while the paths systems still exist and are used by residents. This alteration now places more emphasis on the vehicular corridor as a public space than existed during the period of significance, but does little to detract from the historic character of the area.

Land Use

Land uses during the period of significance were primarily residential, although the school provided community services. Currently, uses continue to be primarily residential. The library provides a community service while the WODC and Fee Management offices offer administrative support.

Circulation

During the period of significance, vehicular circulation was the primary form of circulation. Although not yet named as such, Navajo Street, Tonto Street, Kaibab Street, Juniper Hill, and Tapeats Circle had been constructed by 1942. The streets currently retain their historic alignments. In 1942, however, Juniper Hill ended at Tapeats Circle, rather than extending into the rest of the park as at present.

Historically, maps show that the character area had a well-developed pedestrian system of formal sidewalks leading to and from buildings and along streets. Park annual reports from 1934 suggest that CCC crews created 1,000 feet of crushed rock footpaths with limestone curbing. At present there is little evidence of this circulation network aside from short remnant sections. Sidewalks and paths exist, yet are informal and do not appear to be part of a larger network.

Vegetation

According to annual reports from 1940 and a list of CCC projects at the park compiled by Patricia Mott in 1983, CCC crews were very involved in vegetation-related projects in the Village. Reports mention that crews planted shrubs and plants in residential areas and transplanted over 5,000 trees and shrubs around various structures and residences. CCC crews also landscaped around the newly-built school in 1940. The overall historical vegetation concept is one of a cultivated area with much planting and transplanting of native trees and shrubs, creating a human-made—yet natural-looking—landscape.

Currently, the area is filled with ponderosa pine woodland. It is unknown if these woodlands are indigenous or were transplanted from other locations in the park. Grasses and ornamental vegetation, in the form of both native and exotic plants, exists around residences. These plants may have been part of the CCC beautification efforts. The existing vegetation around the WODC/Library—the former school—shows no sign of formal landscape design; it is not known if the surrounding pines and junipers were transplanted.

Buildings and Structures

Almost all of the buildings and structures constructed during the period of significance remain intact at present, although, in some cases, their uses may have changed. Missing structures include a water tower located on Juniper Hill, east of Bldg. #SRQ0163, and a wading pool near the former school playground, built in 1936. Buildings that post-date the period include two single family residences (Bldgs. #472 and #1140). Bldg. #472 was constructed in 1972 in the location of the former water tower. Bldg. #1140 was built in 1945 and is located on Juniper Hill. These residences do not detract from the overall character of the area.

It is likely that the existing stone walls on Tonto Street and Tapeats circle date from the period of significance.

Views and Vistas

Because the area has occupied the same lands historically as it does at present, and it is likely that vegetative density was similar during the period of significance as it is at present, there were likely no significant views available during the period.

Small-scale Features

Because there is little photographic or textual documentation of the NPS Housing Area, it is difficult to compare historic and contemporary small-scale features.

It is likely, though, that features constructed of native stone, such as Kaibab limestone, or wood date from the period of significance. These features may include stone edging or curbing and wooden wheel stops. Metal features, such as light standards, culverts, and drainage grates, may also date from the period of significance.

Contemporary features tend to be made of metal or composite materials that did not exist, or were not typically used, between 1897 and 1942. Contemporary features also include those of obvious new construction. These features include metal directional and traffic signs, trash receptacles, dumpsters, satellite dishes, and propane tanks.

NPS Service Area

Natural Systems and Features

Existing natural systems and features remain similar to those present during the period of significance. The NPS Service Area and associated features were sited on a gently sloping hill east of Center Road. The landform and location of features has changed little over time.

Spatial Organization

During the period of significance, the primary space was the work plaza located south of Tonto Street. The formal, rectangular plaza was defined by service and maintenance buildings and a woodland edge. To the east, Sunset Drive did not yet continue past the existing Village Historic District boundary into the park. The road terminated into Juniper Hill thereby forming a loop road. CCC barracks were located to the east of this terminus.

Currently, the primary plaza space has lost much of its definition. Missing buildings and a re-routed and formalized Sunset Drive have taken focus away from the space. The plaza has become less of a destination, as the Sunset Drive vehicular corridor now bypasses the plaza and continues eastward into the rest of the park. Woodland continues to define the remaining spaces within the character area. The mule barns located in the southern portion of the area now form a distinct and separate node of space.

Land Use

Historically, land was used for maintenance operations, livestock operations, and residential use. Currently, the area continues to be used for these same purposes.

Circulation

Circulation patterns have changed significantly since the period of significance. Historically, the service plaza was the major vehicular terminus while an unpaved access road led from the southeast corner of the space toward the CCC barracks located east of the plaza. The access road joined with Juniper Hill to form a loop road. Various loops, driveways, and pull-offs accessed residences and maintenance facilities along the way.

After the period of significance, the plaza space and access drive were altered to become a formal road: Sunset Drive. Sunset Drive assumed the western and southern edges of the plaza and then the general alignment of the service road before extending eastward into the park. The northern edge of the plaza was subsumed by Juniper Hill. The new roads had the effect of taking focus away from the plaza and wooded spaces. In addition, the loop drives and pull-offs were abandoned for less formal gravel spaces.

Vegetation

Ponderosa pine communities were present historically as they are today, maintaining similar locations—clustered between and around buildings and along road edges.

Buildings and Structures

Several buildings and structures that date from the period of significance are missing. Equipment sheds along the northern edge of the plaza were replaced by 1960s-era temporary housing units. Equipment sheds along the west edge of the plaza have been removed. A small equipment shed, east of existing Bldg. #SRB0080, was removed from the south edge of the plaza. An equipment shed and Paint Shop were removed from the western edge of the plaza. In addition, the CCC barracks no longer exist. New features include Buildings #1125 and #1124—two pole structures used for livestock purposes.

The effect of these missing and new features is a distinct change in spatial organization of the character area and a decrease in the importance and definition of the work plaza. Any future removals or alterations of buildings and structures within the character area may have an even greater adverse impact to the historic character of the area.

Views and Vistas

Due to the character area's distant location from the rim and dense vegetation, there are currently no significant views or vistas. However, internal views of the work plaza continue to be available. It is likely that similar views existed during the period of significance. In addition, during the period of significance, the former Power House smokestack was visible from the character area.

Small-scale Features

As with other areas within the study boundary, it is difficult to compare period and existing conditions due to the lack of historical information.

According to a 1935 Master Plan, the NPS Service Area contained small-scale features such as a hose house, water stand pipe, stone curbing, power saw, ladder rack, fencing, and log fence. Other features existing during the period of significance likely supported maintenance and livestock-care purposes.

Currently, few of these features are extant, with the possible exception of sections of fence, lighting, and two defunct gas pumps. However, existing contemporary features share similar maintenance and livestock-related purposes. These features include wood wheel stops, bollards, fence types, storage containers, material piles, street signs, dumpsters, and satellite dishes.

Concessionaire Housing Area

Natural Systems and Features

The Concessionaire Area was built on a rise of land west of a ravine and Center Road. This landform remains consistent with its appearance during the period of significance.

Spatial Organization

Historically, landscape features along Apache Street and Boulder Street were developed more than a decade apart; Apache Street housing was planned and built in the late 1920s while Boulder Street housing was developed around 1940. Following typical town planning principles of the time, Apache Street had a neighborhood spatial pattern of residential houses facing the street, creating public space within the road right-of-way and private space to the rear of houses. Alleys reinforced this public/private dichotomy. Boulder Street, however, was planned as clustered development where buildings were arranged in a loose grid pattern between streets, with internal spaces between the residences. A large, undeveloped woodland was located to the east of this cluster. This wooded area would not be developed until 1948 with the addition of the Verkamp's Residence.

Currently, many of the same spatial relationships and patterns exist. The most significant alteration has been the addition of housing in the woodland. Five houses and duplexes were built in the space after 1942. However, the new buildings were constructed to the west of the Center Road right-of-way thus maintaining a wooded buffer along the street edge.

Land Use

Historically, the primary land use was residential in nature. This continues to be the primary land use at present.

Circulation

Vehicular circulation remains generally unchanged since the period of significance. The predominant system of streets and alleys still exists, although with minor alterations. During the period of significance, Boulder Alley did not turn south to meet with Boulder Street, as it currently does. Instead, the alley terminated in a circular turn-around south of Bldg. #0821. A wye intersection once led from the south side of Boulder Street to the former Athletic Field driveway. The intersection was removed when the athletic field was demolished. In addition, neck-down parking along Apache Street did not exist during the period of significance.

Due to the informal nature of the alleys, it is likely that the system of gravel parking spaces and parking pull-offs that exists today was also present historically. The driveway and parking lot that exists between Bldgs. #325 and #326 post-dates the period of significance.

According to the 1941 Master Plan, a sidewalk ran along the south edge of Apache Street. There is no evidence that this sidewalk exists today; it was likely removed when neck-down parking was installed.

Vegetation

Aerial photographs show that the woodland masses exist at present much in the same way as they did historically. The exception is the woodland located east of the 1940s-era housing; this woodland was simple thinned, rather than removed, to create building sites.

At a smaller scale, it is difficult to complete a comparative analysis for landscaping around each residence, or the historic presence of exotic vegetation, due to the lack of available documentation. As with the NPS Housing Area, however, it is likely that CCC crews transplanted vegetation to landscape around residences in this character area. Although some foundation plantings exist between sidewalks and the houses, it is not known if this use of ornamental vegetation was typical of the period of significance.

Buildings and Structures

With the exception of a small number of sheds or garages, the majority of buildings and structures remain from the period of significance. Because of this, building relationships to each other and surrounding features remain almost wholly intact. New features are located in the southeastern portion of the area and do not alter historic building relationships or character. These features include Bldgs. #1376, #325, #326, #322, and #506—all built between 1948 and 1980.

Views and Vistas

As with other character areas located away from the rim, no significant views or vistas currently exist. Because many of the features in this area remain similar to their period of significance, it is likely that no views or vistas were available historically.

Small-scale Features

As with other character areas within the CLR study boundary, it is difficult to compare period and existing conditions due to the lack of historical information.

It is likely that features made of wood or native stone may date to the period of significance. These features likely include rough stone or boulder edging, culverts, drainage grates, and certain types of fencing. Features that are contemporary in construction, that likely post-date the period of significance, include chain-link fence, metal traffic signs, dumpsters, concrete curbing, picnic tables, and propane tanks.

Community School Area

Natural Systems and Features

At present, there are no distinctive natural systems or features in this area. Most likely, none existed during the period of significance.

Spatial Organization

During the period of significance, the character area had only one building, the 1939 school, surrounded by vegetation. The area was defined by Boulder Street to the north, the athletic field driveway to the west, the athletic field to the south, and woodland and the old Fred Harvey Service Station—currently the school maintenance office—to the east.

Currently, the historic pattern of spatial organization is disrupted by the addition of the 1953 Elementary School to the east of the original school building. The effect of this intrusion was to create smaller pockets of space between the buildings.

Land Use

This area has always been associated with, and continues to be associated with, community service and educational uses.

Circulation

Historically, no vehicular circulation was associated with this area and pedestrian circulation was the primary form of transport. The 1941 Master Plan (*Figure 43*) shows two paths leading from Boulder Road to the school. The path which currently leads from Boulder Street to the front of the Middle School may remain from the period of significance.

Vegetation

It is not possible to determine what type of vegetation existed in this area during the period of significance due to lack of historical information. However, it is likely that ponderosa pine communities were present historically, as they are today. Native ornamental species, planted at an unknown date, are located throughout the character area.

Buildings and Structures

Only one building existed in the area during the period of significance: the Grand Canyon Middle School, built in 1939. The second building, the Elementary School, was built in 1953.

Views and Vistas

As with other areas that are located away from the rim, no significant views or vistas currently exist. It is likely that no views or vistas were available historically.

Small-scale Features

As with other landscape character areas within the CLR study boundary, it is difficult to compare period and existing conditions due to the lack of historical information.

It is likely that features made of wood or native stone may date to the period of significance. These features likely include rough stone or boulder edging, culverts, and stone-lined swales. Features that are contemporary in construction, and likely post-date the period of significance, include trash receptacles, metal traffic signs, dumpsters, and a compost bin.

Camp Area

(Refer to Figure 63)

Natural Systems and Features

Currently, there are no natural features of note in this area, nor were there any during the period of significance.

Spatial Organization

Current spatial relationships and patterns around the Maswik cabins remain similar to those existing during the period of significance due to a high retention of buildings and circulation patterns. Both vehicular corridors, interstitial cabin spaces, and the wooded spaces remain from the period.

However, overall spatial organization throughout the character area was disrupted by the loss of the amphitheater, which currently exists as a ruin consisting of two circular gravel areas.

Land Use

The Camp Area was historically used for visitor accommodations and interpretation during the period of significance. Currently, the area supports primarily residential land uses.

Circulation

Village Loop Drive and the access drive through the cabin clusters date from the period of significance and continue to exist at present much as they did historically. Minor alterations include the widening of Village Loop Drive to include a drop-off lane where it turns sharply northward. According to an historic photograph, parking between the cabins appears to have exited historically in much the same way as it does at present—it is opportunistic and consists of loose gravel parking spaces. During the period of significance, parking was also available at the amphitheater site. It is unknown how the existing gravel spaces relate to the historic amphitheater arrangement.

Pedestrian circulation appears to have improved over time, but is still a minor circulation pattern in the area. The addition of sidewalks since the period of significance has resulted in a more formal and developed pedestrian system. Two path alignments, north and south of the remnant amphitheater space, may remain from the period of significance.

Vegetation

It is likely that ponderosa pine trees, in loose arrangements, existed during the period of significance as they do at present.

Buildings and Structures

Few significant changes have occurred regarding buildings and structures since the period of significance. It appears that most buildings and structures remain from the period and few features post-date the period.

The exception is the amphitheater, or "lecture circle" that once existed in the northwestern section of the Camp Area boundary. The demolition date and actual physical appearance of this structure is unknown. In addition, a contemporary planter is wall located in the recently-constructed Maswik Lodge plaza. It is clearly of relatively recent construction.

Views and Vistas

There are currently no significant views in the Camp Area. Because the majority of features remain intact from the period of significance, it is likely that no significant views were available historically.

Small-scale Features

As with other landscape character areas within the CLR study boundary, it is difficult to compare period and existing conditions due to the lack of historical information.

It is likely that features made of wood or native stone may date to the period of significance. These features may include rough stone or boulder edging. Metal features that may date to the period of significance include lighting standards, culverts, and drainage grates. Other features that are contemporary in construction include trash receptacles, metal traffic signs, dumpsters, and bollards.



Figure 63. View of Fred Harvey Auto Camp, now the Maswick Cabins, looking north, circa 1950 (Grand Canyon Museum Collection #9966).



Figure 63a. Maswick Cabins, looking north. (JMA, 2001).

Identification of Contributing, Non-Contributing, and Missing Resources

All existing, inventoried landscape features are classified as contributing, non-contributing, or undetermined in this CLR. Contributing features survive from the period of significance—1897 until 1942. Non contributing features post-date this period. An undetermined classification signifies that not enough information is known about a particular feature to make a judgment concerning its contributing or non-contributing status at this time. For this CLR, one of these three classifications were assigned for each landscape feature in Appendix A of this report, and also on the existing conditions inventory maps. An overview map of contributing and non-contributing features is located at the end of this section (*Sheet 41*).

Missing features are classified as those features that were once present within the Village Historic District but are no longer extant. A list of these features is identified below, organized by landscape characteristic, and keyed to the map on the adjacent page (*Sheet 40*). Features whose historic locations are unknown, or are found throughout the entire Village Historic District, are not mapped. Many of these features are also identified on the period plans located in Chapter II of this CLR.

Although several landscape features are missing, the majority of features present during the period of significance remain. Buildings constitute the greater part of missing features. Minimal vegetation has been lost, in general, due to sensitive siting of new features and the tendency of the NPS to selectively thin woodland to create development sites, rather than razing vegetation. It is likely that many small-scale features are no longer extant, although it is difficult to account for these features due to their inherently moveable, replaceable, and disposable nature.

Missing Spatial Organization Patterns

- A - Open space between Bright Angel Lodge and El Tovar Hotel
- B - El Tovar corral
- C - Playground space south of the current WODC/Library Building
- D - Woodland mass between Middle School and the current School Maintenance Office

Missing Circulation Patterns

- E - Rail spur through Utility Area
- F - Sections of railroad track
- G - Original alignment of Village Loop Drive (southwestern portion)
- H - Portions of the pedestrian path system through the NPS Housing Area
- I - Wye intersection on Boulder Street (to original athletic field)
- J - Apache Street sidewalk
- K - Amphitheater parking

Missing Vegetation

- Native vegetation eradicated by development, including:
  - mule corral
  - inside El Tovar Hotel drop-off loop
- L - Grouping of trees west of the Maintenance Shop (in location of current parking lot)
- M - Uninterrupted woodland mass east of the 1940s-era housing

Missing Buildings and Structures

- N - Bright Angel Hotel
- O - Bright Angel Annex
- P - Cameron Hotel and tent cabins
- Q - El Tovar Hotel auxiliary buildings
- R - Cabins south of the Kolb Studio
- S - El Tovar Hotel water tank
- Miscellaneous sheds and structures in Utility Area
- T - Mule Shed east of Community Building
- U - Sewage treatment ponds/Spray ponds
- V - Smokestack
- W - Western extension of Livery Stable
- Miscellaneous sheds and structures in the Railroad Area
- X - Original Power House
- Y - Freight House
- Z - Babbit's Store
- AA - Water tank
- BB - Wading pool south of the current WODC/Library Building
- CC - CCC Barracks
- Various equipment sheds in the NPS Service Area
- DD - Paint Shop
- EE - Storage Shed and garage (Bldgs. #778 and #778a)
- FF - Amphitheater

Missing Views and Vistas

- GG - Views toward the canyon in former open space

Small-scale Features

- Utility poles, hitching posts, mounting blocks, fire plugs, wood fencing and other features throughout the Village Historic District.

NOTES:

Other missing features include:

- Native vegetation eradicated by development

- Miscellaneous sheds and structures in the Utility Area and Railroad Area

- Various equipment sheds in the NPS Service Area

- Utility poles, hitching posts, mounting blocks, fire plugs, wood fencing, and other small-scale features throughout the Village Historic District

El Tovar Hotel

Power House

General Office & Public Garage

Community Building

Middle School

R N O P GG S A Q B K FF U L E V W X F Y T G EE Z J BB H C M I D DD AA CC

SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
H

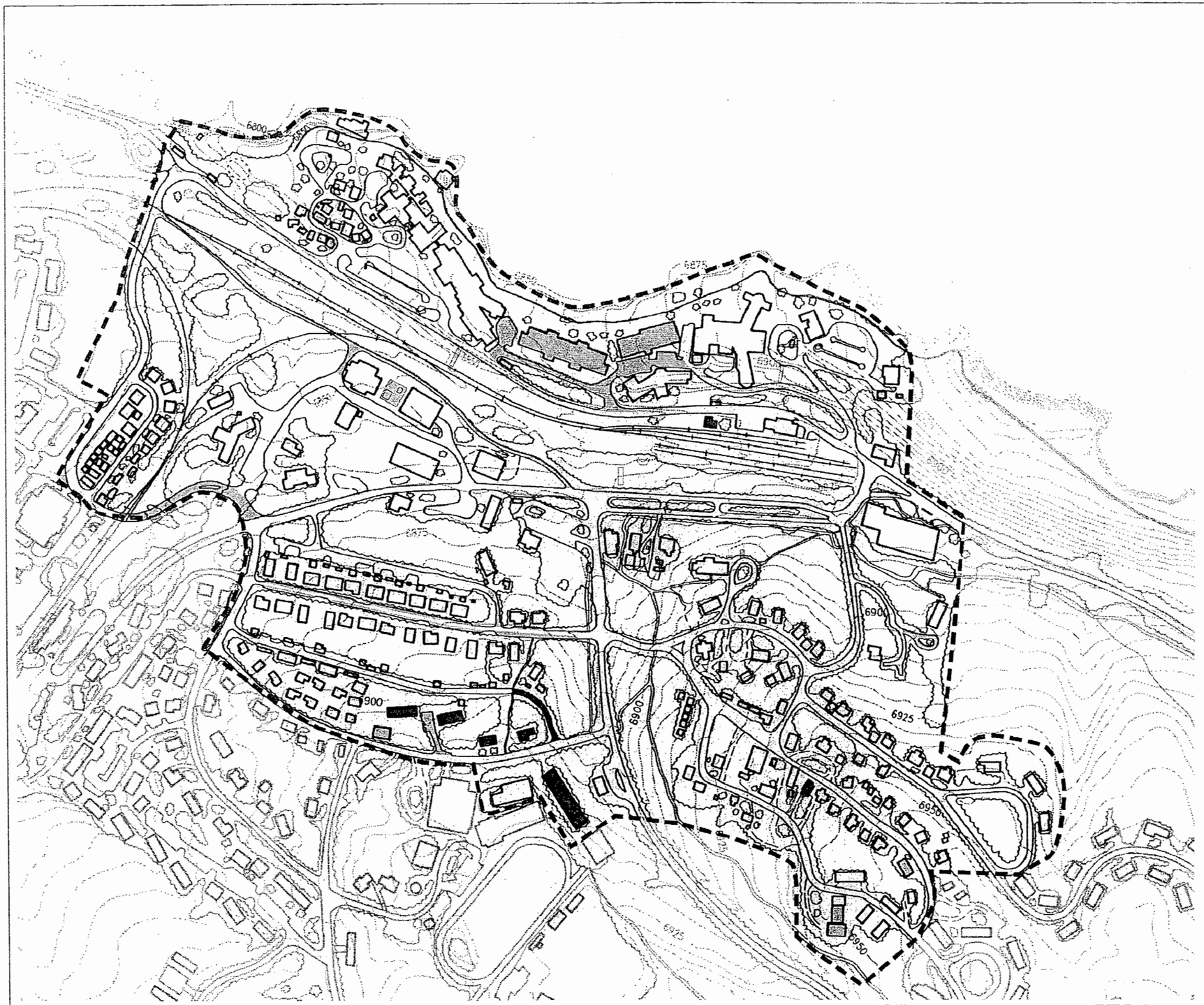
OVERVIEW OF MISSING FEATURES

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
40
OF 67



Legend:

- 1917 - 1942: Features Surviving from the Period of Significance
- 1943 - 1966: Non-contributing Features from the post-WWII and Mission 66-eras
- 1967 - 2002: Non-contributing Features

N
NOT TO SCALE

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO.
H

NORTH RIM DEVELOPED AREA

CONTRIBUTING AND NON-CONTRIBUTING FEATURES

GRAND CANYON NATIONAL PARK - NORTH RIM DEVELOPED AREA

DRAWING NO. 113 / 20223
PKG. NO.
SHEET 41
OF 67

Integrity Assessment

National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation* states that:

> Integrity is the ability of a property to convey its significance...Historic properties either retain integrity (that is, convey their significance) or they do not. Within the concept of integrity, the National Register criteria recognizes seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey significance. Determining which of these aspects are most important to a particular property requires knowing why, where, and when the property is significant.

Assessment of integrity is based on an evaluation of the existence and condition of physical features dating from a property's period of significance, and taking into consideration the degree to which the individual qualities of integrity are present. The seven aspects of integrity included in the National Register criteria are location, design, setting, materials, workmanship, feeling, and association.

> **Location** is the place where the historic property was constructed or the place where the historic event occurred; **design** is the combination of elements that create the form, plan, space, structure, and style of a property; **setting** is the physical environment of a historic property; **materials** are the physical elements that were combined or deposited during a particular period of time and on a particular pattern or configuration to form a historic property; **workmanship** is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory; **feeling** is a property's expression of the aesthetic or historic sense of a particular period of time; and **association** is the direct link between an important historic event or person and a historic property.

Overview

Based on the comparative analysis and evaluation undertaken earlier in this chapter, the Village Historic District retains a high degree of integrity of location, design, setting, workmanship, association, feeling, and materials for the period of significance from 1897 until 1942. Although some landscape features are missing or deteriorated, the majority of features remain intact from the period of significance and accurately portray the landscape's significance as an important contributor to the American park and landscape architecture movements. The remaining features that portray this significance include the primary vehicular circulation systems, many historic buildings and structures, important masses of vegetation, key views toward the canyon, the overall pattern of spatial organization developed from early master planning efforts, and both the types and separation of land uses.

Missing and altered features, which consist largely of buildings and structures, pedestrian circulation patterns, and smaller-scale spatial patterns, do little to detract from the integrity of the landscape. New development within the Village Historic District occurred in such a way that new features were often placed in the location of missing features, on previously disturbed sites, or in areas already slated for development through the master planning process. This method of in-fill development has been important in helping the landscape retain integrity.

Alterations that have adversely affected the integrity of the site include the construction of Kachina and Thunderbird Lodges and the re-routing of traffic from Center Road to South Entrance Road in 1954. However, because Kachina and Thunderbird Lodges can be removed, and the physical presence of Center Road remains intact from the period of significance, the Village Historic District can still be said to have a high degree of integrity.

Integrity Assessment by the Seven Aspects of Historic Integrity

The Village Historic District retains a high degree of **integrity of location** for the period of significance based on the fact that it continues to function as a tourist destination in the same location established in the late 1890s and as a national park as established in 1919.

The Village Historic District retains **integrity of design** for the period of significance based on its retention and continued portrayal of the planning principles, zoning concepts, and design principles set forth by early NPS landscape architects and engineers such as Daniel Hull. The retention of Rustic-style buildings, walls, steps, and other similarly-designed features also contributes to the high level of design integrity. Additionally, NPS design principles, such as integrating architecture into the landscape and harmonizing development with the existing environment, are still visible in the layout of the Village circulation and land use systems, the predominance of native vegetation, and the siting of buildings to take advantage of key views and vistas.

Aspects of the historic district which post-date the period of significance, and have a negative impact on integrity include the addition of Kachina and Thunderbird Lodges and the installation of highly-manicured turf grass lawn; these features are not compatible with the historic design principles evident elsewhere in the park.

The Village Historic District retains **integrity of setting** for the period of significance. The general setting of a village perched on the edge of the Grand Canyon and nestled within ponderosa pine woodland remains intact. The level of integrity, however, is diminished due the expansive, post-period of significance development along the edges of the Village Historic District and throughout the rest of the park. The historic district is considered to retain integrity of setting, despite these changes, because development outside the district boundary had begun to occur during the period of significance, the most recent development lies a good distance east of the historic district, and woodland masses buffer the historic district from much of the newer development.

The Village Historic District retains **integrity of materials** due to the retention and continued use of native stone, wood and peeled log elements, and native vegetation. Circulation features, such as roads and paths, however, appear to have been re-surfaced in contemporary materials including concrete and asphalt. Certain buildings have been re-sided with aluminum material, either covering or removing the original wood siding. A particular loss of integrity is noted regarding small-scale features—many of which are contemporary in nature and use modern metal, plastic, and reflective materials. Although features such as chain-link fence, metal bollards, dumpsters, and reflective traffic signage may be necessary for health and safety purposes, they ultimately detract from the historic character of the Village Historic District.

The Village Historic District retains **integrity of workmanship**, which is particularly evident in the detailing and construction of the Rustic-style buildings and the masonry features constructed by NPS and CCC crews. Other examples of period-of-significance workmanship are found in the mortared flagstone walks within the Bright Angle Cabin cluster, the historic telescopes along the Rim Trail, and the remnant stone fence pier in the Concessionaire Housing Area.

The Village Historic District retains a high degree of **integrity of feeling** from the period of significance. During the period of significance, the Village was created as an oasis of relative luxury in the midst of a scenic wilderness. The Village provided tourist with both the thrill of experiencing the Grand Canyon while offering a haven of warm beds and hot food. In the 1920s, master planning efforts helped to turn the Village into a small town, complete with planned streets and zone land uses. Although the actual wilderness element is somewhat diminished from what existed during the period of significance, the Village Historic District continues to express the historic sense and feeling that existed between 1897 and 1942.

The Village Historic District retains a high degree of **integrity of association**. Evidence of the architects, landscape architects, engineers, and early tour operators who planned, designed, and affected the development of the Village exists in the layout of the streets, circulation patterns, continued separation of land uses, and numerous historic buildings. Most importantly, the Village remains associated with the Grand Canyon itself, the sole reason for the existence of the historic district and park.

Chapter Five
Landscape Treatment and Design Recommendations

Chapter V • Landscape Treatment and Design Recommendations

Introduction

The cultural landscape design guidelines and treatment recommendations presented in this chapter provide specific near-term recommendations as well as a comprehensive vision to guide long-term management decisions. The information included in this section addresses the challenges associated with balancing cultural resource protection, park operations, and visitor interpretation.

All landscape treatment guidelines and recommendations offered in this chapter have been developed in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (1996). This text provides guidance to resource managers prior to and during the planning and implementation of projects that may impact cultural landscape resources. The cultural landscape design guidelines and treatment recommendations provide an overall flexible approach to the protection, preservation, and maintenance of site resources, and recommend a body of specific concepts for managing the site.

This chapter is divided into four sections:

- Management Issues;
- Recommended Landscape Treatment Approach;
- Treatment and Design Guidelines; and
- Treatment Recommendations

The Management Issues and Goals section provides an overview of information found within the park's 1995 General Management Plan (GMP), along with other existing planning and policy information that may impact treatment approaches and recommendations.

The Recommended Landscape Treatment Approach section outlines treatment alternatives recognized by the Secretary of the Interior for addressing historic landscapes, and identifies the alternatives that best suit the resources and management objectives of the Grand Canyon Village National Historic Landmark District (Village Historic District).

The Treatment and Design Guidelines section provides guidance on how to approach general planning for all landscape changes within the Cultural Landscape Report (CLR) project area. This section also provides guidance for all proposed landscape treatments in this plan.

The final section—Treatment Recommendations—focuses on more detailed recommendations for the Village Historic District, and for specific projects planned within the district. These recommendations are conceptual and schematic, should be utilized as part of planning and design processes, and do not serve in place of construction documentation and detailed design documents. Additional research and detailed design may be required to adequately address cultural resource values for some planning and design projects.

Management Issues

This section of the treatment plan summarizes management issues identified in the 1995 GMP that may impact the treatment approach and recommendations offered later in this chapter. The GMP sets forth the basic strategy for managing park resources, visitor use, and interpretation, and is the primary vehicle for determining the general treatment of all cultural resources in the park.

The GMP served as the basis for the CLR team's understanding of the planned use, major improvements, and interpretation of the Village Historic District landscape. The plan was used to inform this CLR regarding the park's vision, management objectives, and planning issues that could potentially impact treatment guidelines and recommendations offered later in this chapter.

The vision for the South Rim—including the Village Historic District—is to "allow visitors direct access to canyon panoramas and to offer a range of visitor experiences—from more social experiences in the Grand Canyon Village to solitary experiences elsewhere along the rim."[1] The treatment recommendations made later in this chapter will support this vision statement. The GMP further details the vision for the South Rim in the following statements:

- The Village Historic District should retain direct access to the rim, where panoramas of the canyon provide the park's aesthetic, inspirational, and emotional appeal.
- The South Rim should remain the focus for most park visitors, with diverse opportunities to view the canyon.
- The South Rim should also provide access to areas that allow people to have solitary experiences.
- The South Rim should accommodate large numbers of visitors, but dense crowds and related conflicts and resources impacts should be minimized.
- Visitors should be able to experience solitude in natural settings as well as social exchange in developed areas.
- The South Rim should provide park-wide orientation and introduce visitors to all the park's educational themes; interpretation of historical and archeological resources should be a strong component of South Rim programs.
- Historic resources should be appropriately used and their integrity maintained.
- The South Rim should be a model of excellence in planning and management.
- Alternative means of transportation, such as walking, biking, or using convenient public transit, should be encouraged.
- To minimize new disturbance, necessary services and facilities should be provided in existing disturbed areas wherever possible, or outside the park.
- Any new development should be cost-effective, water conserving, and energy-efficient, thus reflecting sustainable design concepts.
- The park should work cooperatively with the community of Tusayan, Kaibab National Forest, and all other affected entities near the park to encourage compatible, aesthetic, and well-planned development and recreational opportunities and to provide high-quality visitor information and services.

The GMP also provides management objectives for the park, which are based upon the vision for the South Rim and set the direction for future park management. Many of the objectives listed in the GMP have park-wide relevance and are not reproduced in this CLR, while the following objectives relate directly to the South Rim and Village Historic District cultural landscapes. These objectives are as follows:[2]

Visitor Experience

- Identify and develop an appropriate range of visitor experiences, opportunities, and access that will accommodate a variety of visitor expectations, abilities, and commitment levels.
- Provide viewing opportunities of the canyon, access to views and trails, and interpretation and information, recognizing that these are the most important elements of the visitor experience on the South Rim.
- Maintain the South Rim from Hermit's Rest to Desert View as the focus for the majority of visitor use in the park, including major visitor facilities and accommodations.

Cultural Resources

- Utilize the extensive cultural resources of the South Rim as a strong component of the interpretive program, including the interpretation of American Indian cultures.

Development

- Develop and promote the use of foot trails, bicycle paths, and public transportation to provide convenient and efficient movement of visitors, employees, and residents within Grand Canyon Village and between major points of interest.

The GMP offers a summary of actions that support the vision and objectives for the South Rim and Village Historic District.[3] Again, these actions cover a broad range of activities that are intended to take place throughout the entire South Rim. The actions listed below have relevance to the Village Historic District, as they may impact the historic landscapes contained within. The CLR guidelines and recommendations will address these actions later in the chapter.

Access for People with Disabilities

- All parking lots will conform to federal accessibility standards.
- All trails above the rim will be made accessible as physical conditions allow, given the fact that the terrain at the Grand Canyon is rugged and steep.
- All non-historic buildings will be made fully accessible for persons with disabilities.

Roads, Parking, and Transit

- South Rim roads will be re-surfaced, minor parking lot redesigns and improvements will be undertaken, and trails will be added in conjunction with road improvements.
- The South Entrance Road from Mather Point to the Village Loop Drive will be restricted to public transit vehicles only.

1 U.S. Department of the Interior, National Park Service, *General Management Plan for Grand Canyon National Park* (Denver Service Center, 1995), 8.
2 Ibid., 14.
3 Ibid., 28-46.

Trails

- Road sections that are no longer needed for motorized vehicles, such as the Old Village Bypass Road, will be converted to bike paths.

Orientation and Interpretation

- Interpretive facilities will be concentrated in the Power House area of the Village Historic District. This entire area will be for pedestrians only and will be directly linked to the facilities on the rim across the railroad tracks. These interpretive facilities will be housed in the historic structures that will be rehabilitated. Food service will also be provided. (Note: This facility is currently called the Heritage Education Center and is discussed in further detail in the section on Specific Project Recommendations.)

Visitor Services

- The Power House area—Heritage Education Center—will become a major visitor use area, with a mix of interpretive and visitor service facilities.

- Numerous restrooms will be added along the South Rim; one restroom is planned to occupy the current Kolb Studio garage near the Bright Angel Trailhead.

- Visitor lodging will continue at El Tovar and Bright Angel Lodge. The Kachina and Thunderbird Lodges will be removed from the rim. Once the Kachina and Thunderbird Lodges are removed, this area will be used for program space, American Indian cultural celebrations, and outdoor seating. The design will be plaza-like and will visually connect the Bright Angel Lodge, rim, and El Tovar Hotel. The landscape design will keep with the rim's cultural landscape.

- Victor Hall, Victor Annex, and Colter Hall employee dormitories will be converted to lower priced visitor lodging.

- The Maswik cabins now used by employees will be converted to visitor lodging. The Maswik plywood cabins will be removed and the area revegetated. (Note: It is not known whether the Maswik Cabins discussed above are within the Village Historic District or within the CLR project boundary.)

- The gravel parking lot will be removed from the historic railroad depot area; the switches and tracks will be restored. Rail cars for food service or overnight accommodations may be considered as uses for these tracks.

Sustainable Development

- The NPS will promote environmentally sensitive planning and design and will demonstrate technologies and practices that reduce environmental impacts and produce benefits in energy conservation, solid waste conservation, solid waste management, transportation, water conservation and reclamation, wastewater treatment, and community organization.

This CLR also addresses seven specific projects identified by the NPS that may impact cultural landscape resources within the Village Historic District. The following projects are discussed within the Specific Project Treatment Recommendations section later in this chapter:

- Heritage Education Campus
- Light Rail Station & Pedestrian Bridge
- Bright Angel Trailhead
- Victor Hall and Annex conversion to lodging
- Conversion of Maintenance Office to a visitor-related function
- Historic Trail Depot rehabilitation
- Possible Greenway segment into Village
- Possible removal of Kachina and Thunderbird Lodges

These park visions, management objectives, planning issues, and proposed projects have the ability to directly impact cultural landscape resources within the CLR project area. The treatment guidelines and recommendations detailed later in the chapter address these issues and offer ways in which resources may be preserved, missing or deteriorated resources replaced, and new features established without adversely affecting contributing historic and cultural resources.

Recommended Landscape Treatment Approach

The Department of the Interior currently recognizes four appropriate treatment alternatives for historic landscapes: preservation, rehabilitation, restoration, and reconstruction. These are defined and discussed in both *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and *Director's Order-28: Cultural Resource Management Guideline*. *Director's Order-28* provides the following definitions of the four treatment alternatives for cultural landscapes:

> **Preservation** maintains the existing integrity and character of a cultural landscape 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 cultural landscape by protecting its conditions. In light of the dynamic qualities of a landscape, maintenance is essential for the long-term preservation of individual features and integrity of the entire landscape. Stabilization involves re-establishing the stability of an unsafe, damaged, or deteriorated cultural landscape while maintaining its existing character.

Rehabilitation improves the utility or function of a cultural landscape, through repair or alteration, to make possible an efficient compatible use while preserving those portions or features that are important in defining its significance.

Restoration accurately depicts the form, features, and character of a cultural landscape as it appeared at a specific period or as intended by its original constructed design. It may involve the reconstruction of missing historic features, and selective removal of later features, some having cultural value in themselves.

Reconstruction entails depicting the form, features, and details of a non-surviving cultural landscape, or any part thereof, as it appeared at a specific period or as intended by its original constructed design. Reconstruction of an entire landscape is always a last-resort measure for addressing a management objective and will be undertaken only after policy review in the regional and Washington offices.

Recommended Treatment Approach

The scope of work for this CLR requires the recommendation of an overall, primary treatment approach for the Village Historic District. The selected treatment approach provides the necessary philosophical framework for a consistent and holistic approach for the cultural landscape.[4]

The Village Historic District management issues and objectives have described a clear need for improved visitor services, transportation-related enhancements, improved educational and interpretational opportunities and facilities, enhanced and continued protection of natural and cultural resources, and proposed new development. Many of these actions require alterations or additions to the landscape.

Based on the fact that rehabilitation is defined as "the act or process of making possible a compatible use for a property through repair, alterations, and additions, while preserving those portions or features which convey its historical, cultural, or architectural values," **rehabilitation** is the recommended primary treatment approach to resource management in the Village Historic District.[5] Rehabilitation allows for the establishment of a rich and fulfilling visitor experience, and the implementation of necessary functional site improvements. Rehabilitation also allows the park to pursue resource management initiatives that are intended to promote sustainability.

As part of this rehabilitation-oriented approach, however, *preservation* efforts must also be implemented to ensure that historic, contributing resources are retained. While the unique characteristic of rehabilitation is that it strives to make new uses and features compatible with the existing landscape, the point should be reinforced that preservation principles continue to apply for features which convey the landscape's historical, cultural, and architectural values. Repair, replacement, and new construction are only valid options when the original, contributing features cannot feasibly be retained in their current condition or location.

The Secretary of the Interior's Standards apply to historic properties of all periods, locations, sizes or acreages, conditions, and uses. These standards create a baseline of guidance to which intended changes to the historic landscape must be compared. These standards are neither technical nor prescriptive, but are intended to promote responsible preservation practices that help protect historic and cultural landscapes. The Secretary of the Interior's Standards for Rehabilitation are as follows:

- A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- Each property will be 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 or elements from other historic properties, will not be undertaken.
- Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

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4 U.S. Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (Washington, D.C.: Cultural Resources, Preservation Assistance Division, 1995), 6.

5 U.S. Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. (Washington, D.C.: Department of the Interior, 1996), 48.

Treatment and Design Guidelines

The guidelines described below are organized into a series of topics: general, vegetation, land use, natural features and systems, wildlife management, visual quality and viewsheds, visitor access and interpretation, role of preservation specialists, documentation, new design and construction, accessibility, and sustainability. They are intended to complement and guide the treatment recommendations that follow this section in order to establish a general, overarching approach to site preservation and development for the entire Village Historic District. The following guidelines may be applied to all current and future planning and design initiatives as well as new construction. More park-specific guidelines can be found in the GMP vision statements and summaries of action.[6]

General

- Undertake all work in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes and Director's Order #28: Cultural Resource Management Guidelines. Because of their sensitive nature, particular care should be taken to protect archeological and natural resources that often also constitute cultural resources.

- Retain the character of the historic designed landscape by protecting individual contributing features, as well as the overall landscape. Protection efforts include seasonal and cyclical maintenance and during specific construction and repair projects.

- Ensure the compatibility of proposed features by appropriately responding to the historic designed character of the site. To understand the historic character, utilize inventory and analysis techniques, as well as character descriptions found within this CLR, the 1995 GMP, the Grand Canyon National Park Architectural Character Guidelines, and other planning and design documents.

- Base all treatments on historic documentation discovered through primary and secondary research.

- Minimize new construction at the site to the greatest extent possible while accommodating required new changes to meet visitor, safety, and operational needs. It is preferable to adaptively-reuse existing historic and non-historic building and facilities over demolishing historic structures and features and building new development. When necessary, construct limited new facilities to increase the functionality of the site, enhance the visitor experience, or achieve interpretive goals. Base the design of new facilities on the guidelines within this chapter.

- When adding new features, carefully consider the potential impact of the development on archeological resources, the patterns of spatial organization within the cultural landscape, natural features and systems, and the historic character of the site as a whole.

Vegetation

- Retain, where appropriate, existing vegetative cover and allow successional areas (disturbed and re-vegetated areas) to mature.

- Undertake vegetation management strategies based on NPS principles of sustainability, as described in the 1993 Guiding Principles of Sustainable Design, and GRCA management objectives.

- Remove damaged or deteriorated existing trees using a method that minimizes the potential impacts on known and potential cultural and/or archeological resources. In known or potential culturally-sensitive locations, such as the Village Historic District, undertake tree removal monitored by a qualified cultural resource specialist, such as an archeologist.

- Avoid endangering known or potential archeological resources by limiting activities that may disturb the land until necessary archeological and additional cultural landscape investigations have been completed. If it is not known whether archeological resources are within an area planned for land disturbing activity, such activity should be preceded by archeological evaluations and investigations.

- Remove invasive alien species identified during monitoring activities using ecologically-sound removal techniques. Ecologically-sound removal techniques are those that will not cause damage to other resources, or whose impact on other resources has been assessed to determine whether the treatment provides benefits outweighing the impact on other resources. These removal techniques include using

6 Please refer to the 1995 GMP, pages 9-10, for the appropriate vision statements, and beginning on page 18 for the Summary of Parkwide Actions.

biodegradable, systemic herbicides (i.e. glyphosate) that break down into harmless components upon contact with the soil and repairing damage to resources while mitigating the impact of removal, such as controlling potential soil erosion on steep slopes.

- Remove invasive alien species in the vicinity of cultural and archeological resources in such a way as to minimize ground disturbance and threats to remaining vegetation. Removal should be undertaken only after remaining resources and landscape features and systems have been protected.

- When installing new plantings, avoid threats to existing naturally-vegetated areas by selecting plant species that are non-invasive and healthy.

- When installing new plantings in areas of known or potential sensitive, historic, or archeological resources, use acceptable and least-damaging planting techniques accompanied by archeological monitoring. Recommended techniques include minimizing ground disturbance through the installation of small plants wherever possible; installing plants by hand; selecting planting locations that are not in conflict with desirable plants to remain; and protecting existing plants and resources to remain.

Land Use

- Protect significant aspects of the historic and natural landscape by preserving existing landforms, natural drainage patterns, and hydrology to the greatest extent possible—especially during construction projects.

- Maintain, where feasible, historic land uses including—but not limited to—hiking, trail rides, camping, and other tourism, outdoor recreation, and interpretive programs and support activities that have historically been part of the Village Historic District.

- Minimize immediate and long-term damage to cultural resources by monitoring and regulating use of the landscape; particularly unauthorized visitor uses.

Natural Features and Systems

- Undertake measures to protect and preserve all topographic landforms and vegetative communities. Avoid land-disturbing activities and operations that may impact these natural and cultural resources.

Wildlife Management

- Protect wildlife habitats—particularly those that may support threatened or endangered species—when undertaking new construction or repair associated with the preservation of cultural landscape resources.

Visual and Scenic Qualities and Viewsheds

- Retain and maintain existing contributing views and vistas, particularly along the canyon rim.

Visitor Access and Interpretation

- Protect site resources by limiting, monitoring, and controlling unauthorized visitor access to sensitive landscapes such as undeveloped areas, wildlife habitats, and known and potential ethnographic and archeological sites.

- Encourage stewardship of site resources by developing interpretive programs that address layers of cultural resources, natural systems, and their interrelationships. It is preferable to develop interpretive plans prior to implementing landscape changes. Landscape changes should be generated by and/or compatible with interpretive plans.

- Minimize the visual and physical impacts of interpretive and visitor access facilities on cultural resources and natural systems by developing the least intrusive improvements possible.

Role of Preservation Specialists

- Undertake all treatment projects and management efforts under the direction of experienced specialists, including historical landscape architects, historical architects, archeologists, and qualified technicians and tradespersons. In addition, consult with natural resource specialists concerning impacts to sensitive habitats and re-vegetation programs.

Documentation

- Document—through drawings, photographs, and notes—all landscape alterations and treatments. Maintain records of treatments and retain documentation according to professional archival standards.

New Design and Construction

- Introduce features to facilitate access and interpretation in such a way as to minimize adverse impacts on the historic character and resources of the landscape. New construction should be limited to landscape alterations and additions necessary to provide for visitor access, interpretation, and management. New or altered facilities should be as non-intrusive as possible while allowing for utility, accessibility, and safety.

- Limit the use of destructive investigative techniques, such as archeological excavation, to providing sufficient information for research, interpretation, and management goals.

- Evaluate all proposed new uses in consultation with an historical landscape architect, historical architect, archeologist, or other appropriate cultural resource and preservation professionals.

- Undertake sufficient study and recording of landscape features that require modification, repair, or replacement before work is performed to protect research and interpretive values.

- Avoid landscape changes that create a false sense of historical development, including the addition of conjectural, typical, or representative features. If representative historical features are constructed, provide interpretive materials that clearly identify the features as such.

- Repair, rather than replace, deteriorated historic and cultural landscape features. Repair of deteriorated features should be based on archeological, documentary, or physical evidence. Replacement of historic features, if necessary, should be based on archeological, documentary, or physical evidence; the new feature should match the old in design, color, texture, and, wherever possible, materials. Replaced features should be compatible with, but distinguishable from, original historic fabric.

- Avoid the use of chemical or physical treatments that cause damage to cultural resources and natural systems.

- Protect and preserve archeological resources in place. If such resources must be disturbed, undertake mitigation measures such as documentation, recovery, and curation.

- Design and site new additions or alterations within the Village Historic District in such a way that they do not destroy historic materials, features, and spatial relationships that characterize the cultural landscape. Design all new additions and alterations to be a product of their time, yet also to be compatible with the historic resources in materials, size, scale and proportion, and massing. Differentiate new work from existing historic resources.

- Design and site new additions and alterations to the landscape in such a way that, if removed in the future, the essential form and integrity of the landscape would be unimpaired.

- New design should follow the principles and guidance found in the Grand Canyon National Park Architectural Character Guidelines.

Accessibility

- Make barrier-free accessibility a primary design factor when considering overall planning, design, and interpretation within the cultural landscape. All features associated with accessibility should conform to the standards cited in the Uniform Federal Accessibility Standards (UFAS) and Americans with Disabilities Act Accessibility Guidelines (ADAAG).

- As a part of the planning and design process, recognize the diversity of visitors, including persons who may be physically or mentally challenged; do not speak English; are arriving from foreign countries, remote rural locations, and urban locations; or are very young or elderly.

- Integrate accessibility components fully into the design of new facilities and site improvements to allow for the use and access of all visitors.

Sustainability

- Institute cultural and natural resource treatment and maintenance methods that are environmentally and culturally sensitive and sustainable over the long term.

- Minimize areas of vegetative disturbance, earth grading and compaction, and natural drainage pattern alteration.

- Avoid causing environmental degradation when preserving, providing access to, and interpreting natural and cultural resources.

- Undertake site design that incorporates holistic, ecologically-based strategies aimed at contributing to the repair and restoration of natural systems.

- Avoid using mitigating devices such as closed drainage systems, and large areas of cut and fill, unless necessary. Implement the least-intrusive activities and those involving stabilization first, and proceed subsequently to the most invasive as necessary. Limit major new interventions to areas that are already heavily disturbed.

- Use muted colors to blend new facilities with the natural context.

- Locate new development to take advantage of solar heating, if feasible.

- Consider the direction of prevailing summer breezes and winter winds to aid cooling and ventilation in summer and to shelter new facilities from harsh winter winds.

- Consider the site's ecology, including topography, soil types, vegetation, wildlife habitats, and ground water, in order to integrate the building with its ecosystem.

- Use vegetation to screen undesirable views, before constructing fences or walls.

- Use locally indigenous materials that are renewable, environmentally sensitive, and reflect the regional palette. Explore the availability of recycled materials and consider re-usable materials.

- Perform life-cycle costing of materials to assess their long-term wearing capacity and maintenance costs. Consider using materials that are non-toxic, durable, long-lived, and low maintenance.

- Use locally-produced or available products to construct design features.

- Avoid petroleum-based materials whenever possible. Use only stable, non-hazardous materials that do not emit toxins through off-gassing or soil leaching.

- Include information about the sustainability and the relationship of cultural resources to the environment in interpretive materials.

Treatment Recommendations

One of the purposes of this CLR is to provide landscape treatment recommendations for use by the NPS during the planning and design of projects that may impact the historical and cultural values of the Village Historic District landscape. The following recommendations support the NPS's planning and design processes, including the necessary actions to protect and preserve nationally significant cultural landscapes and ensure that development in specific areas considers the historic landscape character and contributing features.

This section is divided into three parts: an overall treatment concept that offers a comprehensive project-wide context for treatment; general treatment recommendations for the Village Historic District and its associated landscape character areas; and specific project treatment recommendations for the Heritage Education Campus, Light Rail Station and Pedestrian Bridge, Bright Angel Trailhead, Victor Hall and Annex conversion to lodging, Conversion of Maintenance Office, Historic Trail Depot rehabilitation, possible Greenway segment into Village, and possible removal of Kachina and Thunderbird Lodges.

Treatment Concept

The overarching treatment concept which governs the implementation of the rehabilitation approach and creation of treatment recommendations is the necessity of making alterations and new additions to the Village Historic District landscape compatible with the existing historic character while, at the same time, preserving contributing cultural landscape resources.

The Village Historic District landscape contains a wealth of historic resources that represent the evolution of the Grand Canyon Village, specifically between the years of 1897 and 1942. These resources must be protected and preserved so that they may continue to be sources of education and inspiration to all those who visit and work at the South Rim in the future. Park personnel must, however, also be able to accommodate the changing, and often increasing, needs of visitors and employees, including new sources of recreation, increased housing and visitor accommodations, and increased and enhanced transportation opportunities.

With these ideas in mind, the treatment plan offers recommendations and guidelines for preserving contributing features that represent the significance of the Village Historic District. Recommendations are also included for new design and that address specific, NPS-identified projects that will affect the cultural landscape.

Along with the preservation of historic resources and implementation of new and compatible uses, issues of accessibility and maintenance must be considered. As much as possible, all prime destinations and important features should be accessible to all persons. This concept extends to all locations within the Village Historic District, as park and concessionaire employees should be provided with accessible housing and circulation routes. Another key part of the treatment concept is the necessity for maintenance of all features—both historic and non-historic. Signs of deterioration, particularly of road, parking, and trail surfaces, are evident throughout the Village Historic District. Without proper maintenance of all resources, the decline of historic, contributing features is inevitable.

Taking into consideration the aspects of the treatment concept described above, one of the main purposes of the treatment plan—and its recommendations and guidelines—is to support the GMP-stated vision for the South Rim: to allow visitors direct access to canyon panoramas and to offer a range of visitor experiences—from more social experiences in the Grand Canyon Village to solitary experiences elsewhere along the rim.

District-wide Treatment Recommendations

General

- *Retain the overall pattern of spatial organization and circulation* created by the layout of streets, vegetation, and topography. Avoid altering street alignments, removing large masses of contributing woodland vegetation, or excessively altering the existing topography.

- *Assess the presence of non-native and invasive vegetation* throughout the Village Historic District. Remove areas of non-native and invasive vegetation that are detrimental to contributing and native vegetation. Revegetate the disturbed areas with native vegetation. Areas that are not as intensively affected may be monitored and controlled, if removal efforts are not necessary.

- *Maintain the historic zoning and separation of land uses* within the Village Historic District and as developed through master planning efforts of NPS landscape architects during the period of significance.

- *Retain all contributing buildings and structures.*

- *Document all features prior to their alteration or removal.* If the feature slated for alteration or removal has not been adequately documented through photographs, drawings, written narratives, or planning documents, create a baseline of information for the feature prior to implementing changes. This will aid future researchers in their studies and/or promote accurate reconstruction or restoration efforts if the feature will be re-installed at a later date.

- *Assess the potential National Register eligibility for features within and adjacent to the Village Historic District that post-date the period of significance*, yet might soon meet the fifty-year requirement or might be eligible under National Register Criterion G, "Properties That Have Achieved Significance Within the Last Fifty Years." These include features that were built during the Mission 66 and Parkscape U.S.A. development efforts between 1956 and 1972. Features that are found to be eligible for the National Register should be protected and maintained.

- *Minimize new construction* as much as possible. If new facilities must be introduced, site them in previously developed or disturbed locations, such as the former site of Babbitt's Store at the intersection of Village Loop Drive and Center Road.

- *Sensitively site new accessibility features* in order to retain the historic character of the Village Historic District and the feature which will be altered. Consider the visual impact, as well as the impact to historic fabric, the proposed construction will have on historic features.

- *Refer to the Grand Canyon National Park Architectural Character Guidelines*, particularly the section entitled "Site Materials and Elements," for guidance concerning appropriate designs and materials for small-scale features.

- *Perform maintenance on all features*—both contributing and non-contributing.

Interpretation

The GRCA's 2002 Long Range Interpretive Plan offers several primary interpretive themes that encompass geology, hydrology, biology, ethnography, and conservation issues. While these themes aim to present a holistic understanding of the Grand Canyon, additional interpretive goals should be set forth that will bring about a greater understanding of the cultural landscape of the Village Historic District. The following interpretive theme concepts will not only enable visitors to better comprehend how the district landscape came to be, but will help the public understand what a cultural landscape is and why it is important to study and preserve.

Additional Interpretive Themes

Cultural vegetation: Discuss how humans have manipulated vegetation for their own purposes within the Village and South Rim. Include American Indian trends, the removal and replacement of vegetation during turn-of-the-19th-century construction efforts, Rustic-style planting designs and harmonization efforts, the role of the CCC and vegetation, fire management on the South Rim, and a history of exotic and invasive plants on the South Rim.

Preservation efforts: Discuss the reasons and methods behind the preservation of the Grand Canyon Village. Include descriptions about the creation of the Village Historic District and other nationally-significant properties and districts on the South Rim, daily preservation and rehabilitation efforts, how visitors can aid preservation efforts at the Village Historic District or become involved in preservation in their own hometowns, and attempt to instill the importance of preservation efforts as a whole.

Master-planning: Discuss how the physical layout of the Village Historic District took shape through the efforts of U.S. Forest Service and NPS landscape architects and engineers. Include descriptions of the efforts of Leopold and Johnston, Frank Waugh, and Daniel Hull, the national city planning principles from which these men drew inspiration, and hoe these principles were applied to the Village.

Vegetation

The NPS has expressed a particular need for specific recommendations regarding vegetation within the Village Historic District. Although vegetation is addressed for each landscape character area later in this chapter, the following district-wide recommendations will provide assistance at a broader, more comprehensive level. An overview assessment of historical vegetative character is made that evaluates vegetation type, density, and composition. Recommendations will address, at a district-wide scale, which areas of vegetation date from the period of significance and which do not, what levels of change can occur and how they may occur, fire management concerns—in brief, and other recommendations that may prove useful to park managers and personnel.

The CLR team studied a number of documents to create the vegetation recommendations, including the 2002 *Environmental Assessment and Assessment of Effect for Research on Wildfire Hazard Reduction in Ponderosa Pine Ecosystems at Grand Canyon National Park*; the 1997/2001 GRCA Resource Management Plan; and the physical history located in Chapter II of this CLR. These documents, along with historic photographs and plans, help to create a concept of the what the vegetation composition and character may have been like during the period of significance between 1897 and 1942 as well as identifying contemporary vegetation-related issues and concerns.

Historical Overview of Vegetation

Before establishing a baseline of vegetation character that likely existed during the period of significance, it must be noted that vegetation is highly prone to change over time. Unlike buildings, or other constructed features, vegetation grows, evolves, and dissipates at a much greater rate and can be more quickly affected by human actions. For example, it is likely that during the period of significance from 1897 until 1942, vegetation within the Village Historic District reflected more than one character. Grazing, fire suppression, transplantation, growth of invasive and exotic plants, revegetation, and the re-introduction of fire management have all altered the district landscape during the period's forty-five year time span. This CLR presents the most accurate picture of historical vegetative character(s) as possible and provide guidance regarding vegetation management.

According to a 2002 *Environmental Assessment*, the vegetative character of GRCA's ponderosa pine forests have greatly altered since the late 1800s.

> Historically, small numbers of large old ponderosa pines dominated these forests and frequent, low intensity fires burned duff and seedlings from the forest floor but left most of the mature trees unharmed. This changed when livestock grazing and intentional fire suppression interrupted the natural fire regime. Today, extensive areas of the forest are dominated by dense stands of small trees making them more susceptible to disease, insect infestation, and high intensity wildfires.[7]

Additionally, the 1997/2001 *Resource Management Plan* suggests that existing forest conditions are results of "unrestricted grazing practices in the late 1800s (and their continuance into the mid 1930s), and fire suppression efforts starting in the 1920s (and practiced to some extent up to [2001])." These two activities have resulted in reduction of native grasses, forbs, and other groundcovers; allowed forest densities to increase and expand into areas normally held by grasses; and caused extensive change in the structure and vegetation composition of native forest, meadow, and shrub communities.[8] It should be noted that these detrimental activities, and the deteriorated state of the forest vegetation, occurred during the period of significance. It appears that any attempt to "restore" the character of the forest vegetation between 1897 and 1942 is inconsistent with the current fire management and forest restoration efforts of the NPS.

The Village Historic District landscape has been affected by the above activities, as well as the introduction of permanent human occupation. This occupation resulted in clearing of vegetation—particularly along the rim and on the rim plateau; transplantation of vegetation, both within the district and from the surrounding region; introduction of exotic plant species; and the general exploitation of vegetation to meet human needs and desires. Conversely, much native and pre-development vegetation was preserved due to landscape architectural principles of the 1920s and 1930s that promoted environmental sensitivity and design in harmony with nature.

This combination of human intervention and the natural response by the environment led to an ever-evolving forest character—one that was growing increasingly more dense, and possibly more diverse with the transplantation efforts of NPS and CCC vegetation crews. While the remaining forest vegetation grew denser with young trees, disturbed landscapes gained more native shrubs and groundcovers that were introduced from the surrounding region and planted around new buildings and developed areas. Meanwhile, the original pre-settlement forest was becoming increasingly fragmented as new buildings and roads were constructed (*Figures 64 and 65, located at the end of this section*).

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7 U.S. Department of the Interior, National Park Service, *Environmental Assessment and Assessment of Effect: Research in Ponderosa Pine Ecosystems at Grand Canyon National Park* (Grand Canyon National Park, 2002), Summary page.

8 U.S. Department of the Interior, National Park Service, *Grand Canyon National Park Resource Management Plan: Part One—Narrative* (Grand Canyon National Park, 1997-reprinted 2001), 3-117.

Exotic vegetation was also gaining a foothold in the landscape during the period of significance, through intentionally introduced plants, and plants that entered the Village inadvertently on wagons, in hay bales, and other means. For example, tamarisk was introduced into the Grand Canyon in the 1930s as a slope stabilizer. A 1932 text notes that lambsquarters, horehound, cheeseweed, and filaree were all present during that year. The same text suggests that Russian thistle was carried into the Village in baled hay used to feed livestock, and the common mullein plant was quickly infesting the landscape.[9] The following is a list of exotic species identified on the South Rim of GRCA between the years of 1930 and 1936, taken from the April 2003 GRCA Exotic Plant List database.[10] It is unknown to what extent these plants existed within the Village Historic District boundary.

Apricot	*Prunus armeniaca*
Black medick	*Medicago lupulina*
Common apple	*Malus pumila*
Common mallow	*Malva neglecta*
Common timothy	*Phleum pretense*
Filaree	*Erodium cicutarium*
Foxtail barley	*Hordeum jubatum*
Horehound	*Marrubium vulgare*
Lambsquarter/Pigweed	*Chenopodium album*
Lepor barley	*Hordeum muinum*
Prostrate knotweed	*Polygonum aviculare*
Red brome	*Bromus rubens*
Red-seeded dandelion	*Taraxacum laevigatum*
Russian thistle	*Salsola tragus*
Tamarisk	*Tamarix ramosissima*
Smooth barley	*Hordeum muinum* ssp. *glaucum*
Wild oat	*Avena fatua*

Although the vegetative character continued to evolve during the period of significance, there were, however, likely two predominant historic characters within the Village Historic District: the highly manipulated vegetation of the rim plateau and the managed forest vegetation for all areas south of the railroad tracks. The factors that differentiate the two characters are the intensity of public use and the amount of pre-existing vegetation.

The Rim Area landscape character area has historically been the site of the most intensive public use due to its proximity to the canyon edge and available views. It is also likely that existing vegetation became more sparse as it approached the canyon edge. These two factors combined to create a landscape that was highly susceptible to, and presumably required, the manipulation of vegetation for both utilitarian and aesthetic purposes. Early 19th-century photographs depict a rim landscape that was heavily cleared in places and then apparently replanted with native vegetation (*Figures 8, 10, 26, and 30 in Chapter II*). Photographs from later in the period of significance show ornamental plantings of native plants meant to both respect and enhance the natural beauty of the surrounding features (*Figure 59, in Chapter IV Comparative Photographs*).

In contrast, pre-settlement vegetation south of the Bright Angel Wash was likely much more dense. The lack of views into the Grand Canyon, coupled with the planned use of these southern areas by NPS and concessionaire employees and staff, did not necessitate the removal of large amounts of vegetation to accommodate public uses. In fact, landscape architectural principles of the time, particularly Rustic design principles, advocated the retention of as much existing vegetation as possible and the desire to harmonize built features with the surrounding environment. In these locations, vegetation was more apt to be transplanted during revegetation efforts or selectively thinned to accommodate new buildings and features (*Figures 41 and 44, in Chapter II*). Ornamental vegetation appears to have been used to accentuate buildings, roads, and paths rather than used as decorative displays, particularly closer to the canyon edge (*Figure 62, in Chapter IV Comparative Photographs*).

Ornamental vegetation within the Village typically used only native vegetation, most of which was taken from the surrounding woodlands.

> At Grand Canyon, the planting designs emphasized the native plants of the pinyon-juniper belt that characterizes the 4,500-6,500-foot elevations in the park. Yuccas, fernbush, squawbush, and bush mint were all used effectively to establish shrub borders and woodland understories. Pinyon pines and junipers...also were transplanted in the village area wherever ornamental plantings were desired."[11]

According to historical photographs and park histories, typical planting designs were simple in form, attempting to respect the natural surroundings while improving upon the appearance of buildings and other constructed features. Ethan Carr, in *Wilderness by Design*, suggests that vegetative ornament was used to harmonize buildings with the environment and that "local trees and shrubs planted strategically at the corners of buildings or as foundation plantings contributed as much to the building's total effect as did the choice of building materials." Along the rim, Carr states that "in other heavily used areas, such as along the rim walk, small islands of junipers, yuccas, and fernbush were arranged as ornamental compositions that also contributed to the aesthetic appreciation of the park's flora."[12] These ornamental planting principles are still visible at present within the Village Historic District.

In summary, it appears the only singular, continuous character of vegetation during the period of significance was one of change and evolution. The general character of the district's vegetation is one of a cultivated, managed, and manipulated landscape that has developed over time due to human intervention and the environmental responses to that intervention. Vegetation densities, composition, design principles, and health have changed over time, particularly during the period of significance, to reflect human comprehension and aesthetic sensibilities between 1897 and 1942.

9 Susan Lamb, ed., *The Best of Grand Canyon Nature Notes: 1926-1935* (Grand Canyon, AZ: Grand Canyon Natural History Association, 1994), 59-60.

10 U.S. Department of the Interior, National Park Service, *"Grand Canyon Exotic Plant List," Grand Canyon National Park Nature and Science; Plants; Trees and Shrubs*, April 2003, http://data2.itc.nps.gov/nature/subplants.cfm?alphacode=grca&topic=21&loc=2 (25 July 2003).

11 Ethan Carr, *Wilderness By Design* (Lincoln, NE: University of Nebraska Press, 1998), 133-134.

12 Carr, *Wilderness by Design*, 134.

13 *Resource Management Plan*, 3-118.

Recommendations

General

- Address the issues and fulfill the goals set forth within the Vegetation Management section of the Resource Management Plan. Of particular concern to the Village Historic District are the issues of invasive species infestation, degradation of native plant material due to the sheer number of visitors to the district, and efforts of the Forest Ecosystem Restoration Program, whose objectives are to protect human life and property, to restore fuel loads and ecosystem structure within the natural range of variability in vegetative communities, and to restore fire as a natural process.[13]

Woodland/Forest

- The guiding philosophy for management of the existing ponderosa pine forest within the Village Historic District should be to engage in activities that will promote a healthy forest and that will prevent undesired fires, rather than to restore a particular historic forest character associated with an arbitrary historic period or date.

- Retain as much existing, healthy forest vegetation as possible within the Village Historic District.

- Avoid removing vegetation patterns that remain from the period of significance. Refer to the maps portraying vegetative change over time to determine these sensitive areas (*Figures 64 and 65*). Figure 65 depicts forest vegetation that remains from 1942—the end date of the period of significance.

    - Of particular concern are the remaining large woodland masses, such as the trees between the railroad tracks and Village Loop Drive, between Village Loop Drive and Kachina Lodge, and along Center Road. These woodland masses help define spatial organization, provide habitats for wildlife, provide shade, and are aesthetically appealing.

- Selective thinning of trees for fire management purposes is an acceptable activity within the forest/woodland masses. The acreage covered in vegetation prior to treatment, location of the woodland mass, and number of mature trees should remain intact.

- The necessity to create a fire prevention or suppression buffer along the Wildland/Urban interface, in order to protect cultural and natural resources within the Village Historic District, should outweigh the need to maintain any particular portion of vegetation.

Ornamental Vegetation

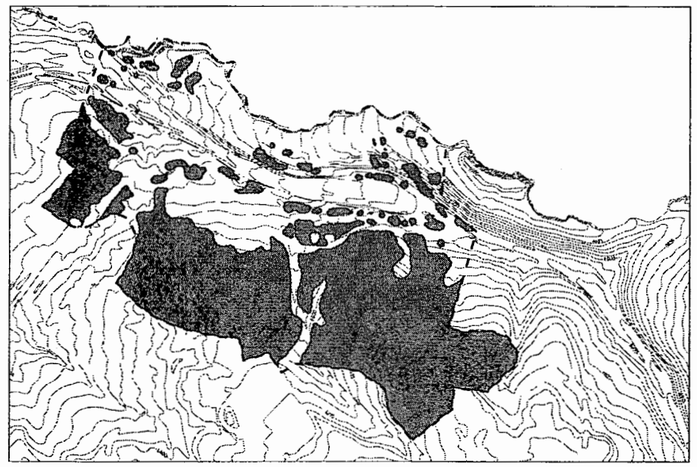
- Maintain planting beds that contain native plants in "naturalized" designs along the rim plateau. Avoid geometric designs, exotic plants, or highly-maintained appearances. Refer to the figures later in this section for examples of compatible and incompatible planting designs.

- Features such as turf lawn, irrigation systems, mulch, and clipped hedges are inappropriate in the Village Historic District.

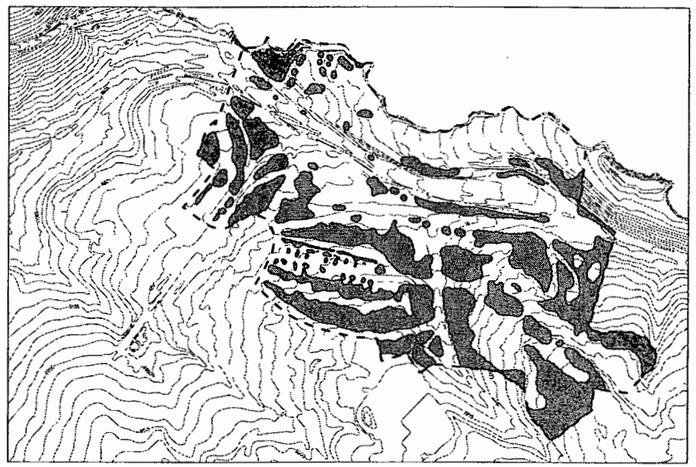
- Use native plants to accentuate the corners and sides of buildings south of the Rim Area landscape character area. Avoid screening the building facades and elevations, but rather attempt to harmonize the building with the landscape.

Revegetation

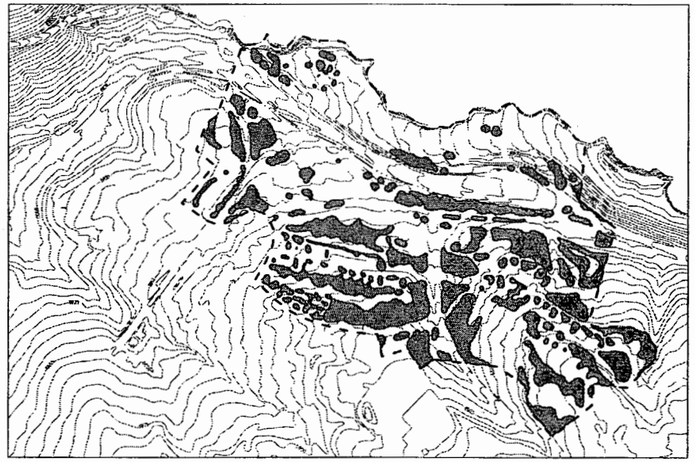
- Revegetate all sites that have been recently disturbed and will not be redeveloped. Quickly implemented revegetation efforts will help prevent infestations of exotic and invasive plant species. Follow GRCA revegetation standards to accomplish this goal.



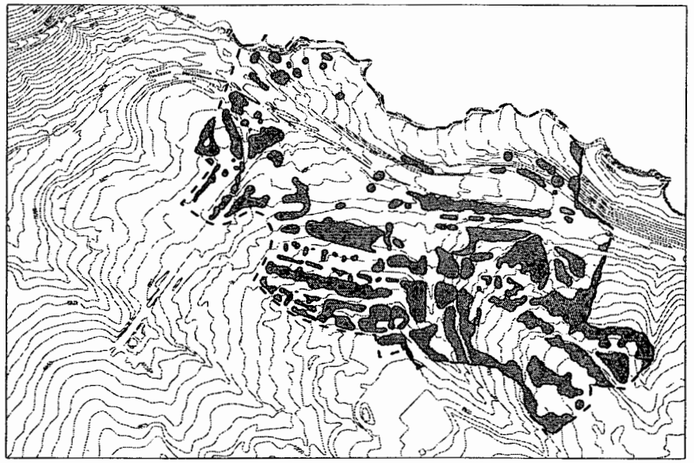
1924



1932



1942



2002

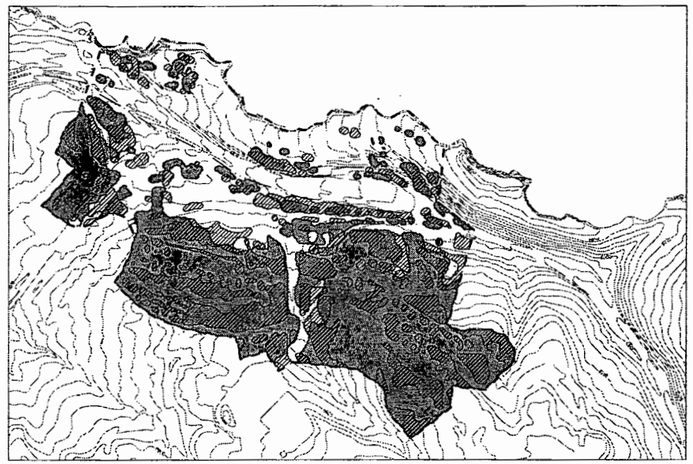
Existing vegetation

Village Historic District boundary

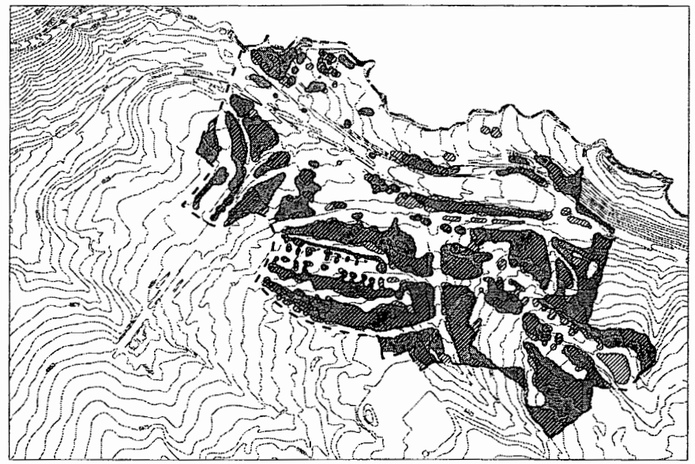
NOTE: This sequence depicts vegetation cover during the period of significance, between 1897 and 1942, and in 2002 within the Village Historic District.

Grand Canyon Village
National Historic Landmark District
Vegetative Changes 1924-2002

Figure 64



1924



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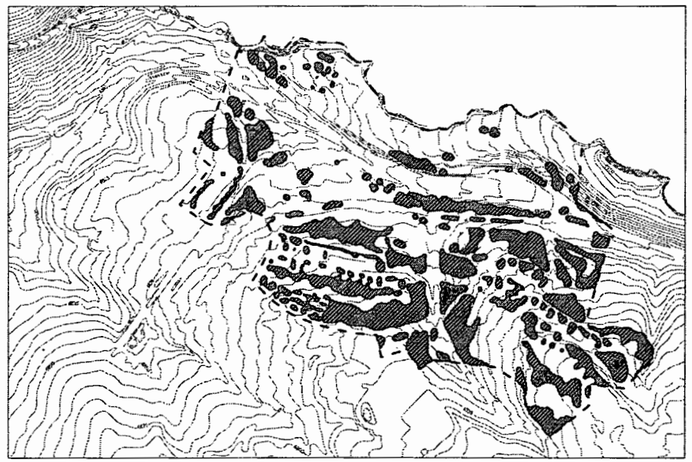
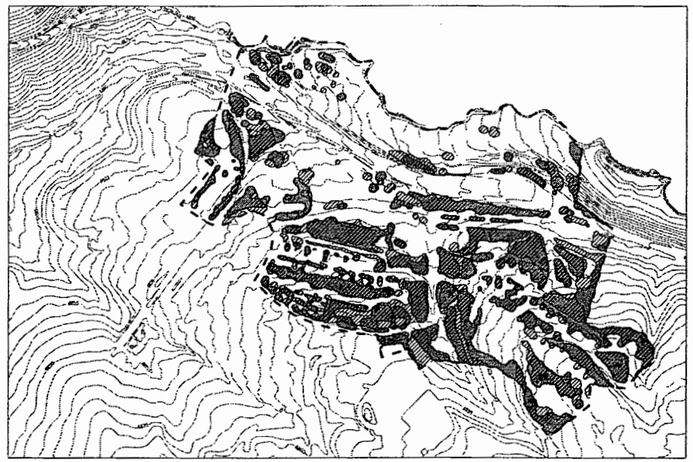


1942



2002

– – – – Village Historic District boundary

Existing vegetation

Existing vegetation in 1942
(End date of the period of signficance.)

NOTE: This sequence compares vegetation cover at the end-date of the period of significance, 1942, with other time periods within the Village Historic District. These periods discussed in Chapter II, Landscape Physical History.

Grand Canyon Village
National Historic Landmark District
Period of Significance Comparison

Figure 65

Recommendations by Landscape Character Area

The following section provides treatment recommendations that focus on individual landscape character areas. These recommendations address surviving historic landscapes features and systems. The level and degree to which changes can occur, without adversely impacting the landscape's physical and visual character-defining features, is identified. Recommendations address how to incorporate new features within the landscape to ensure compatibility with the existing historic landscape character and the need for continued local community and visitor use, accessibility, and interpretation.

The recommendations are located on the following drawing sheets and organized in a similar manner to the Existing Conditions text in Chapter III, by landscape character area. Within each area, recommendations are then organized by landscape characteristic. Maps and photographs are provided for each character area to better illustrate the concepts being discussed in the narrative recommendations.

TREATMENT RECOMMENDATIONS - RIM AREA

Spatial Organization

- Retain all contributing patterns of spatial organization.
- Avoid new construction or demolition that would eliminate these spaces. The removal of Kachina Lodge and Thunderbird Lodge is appropriate, according to the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, however, as they are non-contributing features that were constructed in an historically open space. *Refer to the Specific Project Recommendations for Possible Removal of Kachina and Thunderbird Lodges.

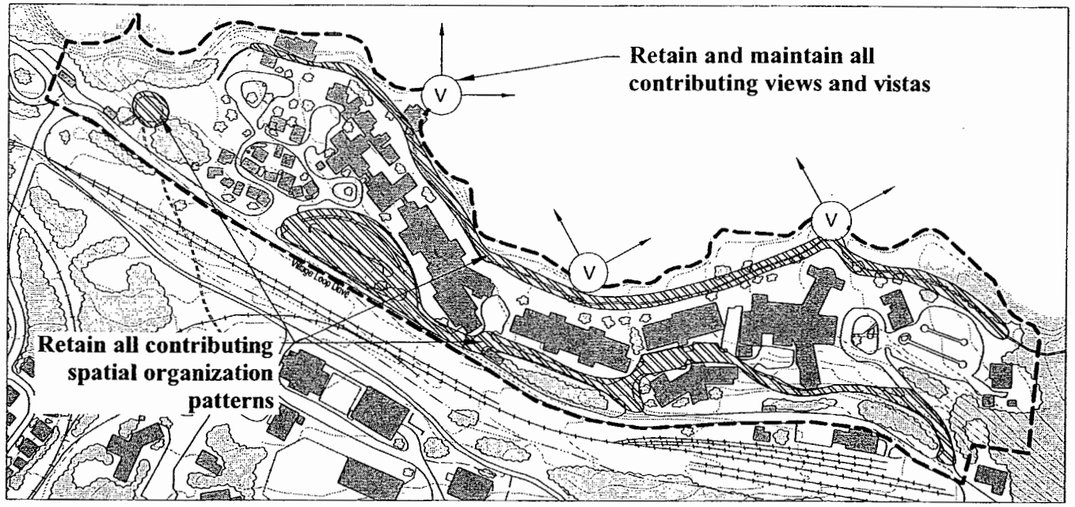
Circulation

- Retain all contributing road alignments and parking areas.
- Retain all contributing pedestrian systems.
- Remove or alter non-contributing circulation features, if necessary and adaptive re-use is not feasible. These features include the Kachina Lodge parking lot and Thunderbird Lodge access loop.
- Repair and maintain all circulation features assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor and major disturbances that require corrective action.
- Reestablish new circulation patterns to follow historic patterns. Locate vehicular circulation south of the buildings while circulation between the buildings and rim should be primarily pedestrian in nature.
- Minimize the establishment of desire paths, which trample vegetation, enhance erosion, and damage cultural resources, by carefully assessing the most efficient and well-traveled routes between destinations prior to the implementation of new pedestrian patterns. Upgrade desire paths by paving, edging, or the installation of signage, if the paths become heavily-used and are not considered detrimental to natural or cultural resources in the area.
- Ensure that the Rim Trail and Bright Angel Trailhead are universally accessible and barrier-free to as many people as possible, including persons with physical disabilities. Undertake accessibility improvements on other pedestrain routes to major destinations in the Rim Area to the degree possible without negatively impacting the historic character and integrity of existing pedestrian systems. Avoid accessibility improvements that require excessive grading, or other construction, that will alter the historic character of the area.

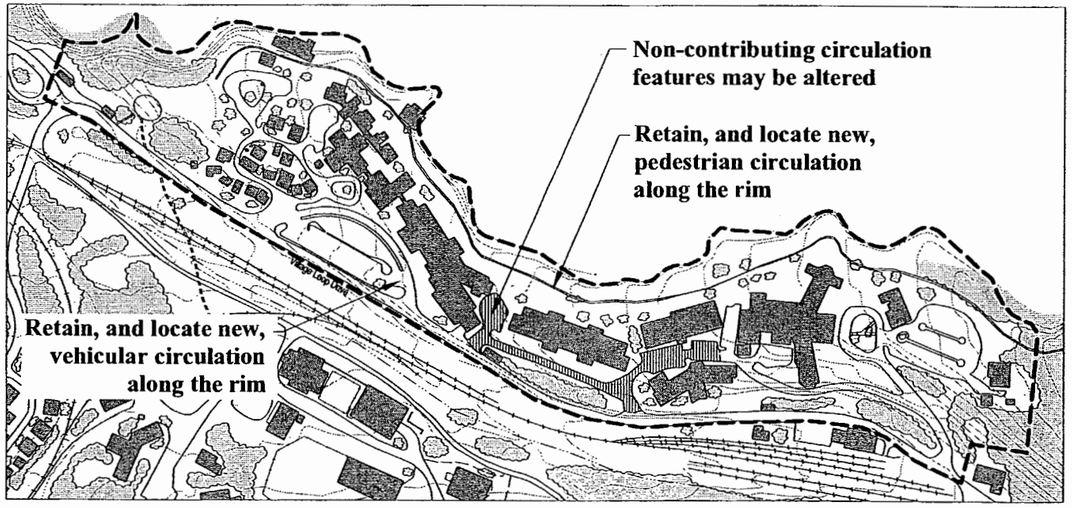
Views and Vistas

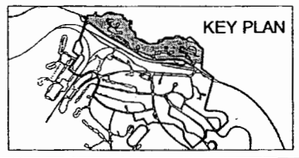
- Retain and maintain all existing, contributing views and vistas. Avoid creating obstruction to these views. Perform maintenance tasks to keep the views clear, such as the removal and thinning of vegetation that obscures contributing views and viewpoints.

Spatial Organization, Views/Vistas



Circulation





SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT PLAN RIM AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 42 OF 67	

TREATMENT RECOMMENDATIONS - RIM AREA

Vegetation

- Remove all turf-grass lawn from the Rim Area. It does not contribute to the character of the Village Historic District, is not native, and is not sustainable as it must be mown and irrigated throughout the growing season. Consider replacing the turf-grass with a low native grass, or revegetate the area with native trees, shrubs, and groundcover if the lodges are removed.

- Evaluate the location, density, and role of non-native plants within the Rim Area landscape. Invasive non-native vegetation should be monitored, controlled, and removed if it threatens to displace or disrupt native vegetation or escape beyond the developed area. Non-native vegetation that is not invasive or detrimental to other natural resources, and is found to have been used or existed during the period of significance may remain, yet should be monitored carefully for possible colonization or invasive properties.

- Revegetate areas that have been disturbed through construction or vegetation removal with native species or historically appropriate non-disruptive non-native species. Undertake revegetation as quickly as possible to inhibit growth of non-native and/or invasive plant species.

- Utilize plants that are native to the Village Historic District and South Rim region when designing and installing new plantings.

- Implement planting designs that are informal and organic in character. Avoid rigid geometry or highly-stylized designs, such as tree allees, formal gardens or planting beds, and clipped or trimmed foundation plantings.

*For district-wide vegetation recommendations, refer to the section concerning vegetation found earlier in this chapter.

Buildings and Structures

- Retain all contributing buildings and structures. Avoid removing or relocating these features.

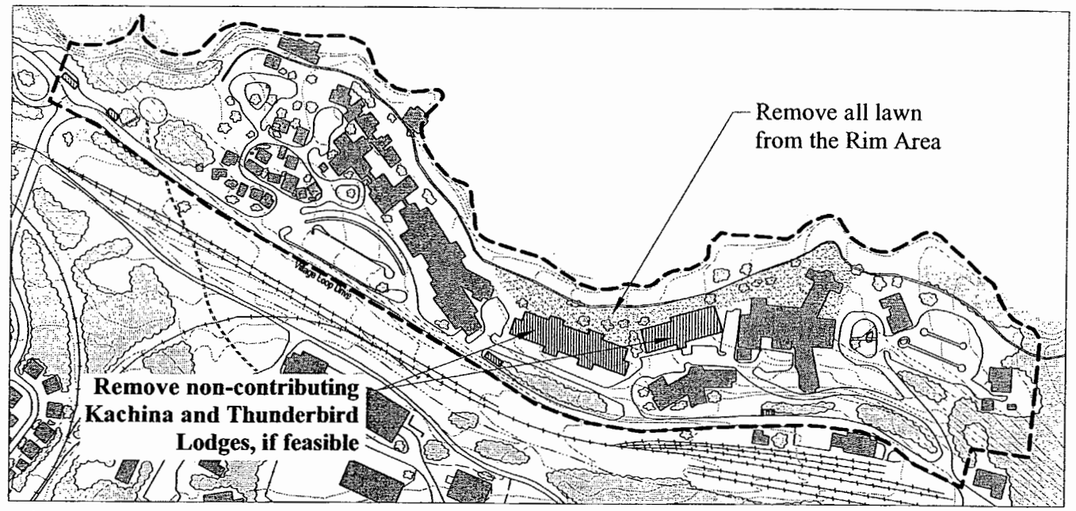
- Repair and maintain features identified in the Chapter III Condition Assessment as being in fair or poor condition.

- Remove Thunderbird Lodge and/or Kachina Lodge, if they are not found to be eligible for the National Register under Criterion G. * Refer to the Specific Project Recommendations for Possible Removal of Kachina and Thunderbird Lodges for further recommendations.

- Design new buildings and structures to reflect the character of existing, historic structures: two stories or lower, constructed primarily of wood and stone, and utilizing muted earth-tone colors. Refer to the *Grand Canyon National Park Architectural Character Guidelines* for more additional information.

- Limit the construction of new buildings and structures in the Rim Area. If necessary, new features should be located within the existing clusters of development, at the eastern and western edges of the character area. They should be sited, if possible, in the location of missing buildings and structures.

Vegetation, Buildings and Structures



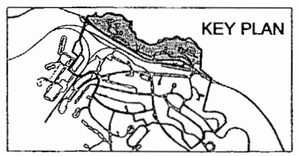
Small-scale Features

- Design new small-scale features to reflect the character of existing, historic small-scale features by using appropriate materials and styles. *Refer to the Design Palette of compatible and incompatible features on the next sheet for guidance.

- Minimize visual and spatial intrusions by incompatible features, such as utility boxes and dumspters, through selective siting and screening techniques. Site non-historic and incompatible features in inconspicuous locations or screen these features using vegetation, fencing, or stone walls.

- Remove or screen non-contributing small-scale features that are no longer in use, necessary, or that detract from the historic character of the area, such as visible dumpsters, utility boxes, or inadequate bollards. Repair and maintain features assessed to be in fair or poor condition that will remain.

*Refer to Specific Project Recommendations for comments regarding the Rim Trail.



SCALE: 1" =400'

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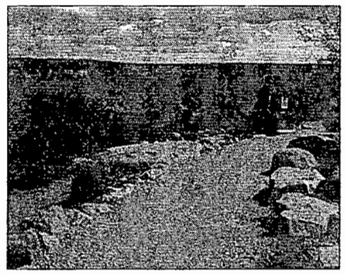
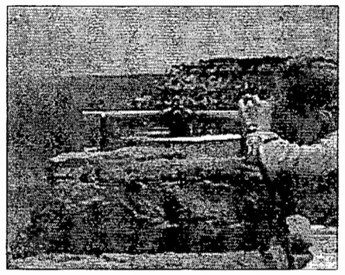
A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT PLAN RIM AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 43 OF 67

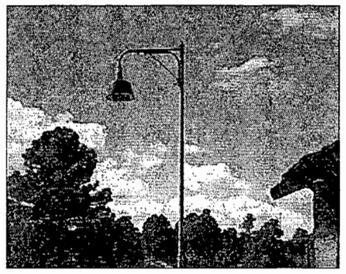
Design Palette

Compatible Features


Stone edging and gravel paths


Decorative telescopes

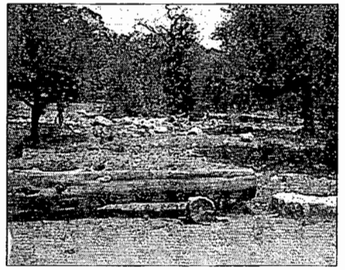

Stone wall

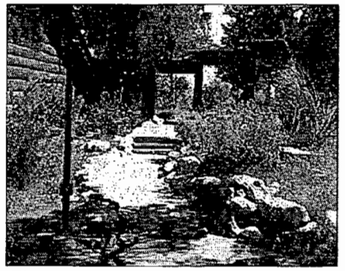

Historic lighting standard

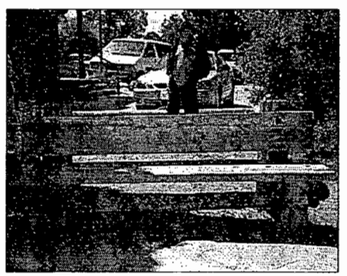

Stacked stone wall

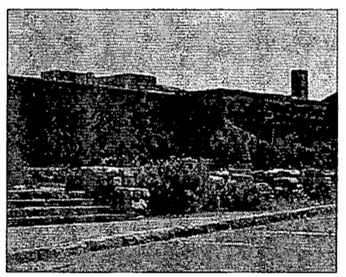

Stone signage

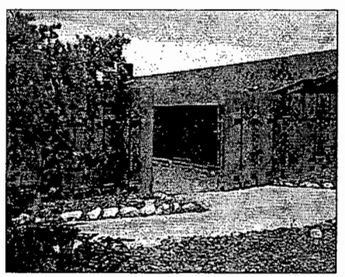

Boulder edging


Wood wheelstops

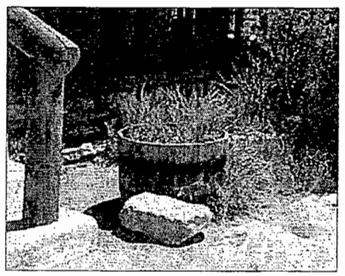

Flagstone path and native plantings

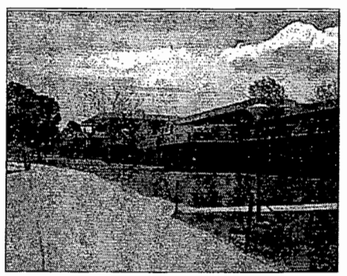

Wood bench

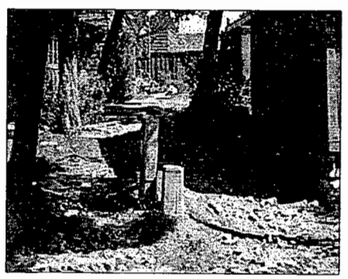

Native planting design

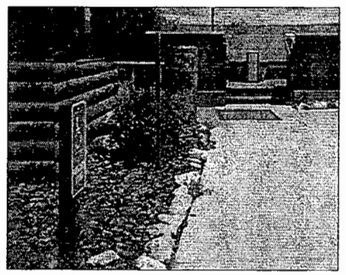

Brown board privacy fence

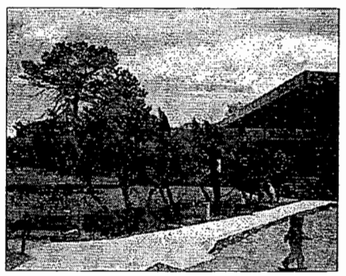
Incompatible Features

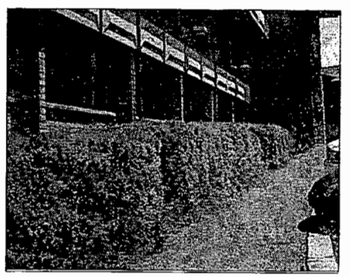

Non-historic barrel planters

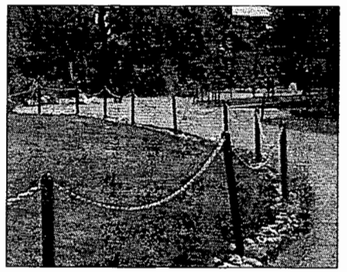

Modern lighting and turf

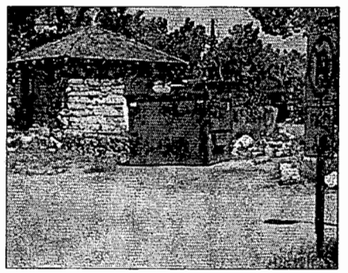

Exposed utility boxes

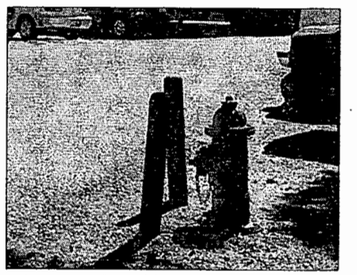

Mulch and foundation planting

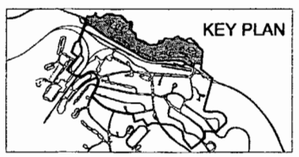

Row of trees


Clipped hedge


Turf lawn


Visible dumpster


Damaged and inadequate bollards



A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT RECOMMENDATIONS

RIM AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO. ___

SHEET 44 OF 67

TREATMENT RECOMMENDATIONS - UTILITY AREA

Spatial Organization

- Retain and maintain the existing, contributing spatial relationships in the area. Key spaces include the central utilty yard, the open yard between the Livery Stable and Mule Barn, the corrals, the Village Loop Drive corridor, the Community Building space, and the massing of vegetation between Village Loop Drive and Apache Alley.

- Remove the substation, and associated structures, if necessary, to regain the historically open space between the Purchasing/Receiving Building and Power House.

Views and Vistas

- Retain the long, interior views through the central utility yard and into the site from Village Loop Drive and the Rim Area. New or relocated features should not obstruct these views. For example, new plantings within these contributing viewsheds should be minimal in number and low in height to avoid blocking views.

Circulation

- Retain and maintain all contributing road alignments and parking areas.

- Repair and maintain all circulation features assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor and major disturbances that require corrective action.

- Remove and prohibit off-road parking throughout the character area. This type of opportunistic parking damages pavement edges, compacts soil, damages vegetation, and creates an unkempt and cluttered appearance.

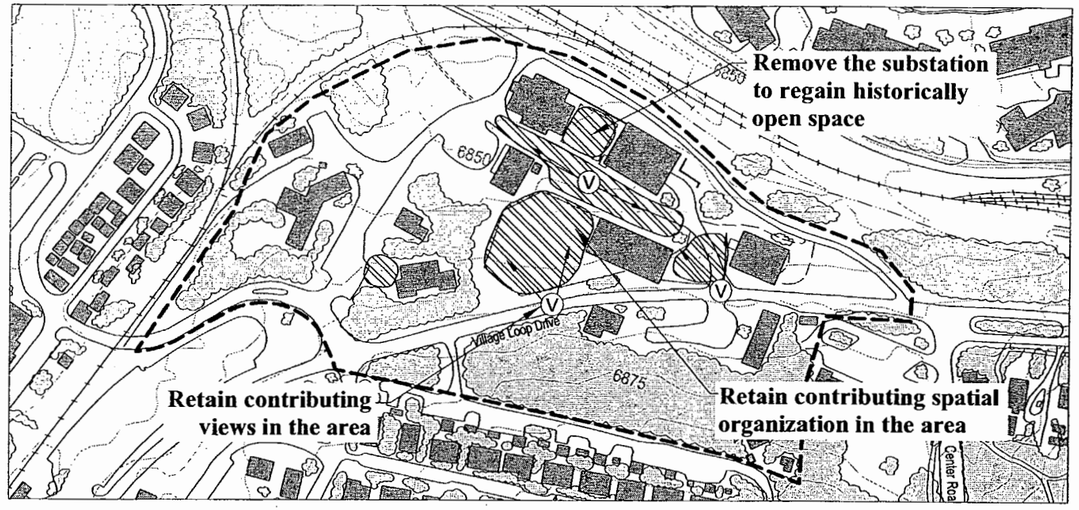
- Retain the central circulation corridor that runs through the utility buildings. New circulation patterns should be derived from this corridor alignment.

- Retain and maintain existing, formal pedestrian circulation associated with the Community Building. New pedestrian patterns in this location should continue to conform to the more formal and defined character of the building.

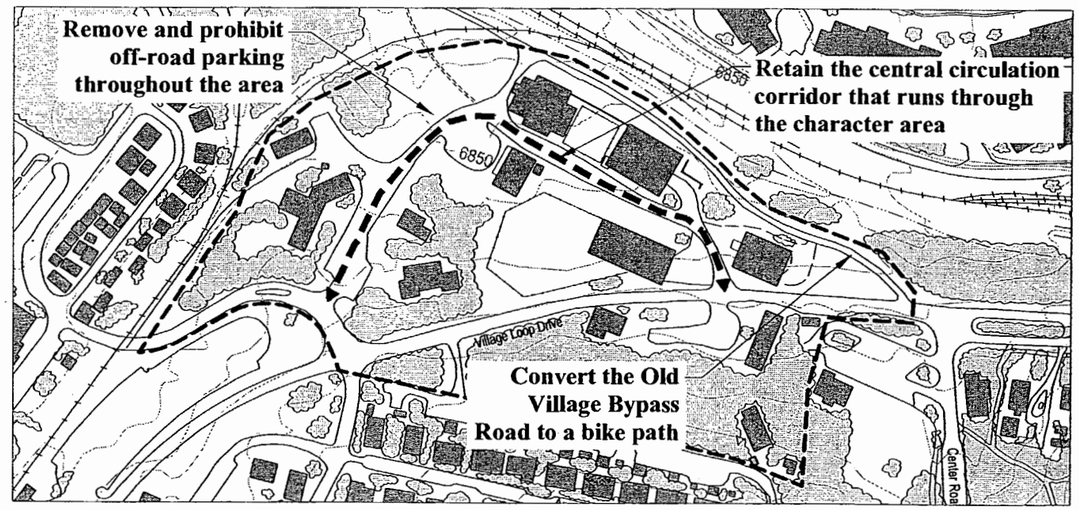
- Avoid introducing new parking lots and spaces except as required to accomodate NPS or concessionaire staff. It is preferable to use existing parking facilities to meet anticipated needs or to establish new parking outside of the Village Historic District than to build new lots.

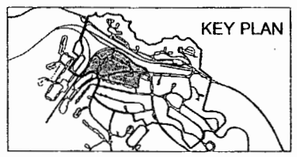
- Convert the Old Village Bypass Road to a bike path, or incorporate into the proposed Greenway, if it is no longer needed for vehicular circulation or will not become part of the light rail transit system, as proposed by the NPS.

Spatial Organization, Views/Vistas



Circulation





SCALE: 1" =300'

0 150 300 600 900 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT RECOMMENDATIONS

UTILITY AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 45 OF 67

TREATMENT RECOMMENDATIONS - UTILTY AREA

Vegetation

- Retain and maintain, as much as possible, all existing tree cover that is non-invasive and in good condition. Particular attention should be given to retaining and maintaining contributing vegetation.

- Re-establish missing vegetation patterns associated with the period of significance, if new plantings are necessary. Refer to historic aerial photographs in Chapter II for historic vegetation patterns and the graphic at right for representative locations of missing vegetation masses.

- Design new vegetation patterns to reflect historic patterns. During the period of significance, vegetation was randomly planted about the buildings, or left in their original locations as buildings were constructed around them. New plantings should be introduced as individual trees, loose groupings of trees, and masses of trees. Avoid allees of trees, geometric patterns, or other formal planting designs.

- Avoid planting groves of trees in locations that were historically open. If vegetation is necessary in locations that historically lacked stands of vegetation, such as the corral space and former spray pond site, utilize groundcover or low plantings to maintain their historically open character.

Buildings and Structures

- Retain and maintain all contributing buildings and structures in the Utility Area. Adaptively re-use these features as possible. Avoid demolishing or relocating them.

- Repair and maintain all buildings and structures assessed in fair poor condition in the Chapter II Condition Assessment. These features show clear evidence of minor and major disturbances that require corrective action.

- Remove the substation, and its associated features, if they are no longer useful. This action will re-establish an historically open space between the Purchasing/Receiving Building and Power House.

- Construct necessary new buildings or structures in the locations of missing historic buildings and structures. Archeological investigations may prove useful in determining the location of no-longer-extant buildings or structures.

- Follow the *Grand Canyon Nationa Park Architectural Character Guidelines* when implementing new construction or altering existing buildings or structures.

- Consider implemeting new design elements that emulate or interpret the missing Power House smokestack, removed in 1956.

Small-scale Features

- The design of new small-scale features, such as benches, fencing, trash receptacles, and tables, should be compatible with the historic character of the area. These new additions, however, may also be contemporary in style or contemporary interpretations of the design styles extant during the period of significance, as long as they do not distract from or ignore the area's historic character. The colors of new features should be neutral and the overall forms simple and devoid of decorative elements. The use of wood, metal, and stone materials is preferable.

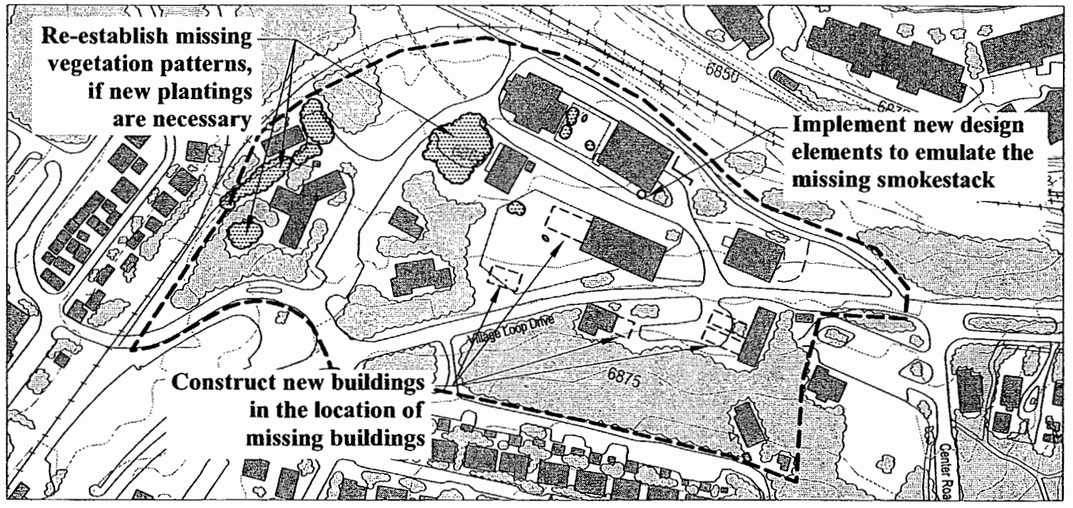
- Retain existing small-scale features whenever feasible to meet new needs rather than replacing them with new site elements. Create strategies for salvaging small-scale features, or the materials of these features, by incorporating them into the design of new features.

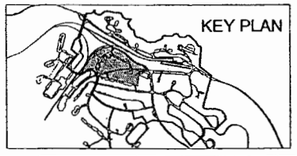
- Consider retaining utility poles and lines, as they do not detract from the historic character of the area.

- Retain the current minimal and understated character of interpretive and directional signage which is consistent with the site's historic utilitarian character. Design signage that incorporates natural and native materials, such as stone and wood, and muted colors to blend with the site's character.

- Design new lighting, including lighting standards, to reflect the understated character of the area and avoid presenting a false sense of history. Lighting should also follow GRCA night-time lighting standards for reducing light pollution.

Vegetation, Buildings and Structures





SCALE: 1" =300'

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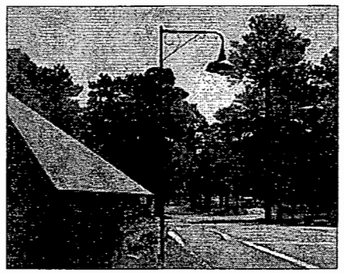
A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS UTILITY AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. SHEET 46 OF 67

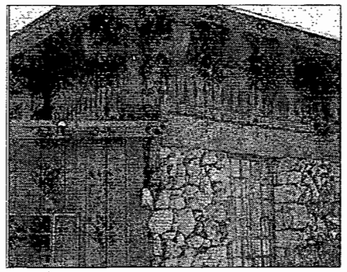
Design Palette

Compatible Features


Cut stone curbing

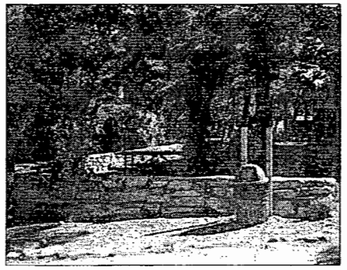

Historic light standard


Boulder "bollard" protection


Architectural details

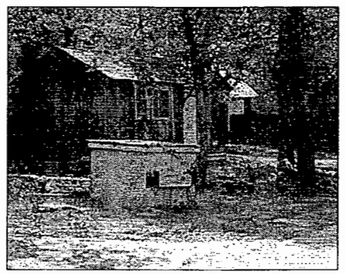

Stone-edged gravel paths


Wood railing details

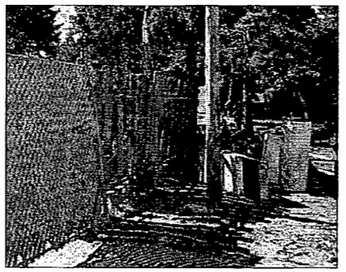

Stone wall

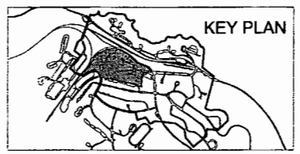
Incompatible Features


Visible material piles


Deteriorating and visible dumpster


Material piles and damaged fencing


Abandoned appliances



A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
T

TREATMENT RECOMMENDATIONS

UTILITY AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
47
OF 67

TREATMENT RECOMMENDATIONS - RAILROAD AREA

Natural Systems and Features

- Maintain and protect the slopes of the Bright Angel Wash. Take measures to prohibit visitors and staff from walking down the slopes, rather than using authorized paths and stairs.

- Engage a qualified natural resource specialist to assess the ditch for its ability to accomodate current drainage needs, the potential need for dredging and/or slope stabilization, and whether the vegetation in the ditch is exotic, invasive, or requires protection. Avoid removing, channelizing, or filling-in the ditch, as it is a contributing resource.

Spatial Organization

- Retain all contributing, character-defining spaces. Avoid new development within, or between, these spaces that would permanently alter spatial organization.

Vegetation

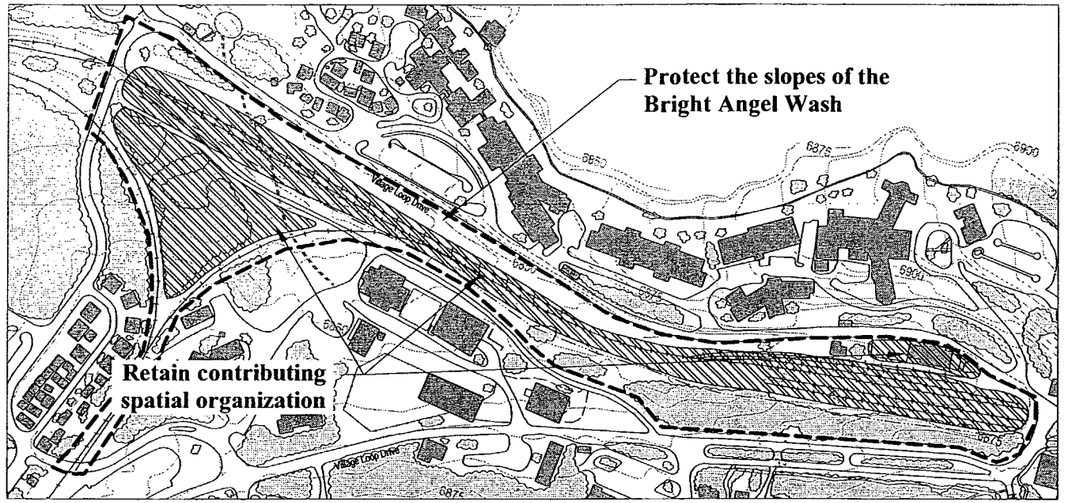
- Retain all contributing vegetation, particularly south of the railroad tracks and within the wye space.

Circulation

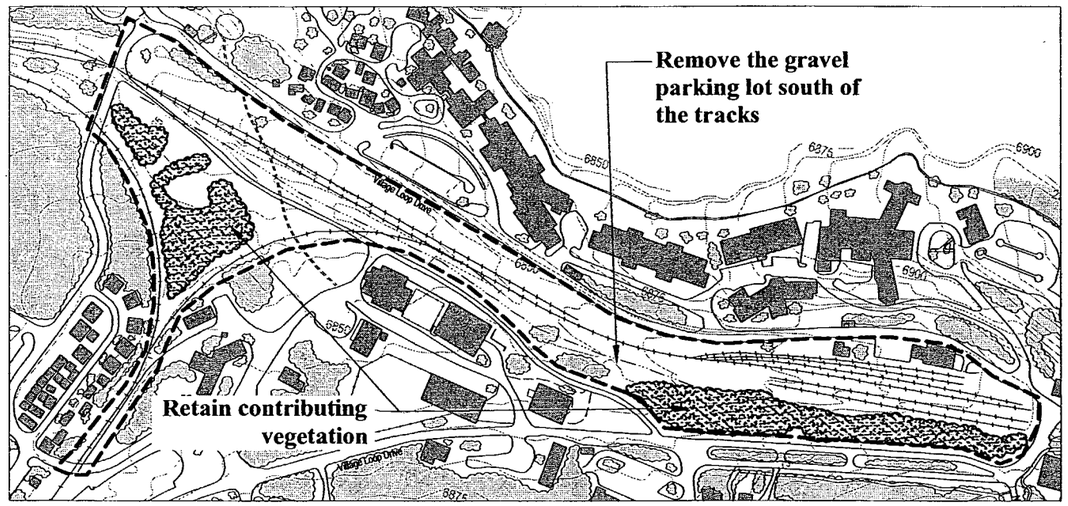
- Retain and maintain all contributing circulation features, particularly the railroad tracks, asphalt parking near the Railroad Depot, the asphalt path along the southern edge of the character area, and the median. Avoid removing the railroad tracks, even if rail service is suspended.

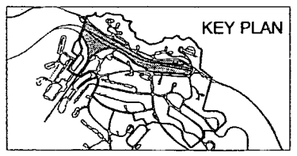
- Remove the gravel parking lot south of the tracks. This parking lot is not historic, detracts from the character of the area, and is likely detrimental to surrounding natural resources.

Natural Systems and Features, Spatial Organization



Vegetation, Circulation





SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS RAILROAD AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 48 OF 67

TREATMENT RECOMMENDATIONS - RAILROAD AREA

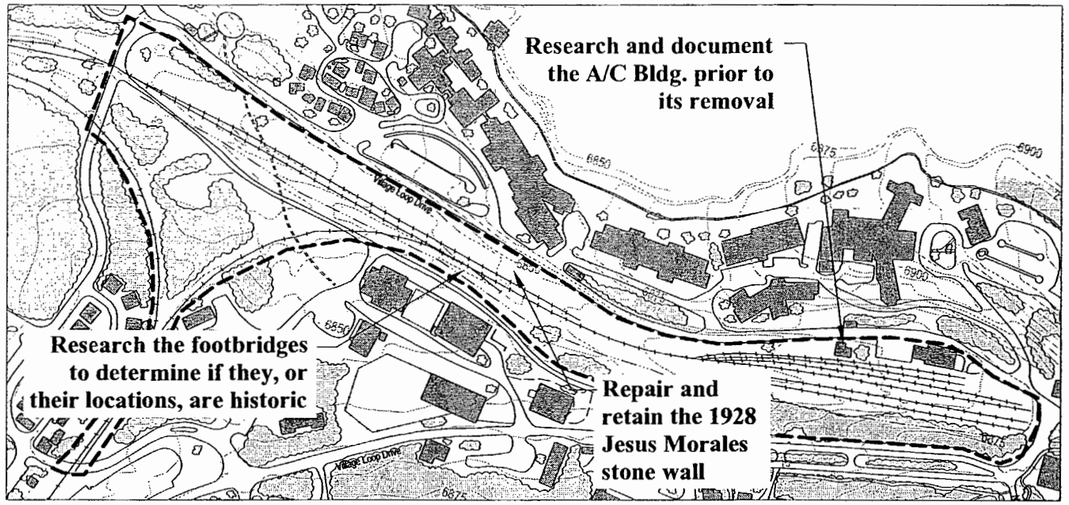
Buildings and Structures

- Retain and maintain all stone headwalls, bridges, steps, and stone-faced culverts. Avoid removing or obscuring these features.
- Research and document the Air Conditioning Building that is slated for removal.
- Research all footbridges to determine if they, or their locations, are historically significant. Remove existing bridges that are non-contributing, pose a safety hazard, or are beyond repair. If any of the bridges are found to be historic, or in an historic location, consider replacing them "in-kind" with structurally sound bridges based on accurate historic documentation. If historic bridges will be replaced, rather than repaired, the new bridge should match the old in design, color, texture, and where possible, materials. If necessary, new bridge materials for an historic bridge design may be of more contemporary and sustainable composition. However, the essential base material should remain the same (i.e. metal components should not be substituted for an historic wood bridge).
- Repair and retain the 1928 stone wall constructed by stonemason Jesus Morales.
- Avoid constructing new buildings and structures within the Bright Angel Wash, and the character area in general. If construction of new features is necessary, locate them near the Railroad Depot. Any new buildings or structures should be of minimal size and, if possible, located on the former sites of missing buildings.

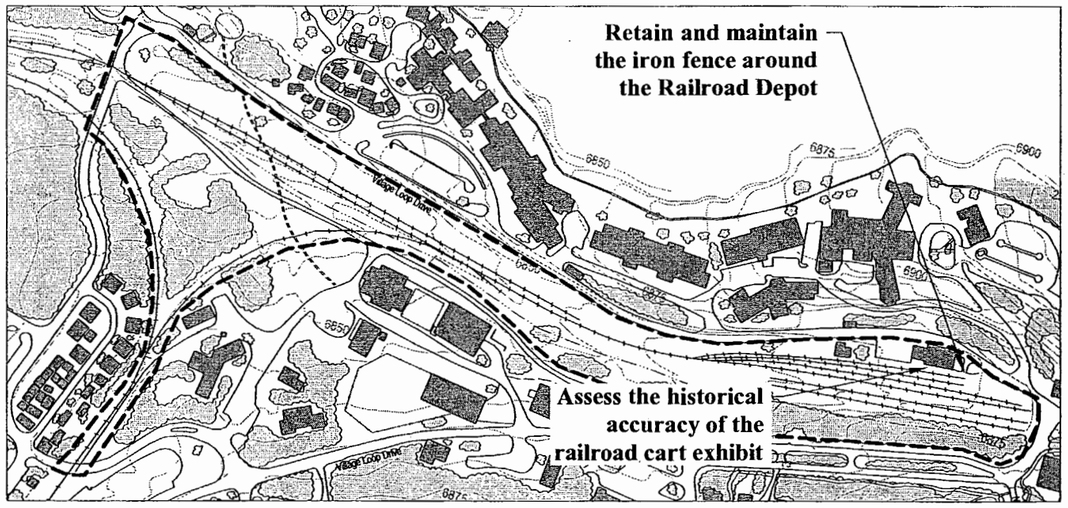
Small-scale Features

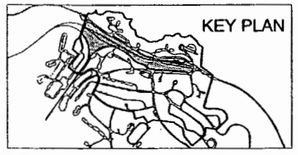
- Retain and maintain the iron fence surrounding the Depot.
- Repair and maintain all small-scale features assessed in fair or poor condition in the Chapter II Condition Assessments. These features show clear evidence of minor or major disturbances that require corrective action.
- Assess the accuracy of the railroad cart exhibit. If this cart, or the style of cart, was never used in the park, consider removing the exhibit to avoid conveying a false sense of history.

Buildings and Structures



Small-scale Features





SCALE: 1" =400'

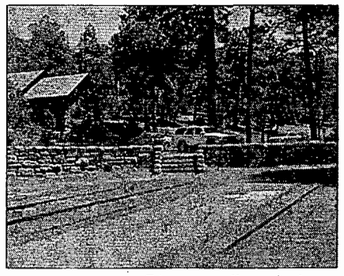
0 200 400 800 1200 N

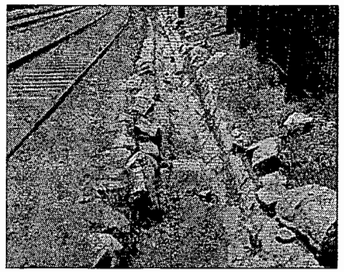
A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS RAILROAD AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. SHEET 49 OF 67

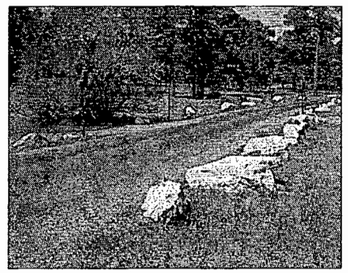
Design Palette

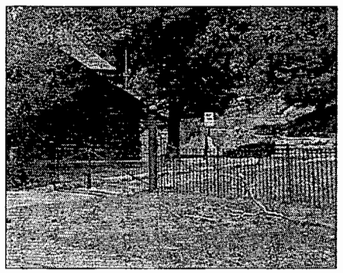
Compatible Features


Peeled-log footbridge

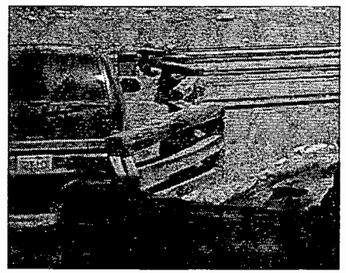

Stone wall and steps

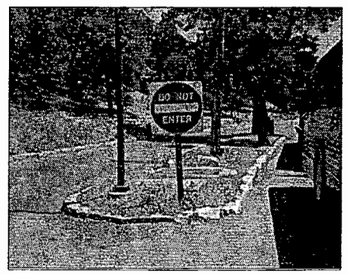

Stone swale


Boulder edging


Iron fence

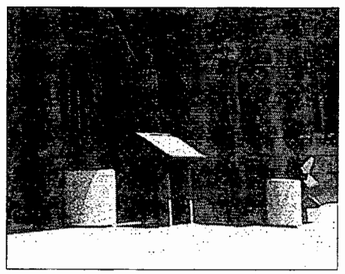
Incompatible Features

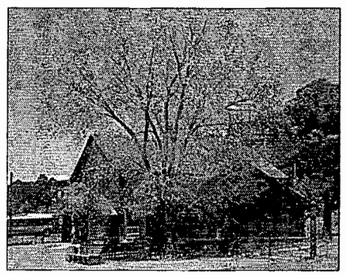

Contemporary wood fence

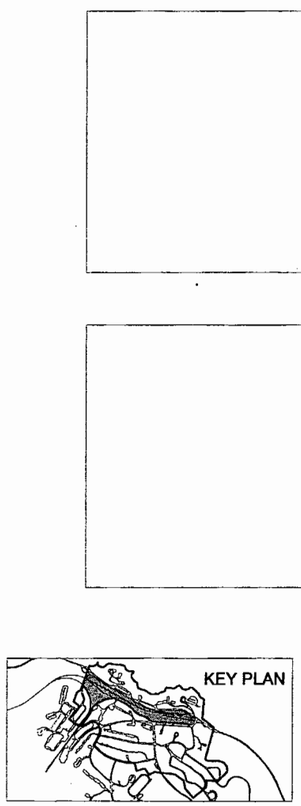


Excessive signage in historic median


Visible construction remnants


Aggregate-faced trash cans


Non-native maple tree



A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT RECOMMENDATIONS

RAILROAD AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO. ___

SHEET 50 OF 67

TREATMENT RECOMMENDATIONS - VISITOR AND COMMUNITY SERVICES AREA

Natural Systems and Features

- Retain the ravine running through the Village Historic District. Avoid excessively altering the topography through grading, or other measures.

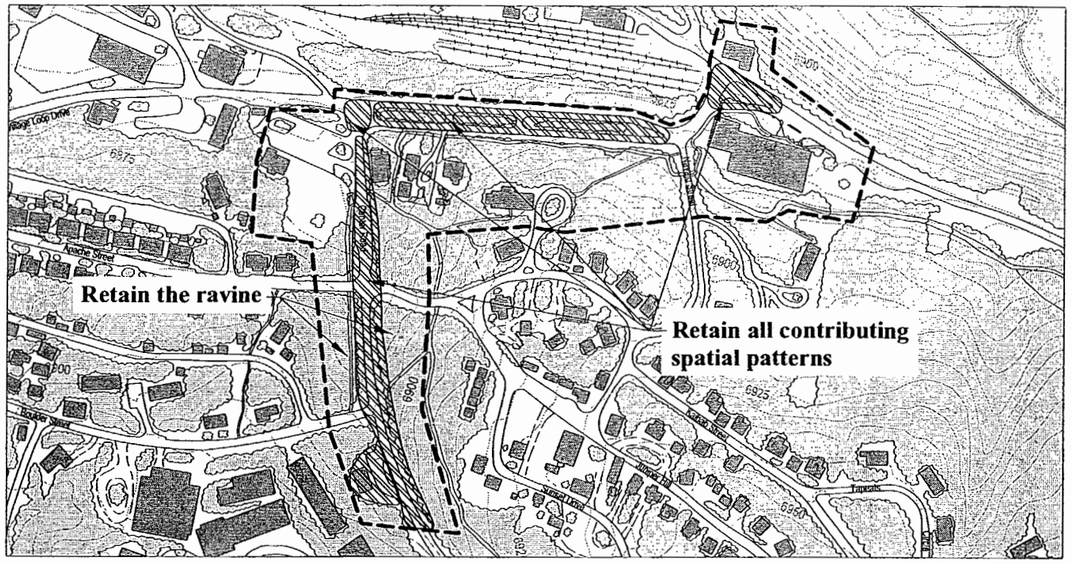
Spatial Organization

- Retain all contributing spatial patterns, including historic intersections, corridors, and nodes. Avoid alterations to contributing spatial organization through activities such as realigning roads and road corridors, removal of parking lots or traffic islands, or removal or relocation of buildings.

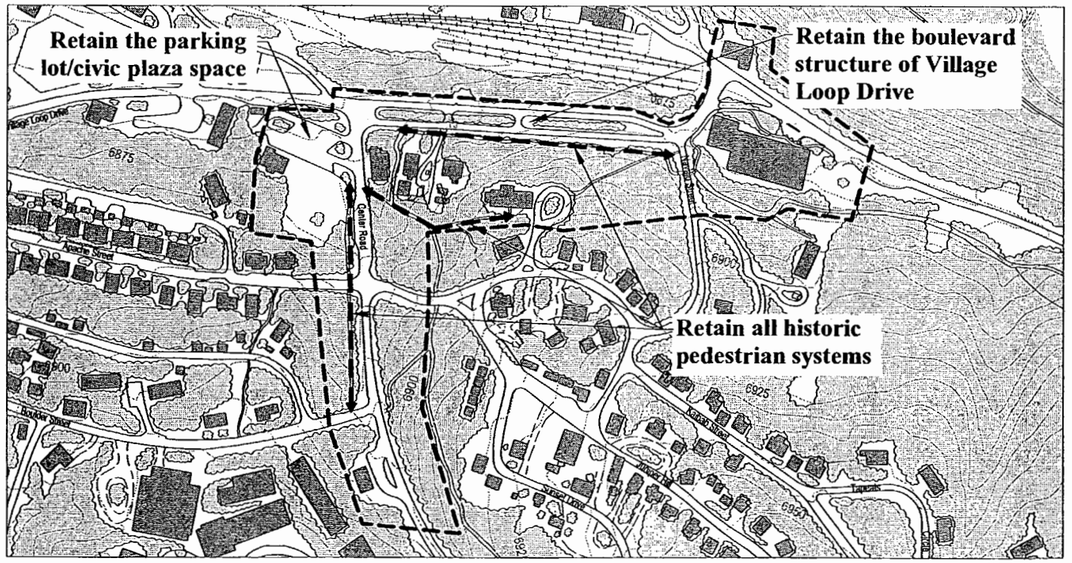
Circulation

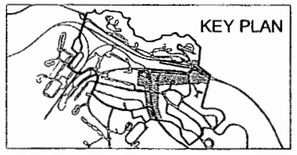
- Retain the existing, historic parking lot at the intersection of Village Loop Drive and Center Road.
- Retain the boulevard structure comprising the eastern portion of the Village Loop Drive.
- Retain the existing, historic layout and alignment of the Village Loop Drive and South Entrance Road intersection. Alterations, deemed necessary for traffic flow, should be designed to be as minimal as possible and to retain the existing organizational system.
- Retain and maintain all historic pedestrian systems. These include the sidewalk along Village Loop Drive, the path between Center Road and Grand Canyon Association Building, and the sidewalk along the west edge of Center Road.
- Repair and maintain all parking lots, roads, drives, paths, and sidewalks to remain. Particular attention should be paid to the features assessed in fair or poor condition as described in the Chapter III Condition Assessments.
- Evaluate the underlying reasons for the presence of earthen desire paths, such as the path between the Grand Canyon Association Building and Navajo Street. Consider formalizing or paving these paths, if they are found to be well-used, to decrease erosion and prevent further damage to surrounding vegetation. Future development of pedestrian circulation should take into consideration current circulation patterns and weigh efficiency with the need to protect natural and cultural resources.

Natural Systems and Features, Spatial Organization



Circulation





SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS VISITOR AND COMMUNITY SERVICES AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 51 OF 67

TREATMENT RECOMMENDATIONS - VISITOR AND COMMUNITY SERVICES AREA

Vegetation

- Retain as much existing vegetation as possible in this character area. Historic photographs indicate this area was wooded throughout the period of significance. Remove dead and diseased vegetation, as identified in the Chapter III Condition Assessments. Assess the causes of these problems and discontinue or prohibit activities that contribute to the loss of vegetation.

- Thin vegetation along road edges, if necessary for fire prevention and suppression purposes. Maintain a buffer of vegetation along Center Road, however, in order to retain the forested character and prevent views into developed areas.

- Revegetate the former Babbitt's Store site if no new development is planned in this location.

Buildings and Structures

- Retain all contributing buildings and structures.

- Limit new construction within the character area. New construction, if necessary, should be sited in the locations of missing buildings, such as Babbitt's Store. New construction may also be located within existing clusters of buildings, located around the Village Loop Drive and Center Road intersection and the Village Loop Drive and South Entrance Road intersection.

- Construct new retaining walls, planters, and structures to reflect the historic characters of the area - typically wood and stone materials, hand-built craftsmanship, and of generally NPS Rustic and Rustic Revival design. New features may be contemporary in design, or a contemporary interpretation of an historic feature, yet also must be compatible with the historic character. Compatible new features will incorporate primarily wood and stone elements. Avoid using concrete masonry units or constructing concrete walls, unless the resultant structures will be well-screened from view and no other building material may feasibly be used.

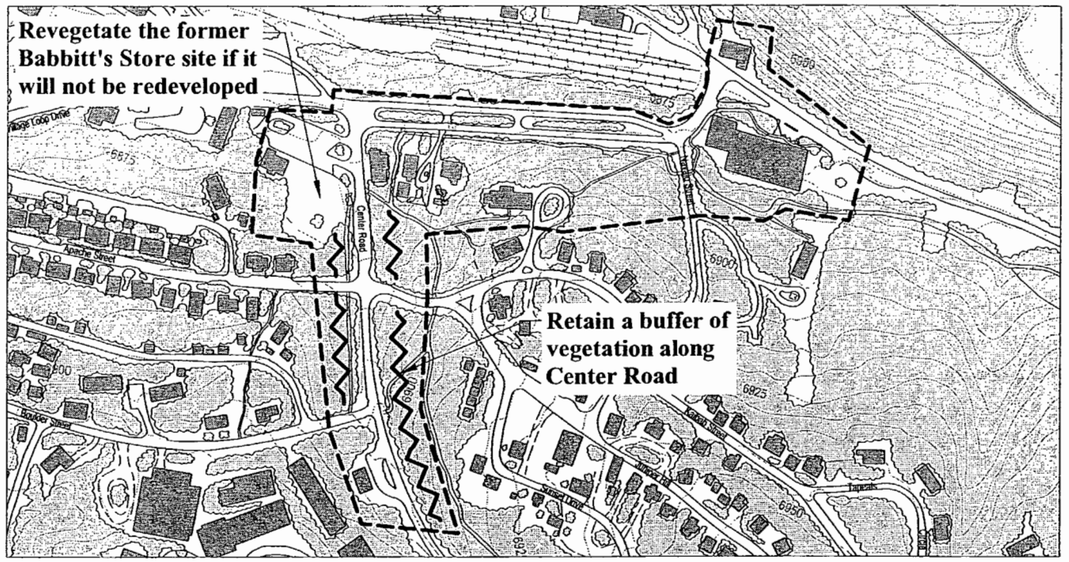
Small-scale Features

- Repair and maintain all small-scale features assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor or major disturbances that require corrective action.

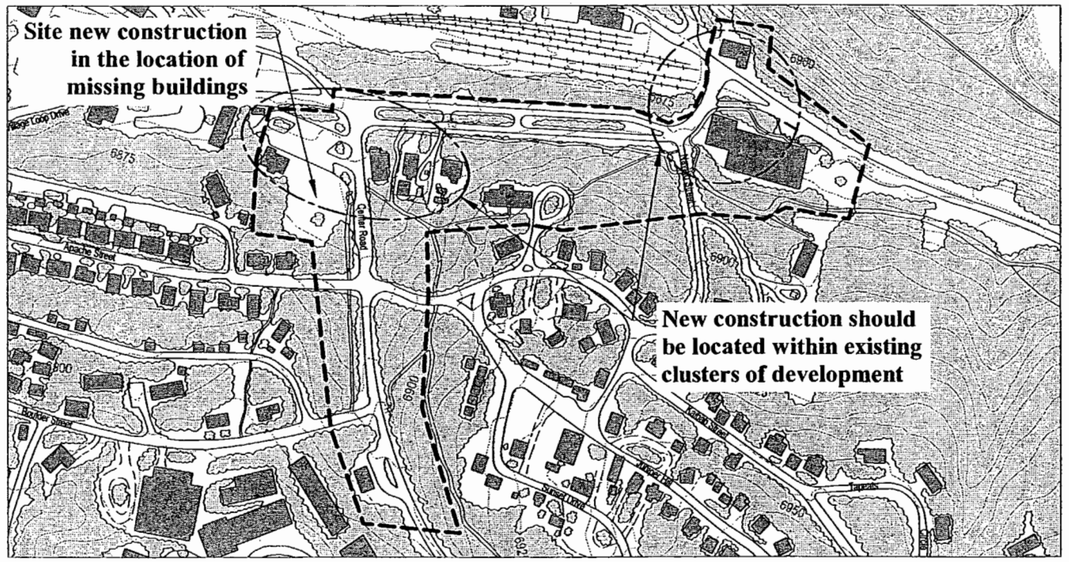
- Design new small-scale features to be compatible with the historic character of the area; new features should incorporate native stone, metal, and wood into their design. Avoid using concrete for features such as new wheelstops and curbing, or contemporary metal or reflective signage where new wood signage would perform the same function.

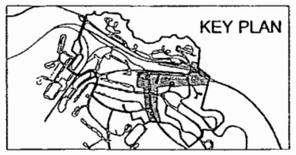
- Screen new small-scale features that are necessary for health, safety, and welfare, yet are not compatible with the historic character of the area. These features include propane tanks, dumpsters, trash receptacles, and utility boxes and meters. Screening techniques may include vegetation, fencing, and/or masonry walls.

Vegetation



Buildings and Structures





SCALE: 1" =400'

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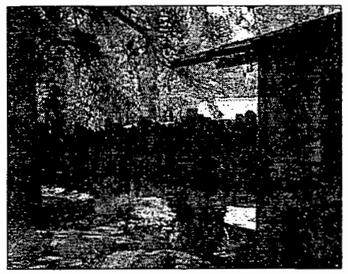
A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS VISITOR AND COMMUNITY SERVICES AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. — SHEET 52 OF 67

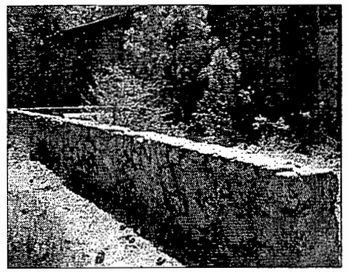
Design Palette

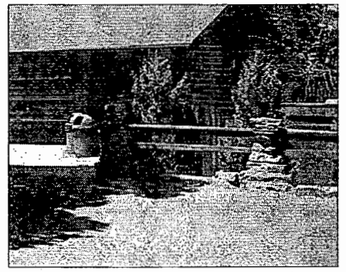
Compatible Features

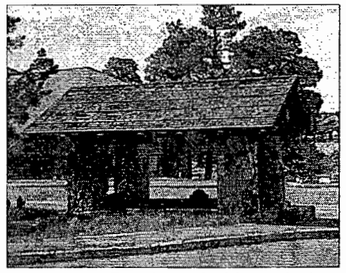

Wood and stone fence


Telephone kiosk and stone wall

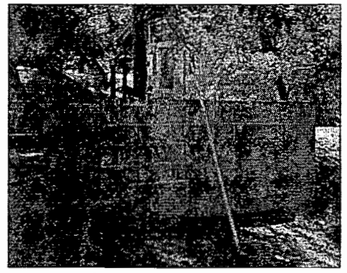

Stone pier

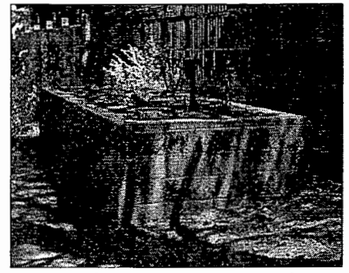

Stone wall


Stone and wood fence

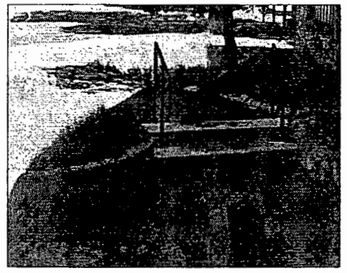

Rustic-styled bus shelter

Incompatible Features


Concrete masonry unit wall


Concrete masonry unit wall


Concrete masonry unit wall


Concrete retaining wall


Visible dumpster

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT RECOMMENDATIONS

VISITOR AND COMMUNITY SERVICES AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO.

SHEET 53 OF 67

TREATMENT RECOMMENDATIONS - NPS HOUSING AREA

Spatial Organization

- Retain all contributing spatial patterns, particularly the residential corridors that define the primary organization of the character area.
- Avoid removing buildings or vegetation along the residential corridor, as these features help define the contributing spatial pattern.

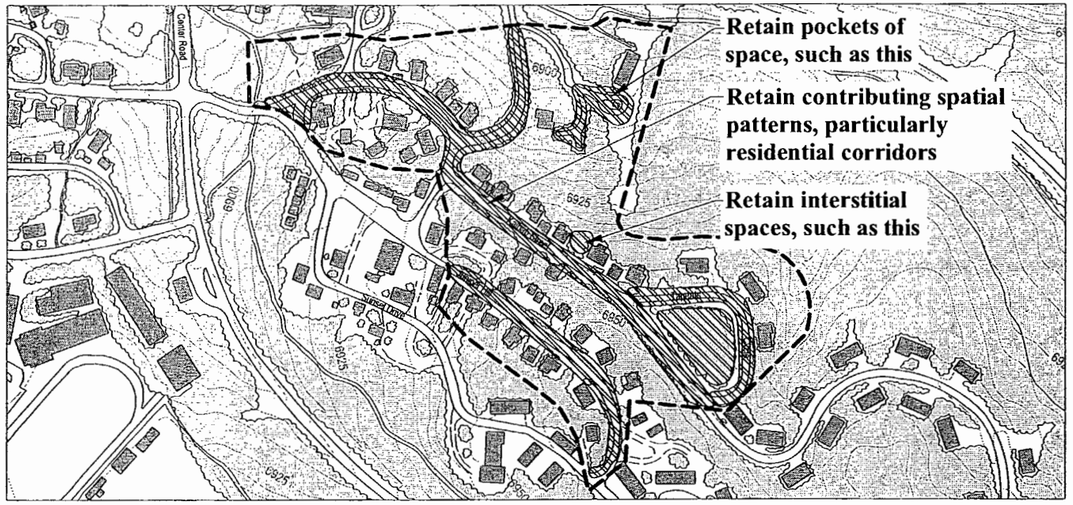
Vegetation

- Retain as much of the existing vegetation as possible in this character area. Historic photographs suggest that dense tree cover characterized this during the period of significance.
- Retain ornamental vegetation around the residences and within the character area that is non-invasive and does not present a threat to historic and/or native vegetation. Future research should be undertaken to determine which ornamental plantings reflect the period of significance. Consider replacing plantings found to be non-contributing with more appropriate plantings.
- Remove vegetation that is dead or exhibits signs of disease that cannot be easily treated. Replace removed vegetation in-kind with plants of similar habit and character.

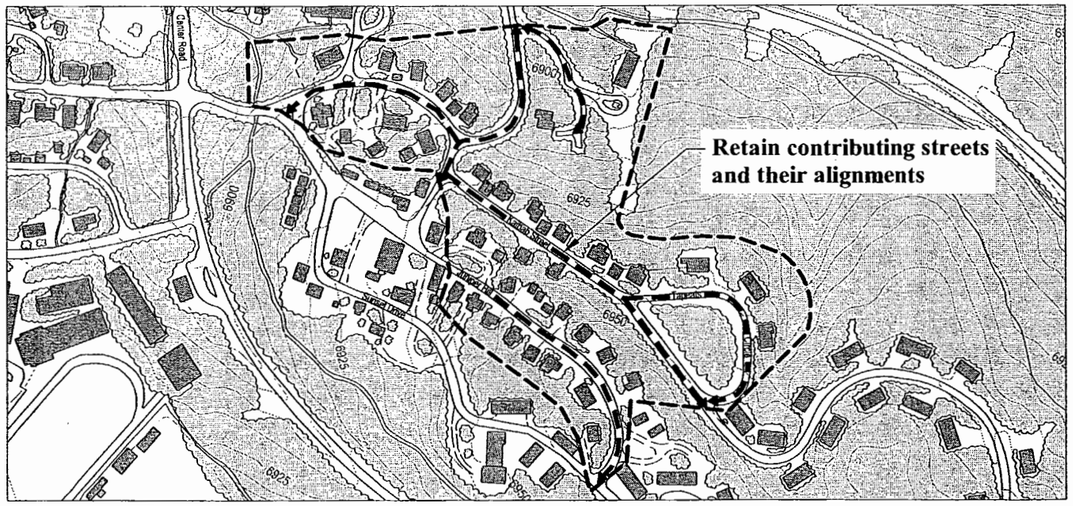
Circulation

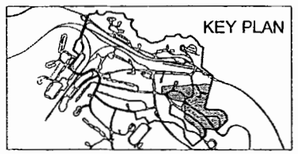
- Retain all contributing streets. Avoid altering their alignment or width.
- Retain gravel driveways and parking areas around residences. Historic photographs suggest that gravel driveways and parking were typical of the period of significance. Consider, however, lining these features with stones or boulders to clearly define their edges and prevent damage to cultural and natural resources.
- Re-establish the historic pedestrian systems associated with the residential streetscape, if the need exists. Use historic materials, such as crushed limestone tread and stone edging, whenever feasible.Attempt to follow the historic path alignments, whenever possible.
- Repair and maintain all circulation systems assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor or major disturbances that require corrective action.

Spatial Organization



Circulation





SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS NPS HOUSING AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113/20223 PKG. NO. — SHEET 54 OF 67

TREATMENT RECOMMENDATIONS - NPS HOUSING AREA

Buildings and Structures

- Retain all contributing buildings and structures, including residences, garages, and sheds. Avoid demolishing or removing these features.

- Retain each building's relationship to the street, which helps to define the character and spatial organization of the area. Avoid moving contributing buildings farther away or closer to the street edge.

- Avoid altering the exterior appearances of buildings in such a way as to detract from the historic character of the area. Aluminum siding, replacement windows, and asphalt shingle types are examples of unsuitable materials. Follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties* when undertaking any alterations to buildings.

- Retain and repair all contributing stone walls within the character area.

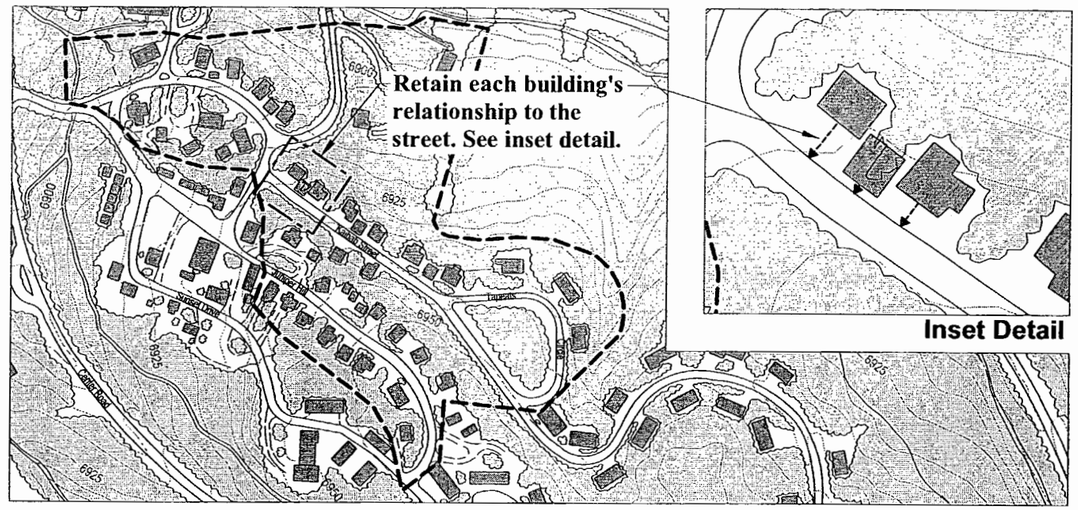
Small-scale Features

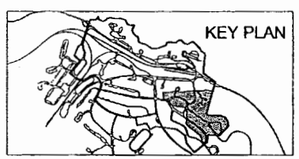
- Repair and retain all small-scale features assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor or major disturbances that require corrective action.

- Design new small-scale features to be compatible with the historic character of the area; new features should incorporate native stone, metal, and wood into their design. Avoid using concrete for features such as new wheelstops and curbing, or contemporary metal or reflective signage where new wood signage would perform the same function.

- Screen new small-scale features that are necessary for health, safety, and welfare, yet are not compatible with the historic character of the area. These features may include propane tanks, dumpsters, trash receptacles, and utility boxes and meters. Consider vegetation, fencing, and masonry walls for screening.

Buildings and Structures





SCALE: 1" =400'

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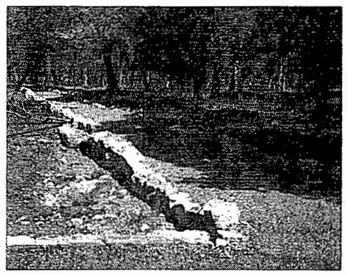
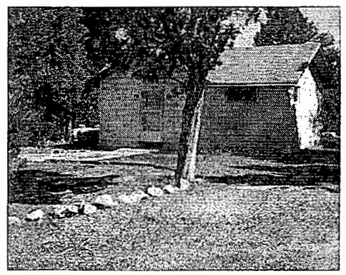
A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS NPS HOUSING AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. — SHEET 55 OF 67

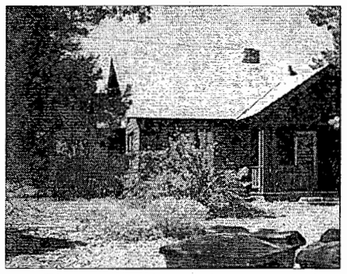
Design Palette

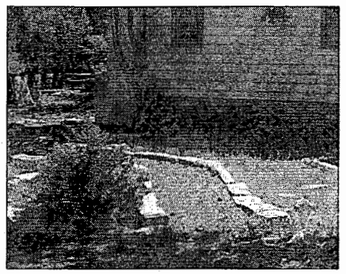
Compatible Features


Stone edging and gravel paths


Stone-egded gravel drives


Boulder edging


Plantings with native vegetation

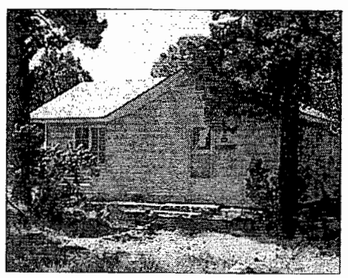

Cut stone edging


Stone retaining wall

Incompatible Features


Exotic plants in planting beds


Makeshift satellite dish stand


Aluminum siding

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS NPS HOUSING AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. — SHEET 56 OF 67

TREATMENT RECOMMENDATIONS - NPS SERVICE AREA

Spatial Organization

- Retain and maintain the three primary spaces that organize the character area: the central work plaza, mule barn node, and vehicular corridor. Avoid removing or relocating buildings, and other features, that would alter the character and configuration of these historic spaces, particularly in and around the central work plaza.

Vegetation

- Retain all existing, contributing vegetation with particular attention to the stands of pines between the work plaza and Labor Cabins, and the woodland mass between the work plaza and mule barn node.

- Retain, as possible, a generous vegetative buffer around the central work plaza, mule barn node, and vehicular corridor to screen the spaces from Center Road if vegetation must be removed for fire prevention purposes.

- Avoid formal, highly-maintained or geometrically arranged plantings. New vegetation should be sited informally to mimic the natural, wooded character of the area.

Views and Vistas

- Retain the long internal views through the work plaza, formed by the general arrangement of buildings about the edges of, and in the center, of the plaza. Avoid constructing new features in locations that would obstruct these views.

Circulation

- Retain Sunset Drive as an informal, uncurbed road used primarily for service access. Avoid installing curbs, gutters, widening the road, or otherwise upgrading Sunset Drive.

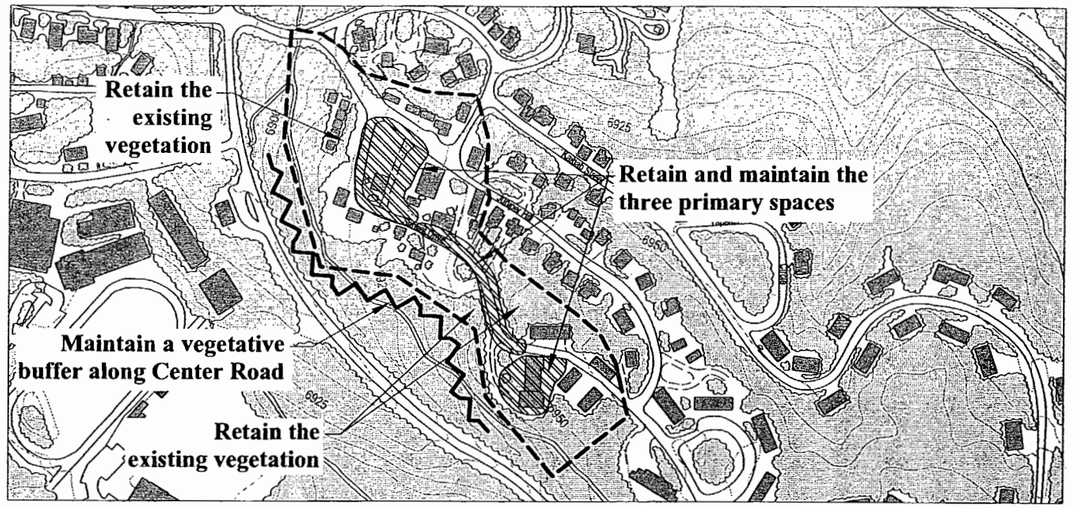
- Repair and maintain all circulation features assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor and major disturbances that require corrective action.

- Avoid creating a distinction between Juniper Hill and the work plaza. Juniper Hill appears to have become an extension of the work plaza during the period of significance. Avoid installing curbs, medians, distinctive and differing pavement types, or other measures that would differentiate Juniper Hill from the northern portion of the work plaza.

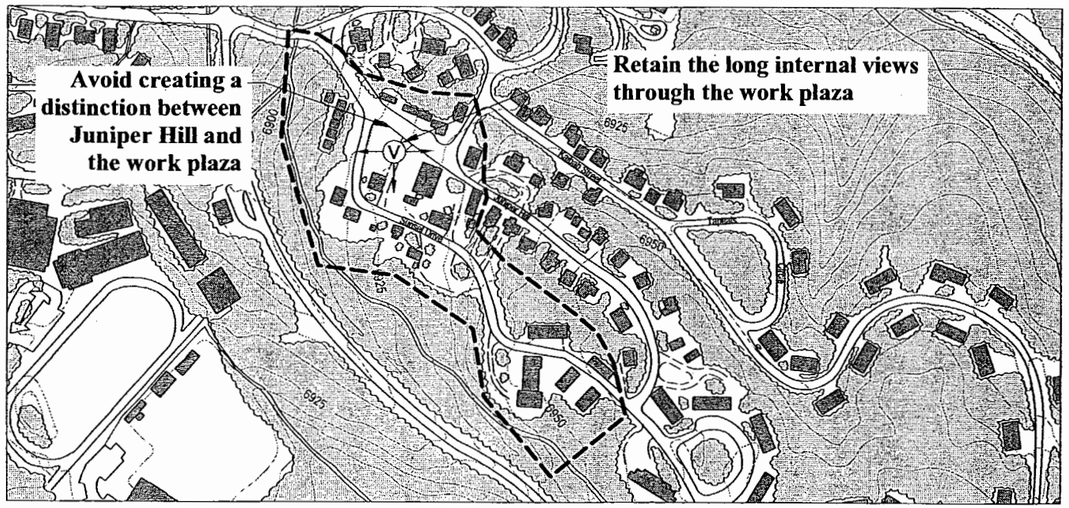
- Avoid using the work plaza as a parking lot for NPS, concessionaire, or other vehicles. If possible, parking, not related to service or maintenance use, should be removed to a location outside of the Village Historic District. No new or additional parking areas should be located within this character area.

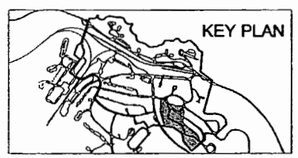
- Avoid introducing formal pedestrian paths, such as stone-edged asphalt paths or concrete sidewalks, into the character area. No obvious pedestrian circulation, of any type, was historically located in this area.

Spatial Organization, Vegetation



Circulation, Views and Vistas





SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS NPS SERVICE AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 57 OF 67

TREATMENT RECOMMENDATIONS - NPS SERVICE AREA

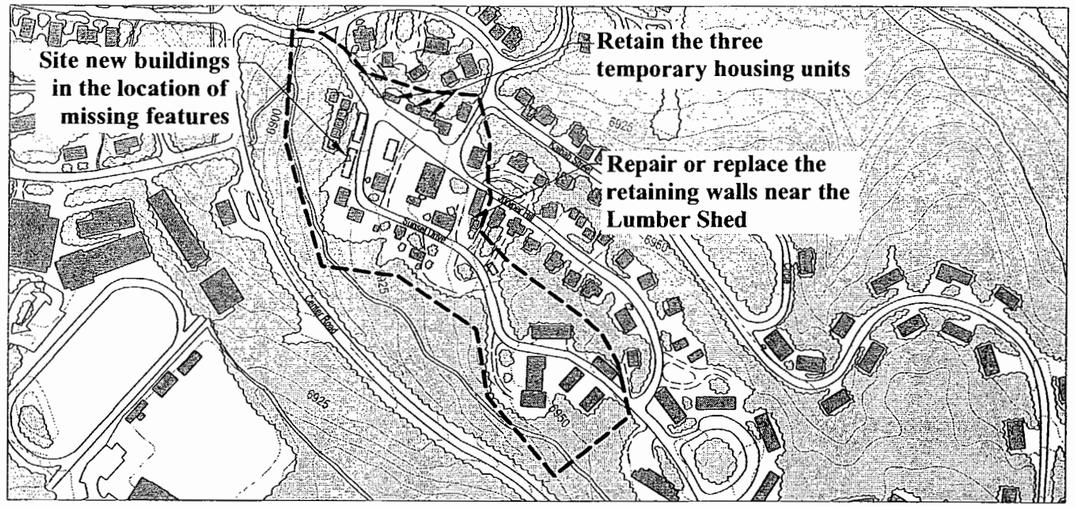
Buildings and Structures

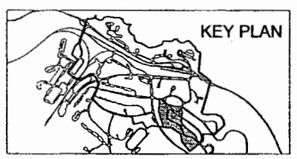
- Retain all contributing buildings and structures.
- Retain the three temporary housing units located along the northern edge of Juniper Hill and the work plaza. Although these features do not contribute to the period of significance, they help define the edge of the plaza. Consider, however, replacing the units with permanent housing that is compatible with the historic character of the area.
- Repair or replace the retaining walls near the Lumber Shed. Determine whether the masonry wall is historic *prior* to undertaking any action; the contributing or non-contributing status of the wall will determine the approach to its treatment. If it is determined that the walls should be replaced, use materials found in the original wall.
- Locate new buildings and structures on the site of missing features, whenever possible. New features should reflect the informal, utilitarian character of the area and draw design concepts from existing, historic buildings and structures. Refer to the graphic at right for representative locations of missing buildings and also to Figure 36 in Chapter II for building locations in 1941.
- Maintain historic building uses whenever possible. Adaptively re-use buildings that are empty or used solely for storage.

Small-scale Features

- Avoid introducing ornamental features, such as stone edging, decorative fencing, or stacked stone walls, into this historically utilitarian character area.
- Assess the existing lighting features for the possibility of light pollution. Evaluate the effectiveness of the lamps for their ability to contain light.
- Remove or replace small-scale features that are no longer in use or pose a hazard to people, wildlife, or natural resources. These features may include deteriorated metal bollards, abandoned gas pumps, storage containers, and material piles.

Buildings and Structures





SCALE: 1" =400'

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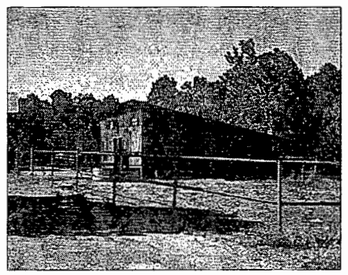
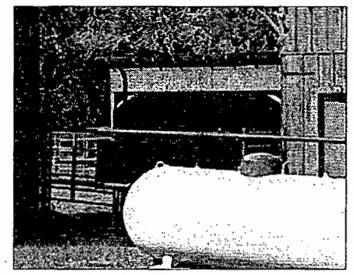
A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS NPS SERVICE AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. — SHEET 58 OF 67

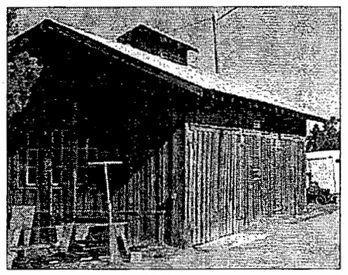
Design Palette

Compatible Features

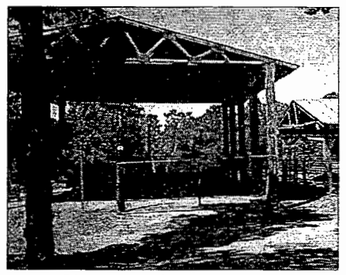

Metal corral fencing

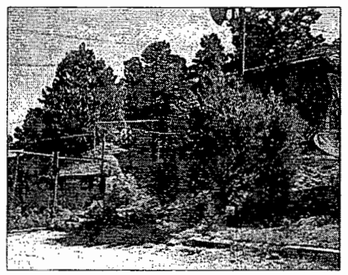

Wooden bollards

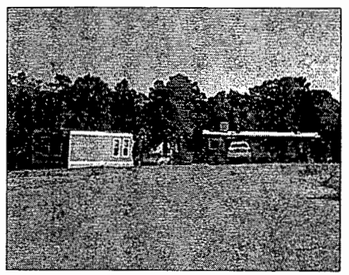

Wood shelter with rafter ends


Typical wood building with metal roof

Incompatible Features

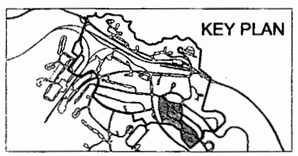

Chain-link fence around corral


Chain-link fence and satellite dishes


Temporary housing units


Materials stored outdoors

KEY PLAN



A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS NPS SERVICE AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. SHEET 59 OF 67

TREATMENT RECOMMENDATIONS - CONCESSIONAIRE AREA

Spatial Organization

- Retain the vehicular corridors and interior yard spaces that remain from the period of significance and that help to define the character area as a residential neighborhood.

- Avoid removing or relocating buildings and structures, vegetation, or realigning roads as these actions would alter the historic spatial organization.

Land Use

- Avoid incorporating non-residential land uses, such as maintenance or visitor accomodations, into this character area. New uses would ultimately necessitate the introduction of features and development that would not relfect the historic character of the area.

Circulation

- Retain the street and alley relationship. Avoid upgrading, widening, or curbing the alleys to create through-streets.

- Retain and maintain the formal pedestrian circulation patterns, such as the concrete sidewalks, in this character area. New pedestrian circulation, if necessary, should reflect the historic character of the existing circulation systems.

- Avoid altering the streetscape. For example, the neck-down parking along Apache Street may be an effective traffic-calming device, yet it greatly alters the historic character of the street. Prior to undertaking new measures such as these, carefully assess their affect on the historic character of the landscape.

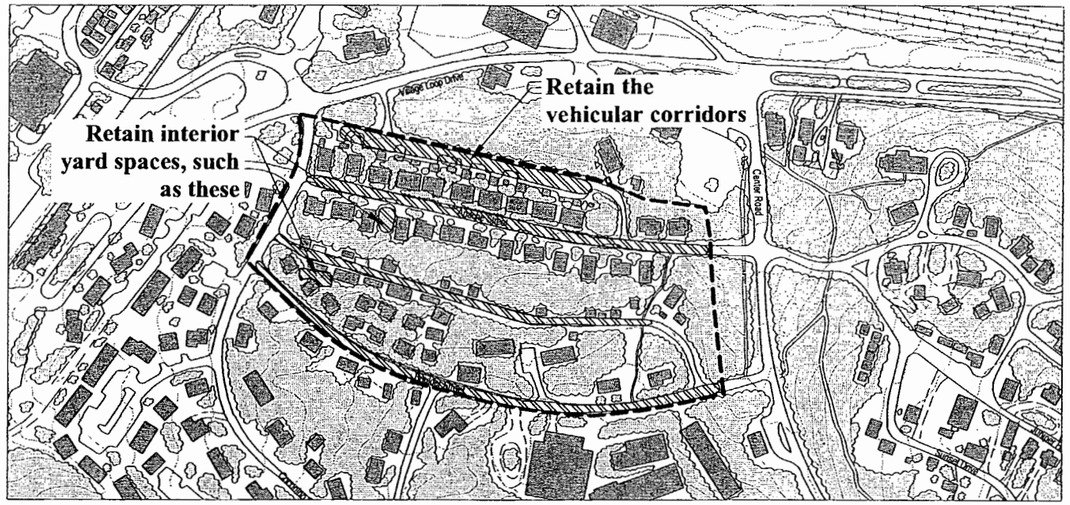
- Consider reconnecting Apache Alley to Coconino Street, as it existed historically. Do not take this action if traffic issues demand that the alley remain a dead-end route.

- Repair and maintain all circulation features assessed in fair or poor condition in the Chapter III Condition Assessments. These features show clear evidence of minor or major disturbances that require corrective action.

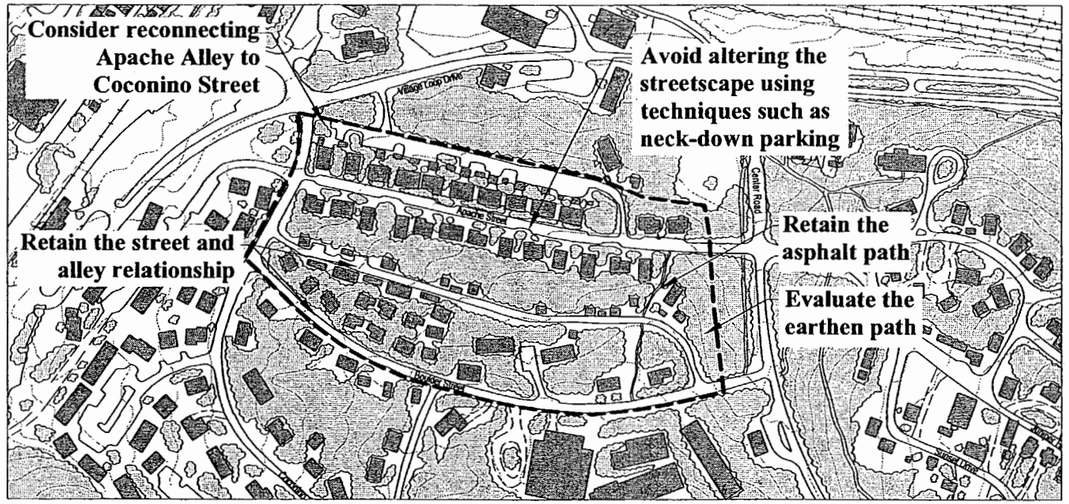
- Retain the full length of the asphalt path that begins east of Bldg. #823 and ends at Boulder Street. Although the southern portion of the path is non-contributing, it is a compatible feature.

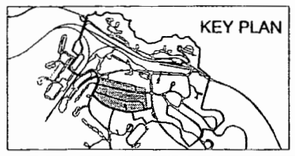
- Assess the necessity for, and the historic status of, the earthen path located in the eastern portion of the character area. Remove and revegetate the path if it is not historic and not well-traveled. However, if the path is found to be an important route for staff and employees, consider edging and/or paving the path to prevent damage to surrounding natural and cultural resources.

Spatial Organization, Views/Vistas



Circulation





SCALE: 1" =400'

0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS CONCESSIONAIRE AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. — SHEET 60 OF 67

TREATMENT RECOMMENDATIONS - CONCESSIONAIRE AREA

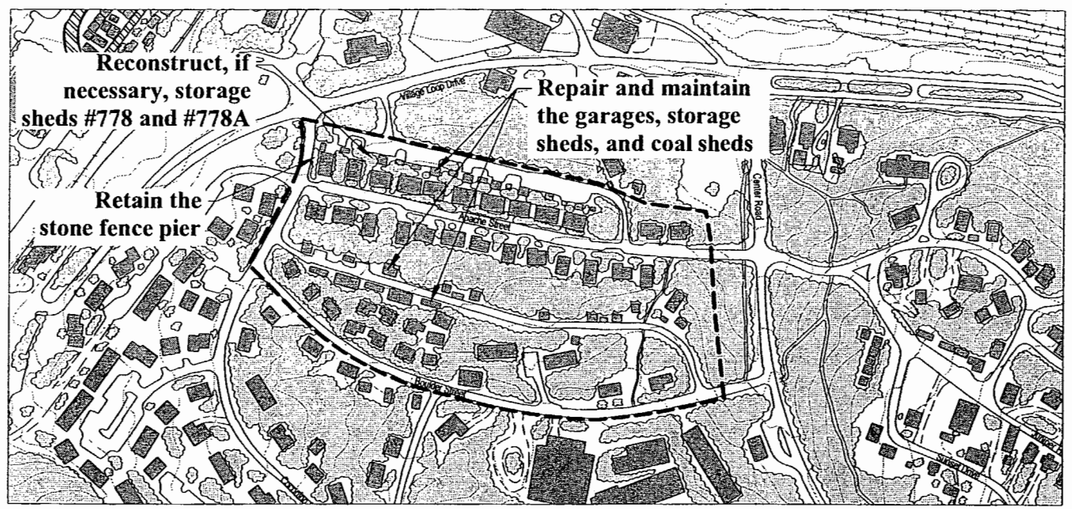
Vegetation

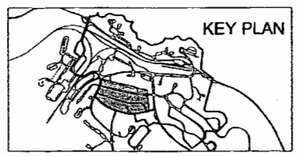
- Retain as much existing vegetation as possible within this character area.
- Retain ornamental vegetation around the residences and within the character area that is non-invasive and does not present a threat to historic and/or native vegetation. Future research should be done that addresses ornamental planting designs typical of the period of significance in this area. If certain plantings are found to be non-contributing, they may removed and, if desired, replaced by appropriate plantings.

Buildings and Structures

- Repair and maintain all deteriorating and damaged buildings and structures within the character area, particularly the garages, storage sheds, and coal sheds.
- Retain the stone fence pier located near the corner of Coconino Street and Apache Alley. If the need for fencing arises in the future, consider incorporating the pier into the new design. Refer to the historic images in Chapter II for plans of the original wooden fence and pier design.
- Avoid removing or relocating any contributing building or structure.
- Site new construction as infill along the street corridors, in the location of missing buildings or structures, or in the southeast corner of the site. The setbacks, building style, and massing of new features should reflect the historic character of the area.
- Reconstruct, if necessary, the storage shed (Bldg. #778) and garage (Bldg. #778A), which currently exist as stone foundations. Undertake a reconstruction only if the need for storage arises and enough documentation is available to accurately reconstruct these features. If the structures will not be reconstructed, alternatives for their sites include maintaining the foundations, removing the foundations, or locating other structures in their place.

Buildings and Structures





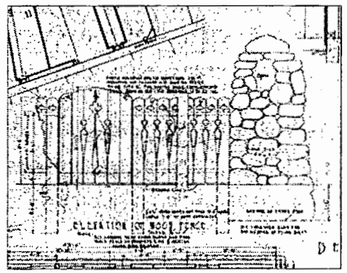
SCALE: 1" =400'

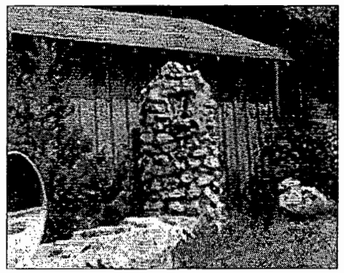
0 200 400 800 1200 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS CONCESSIONAIRE AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. — SHEET 61 OF 67

Design Palette

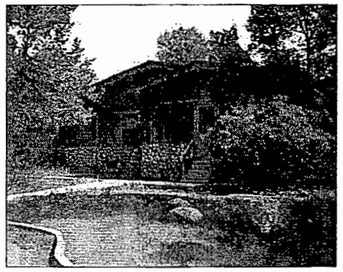
Compatible Features

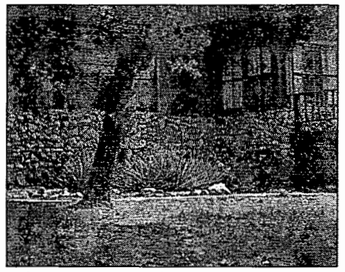

Historic wood fence and stone pier


Remnant stone pier


Stone wall

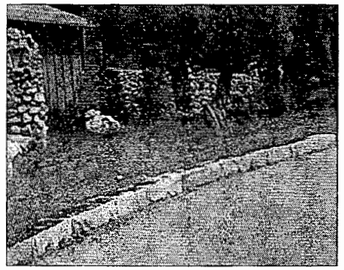

Vegetation between buildings


Vegetation at building corners

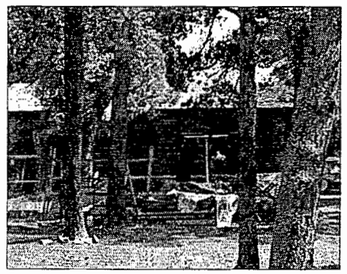

Native vegetation around building


Architectural details

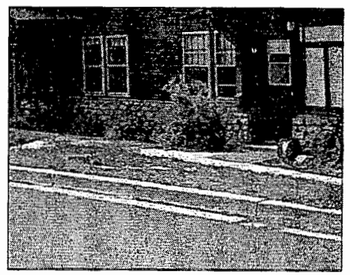

Concrete sidewalks


Stone curbing

Incompatible Features

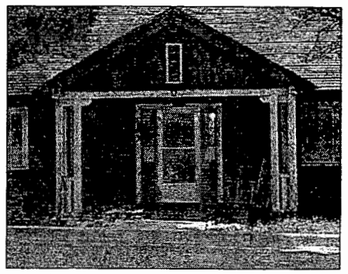

Material stored outdoors

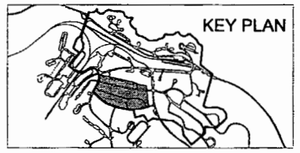

Chain-link fence


Concrete curbing


Neck-down parking


Lawn art


Incompatible replacement door



A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN:
JLB

TECH. REVIEW:
RMM

DATE:
JANUARY 2004

SUB SHEET NO.
T

TREATMENT RECOMMENDATIONS

CONCESSIONAIRE AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO.
113
20223

PKG. NO.

SHEET
62
OF 67

TREATMENT RECOMMENDATIONS - COMMUNITY SCHOOL AREA

Circulation

- Retain the concrete sidewalk leading from Boulder Street to the northern facade of the Middle School. It is likely that this sidewalk is historic, or is in an historic location.

- Retain, as needed, other existing paths as they do not detract from the character of the area.

Vegetation

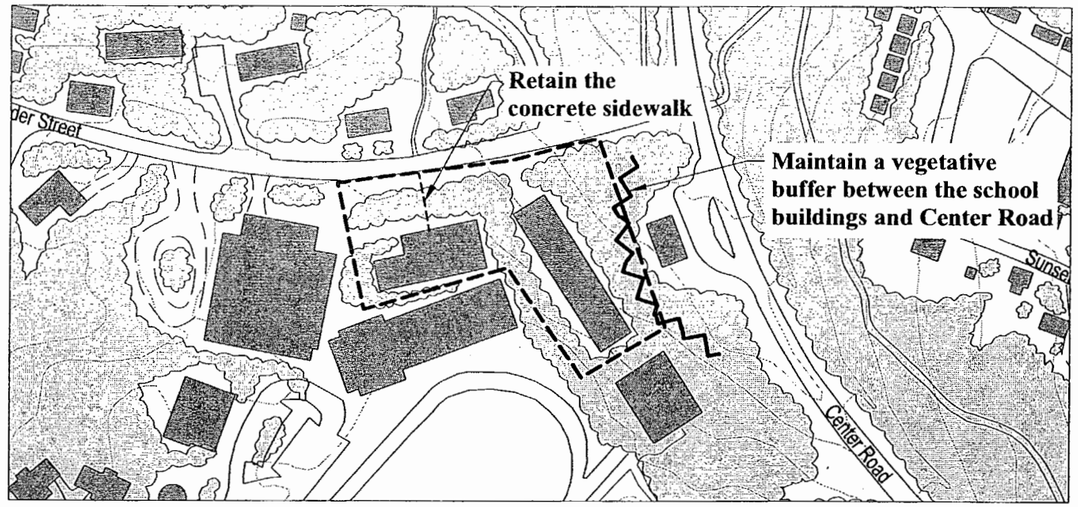
- Retain as much vegetation as possible in this character area. Thin or remove vegetation, as necessary for fire prevention, between the Middle School and Elementary School and along the southern edge of the character area boundary. Retain, as possible, the vegetative buffer between the schools and Boulder Street.

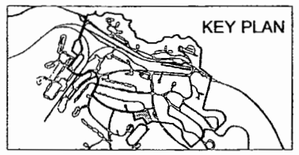
- Undertake further research to determine if the ornamental vegetation in the character area is historic, or typical of ornamental planting designs of the period of significance. If these plantings are not historic, they may remain, as they do not detract from the character of the area.

Buildings and Structures

- Retain and maintain both the Middle School and Elementary School. Avoid removing, relocating, or altering the buildings. Although the Elementary School was constructed after the period of significance, it should be evaluated for its eligibility to the National Register of Historic Places in, or after, 2003 when it reaches fifty years of age.

Circulation





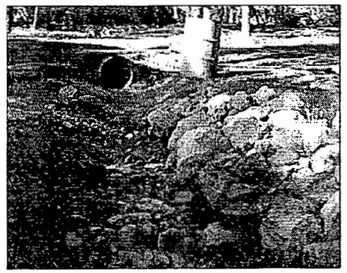
SCALE: 1" =200'

0 100 200 400 600 N

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS COMMUNITY SCHOOL AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 / 20223 PKG. NO. — SHEET 63 OF 67

Design Palette

Compatible Features



Stone riprap protection



Stone/gravel swale and ornamental yucca plantings



Wide walk to school entrance and ornamental tree plantings

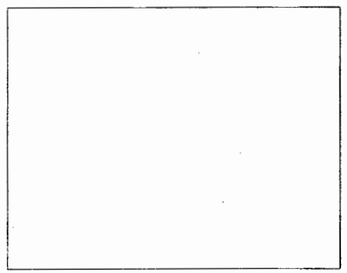


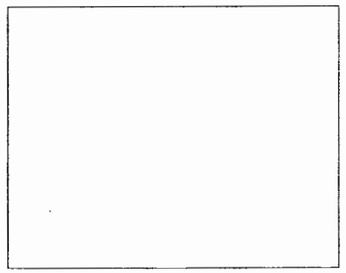
Stone and boulder edging

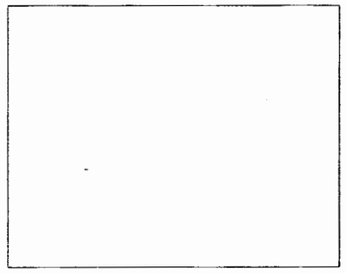
Incompatible Features

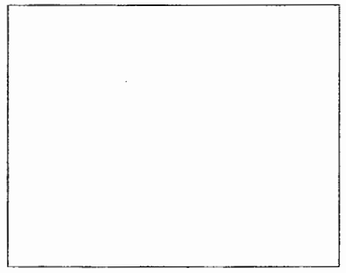


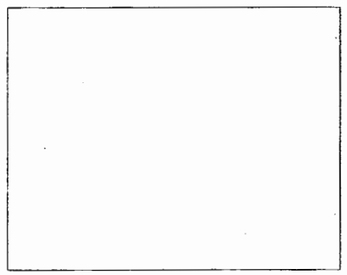
Contemporary trash receptacles

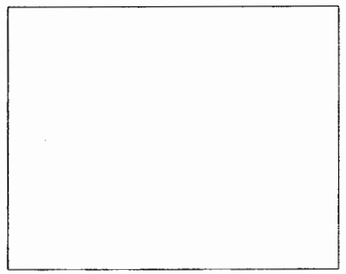


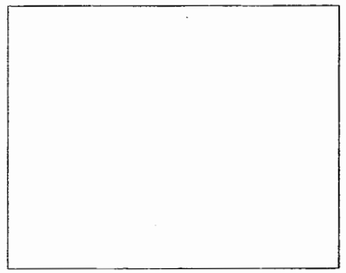


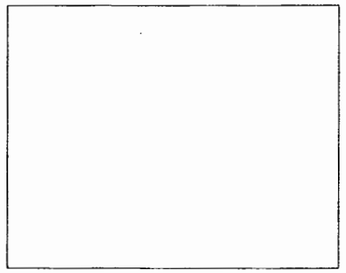


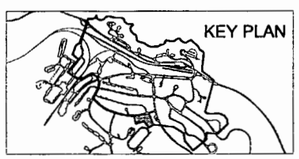












A/E FIRM

PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:

DRAWN: JLB

TECH. REVIEW: RMM

DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT RECOMMENDATIONS

COMMUNITY SCHOOL AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 20223

PKG. NO.

SHEET 64 OF 67

TREATMENT RECOMMENDATIONS - CAMP AREA

Spatial Organization

- Retain the vehicular corridors, interstitial spaces, and woodland masses that define space in this character area. Avoid actions that may adversely affect these spatial patterns, such as removing or relocating buildings, removing larger areas of vegetation, or realigning road segments.

- Reinforce historic spatial organization by locating some type of feature, such as parking, interpretive displays, or a new lecture circle, at the site of the former amphitheater.

Circulation

- Retain the alignment, width, and existing characteristics of Village Loop Drive and the access road through the cabins. Additional widening of Village Loop Drive will further encroach upon the Maswik Cabins, resulting in loss of historic character.

- Retain the informal gravel parking spaces along the access road through the cabins. Historic photographs from the 1950s show the same gravel-floored, opportunistic parking as exists today. If the spaces are paved the existing parking pattern should be followed in order to retain historic character.

- Install stone or log edging to better define parking spaces and prevent damage to adjacent vegetation and buildings. During fieldwork, vehicles were observed parked too close to tree trunks, outside of the gravel parking spaces, and very close to cabin walls. These actions may result in damage to cultural and natural resources. Well-defined parking spaces may alleviate these problems.

- Determine if the former amphitheater paths are historic; The 1941 Master Plan suggests the existing southern path may follow an historic alignment. If these either of these paths contribute to the period of significance, retain their alignments and re-use them as routes to the former amphitheater space.

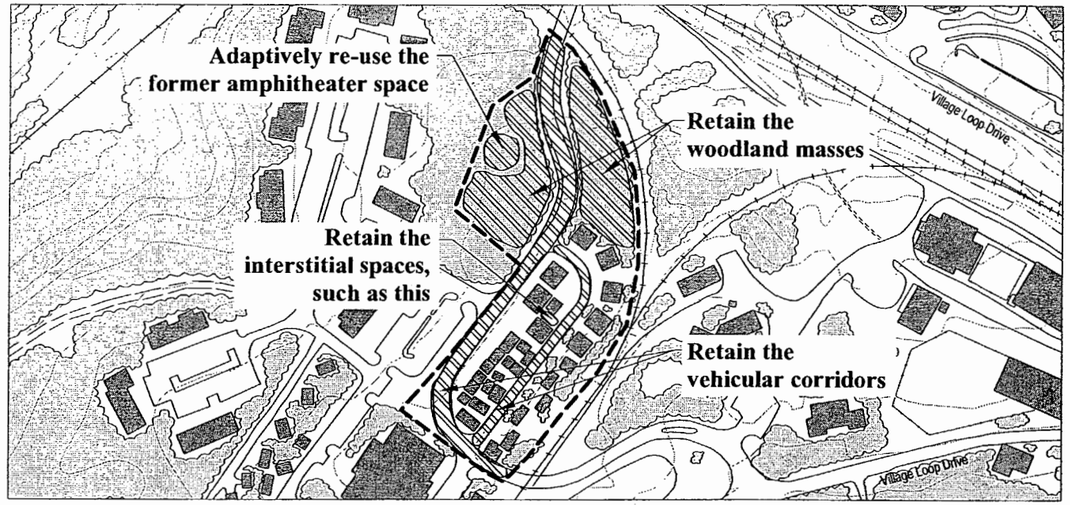
Vegetation

- Retain as much existing vegetation in this area as possible. Historic photographs suggest that the density and random placement of vegetation remains similar today as it did historically.

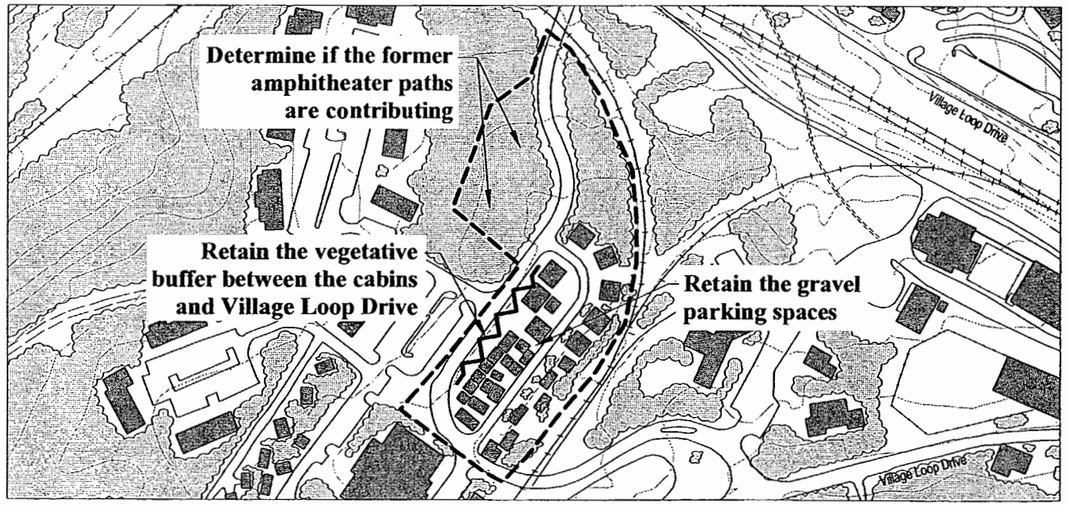
- Retain and maintain the vegetative buffer between the Maswik Cabins and Village Loop Drive, as well as the vegetation between the cabins and the railroad tracks.

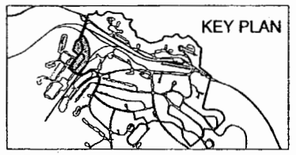
- Protect vegetation from vehicular damage by adjusting the edges of parking spaces away from tree trunks and/or constructing barriers between parking spaces and trees.

Spatial Organization



Circulation, Vegetation





SCALE: 1" =300'

0 150 300 600 900 N

A/E FIRM
PRIME:
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PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT PLAN

CAMP AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

DRAWING NO. 113 / 20223

PKG. NO. —

SHEET 65 OF 67

TREATMENT RECOMMENDATIONS - CAMP AREA

Buildings and Structures

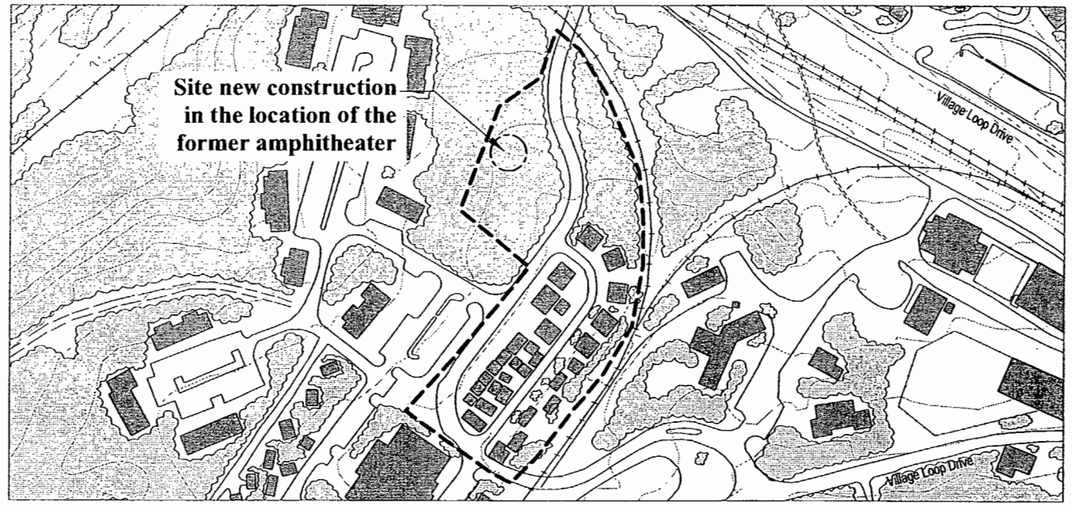
- Retain and maintain all contributing buildings and structures within the character area. Avoid removing, relocating, or altering the exteriors of these features. New uses and interior alterations are acceptable.

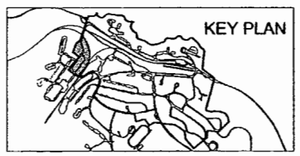
- Consider carefully the need for new construction. Implement new construction only when necessary. The most appropriate location for new construction is on the site of the former amphitheater. Any new development in this location should be minimal, visually compatible, and as unobtrusive as possible. New construction would preferably relate to an educational, interpretive, or recreational function such as a new amphitheater, an outdoor exhibit or classroom space, or a picnic or shelter area. Limited parking, revegetation, or small-footprint structures are preferable to a large-scale, contemporary building.

Small-scale Features

- Maintain the site's characteristically minimal number of small-scale features that are simple in design. Historic photos of the area depict few small-scale features beyond boulders and lighting.

Buildings and Structures





SCALE: 1" =300'

0 150 300 600 900 N

A/E FIRM
PRIME:
VAN DIJK WESTLAKE REED LESKOSKY
PHOENIX, AZ

SUBCONTRACTOR:
JOHN MILNER ASSOCIATES
CHARLOTTESVILLE, VA

DESIGNED:
DRAWN: JLB
TECH. REVIEW: RMM
DATE: JANUARY 2004

SUB SHEET NO. T

TREATMENT RECOMMENDATIONS

CAMP AREA

GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT

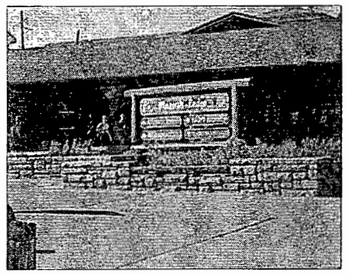
DRAWING NO. 113 / 20223

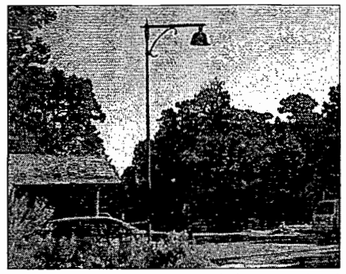
PKG. NO. —

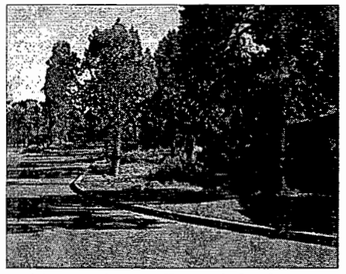
SHEET 66 OF 67

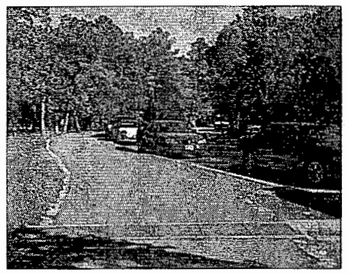
Design Palette

Compatible Features

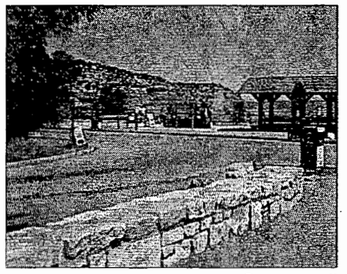

Cut stone retaining wall

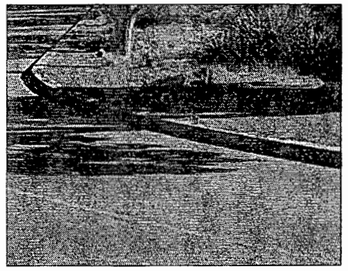

Light standard


Vegetative buffer to left of cabins


Stone edged sidewalk

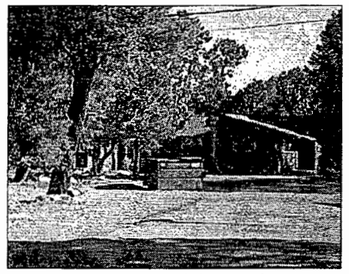

Stone edged path

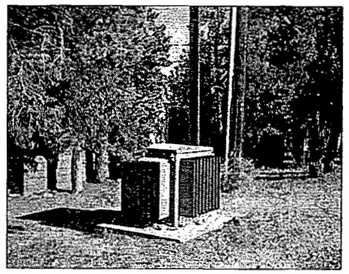

Stone wall


Cut stone curbing

Incompatible Features


Refuse in front of cabin


Visible dumpster


Exposed utility boxes

A/E FIRM PRIME: VAN DIJK WESTLAKE REED LESKOSKY PHOENIX, AZ SUBCONTRACTOR: JOHN MILNER ASSOCIATES CHARLOTTESVILLE, VA	DESIGNED: DRAWN: JLB TECH. REVIEW: RMM DATE: JANUARY 2004	SUB SHEET NO. T	TREATMENT RECOMMENDATIONS CAMP AREA GRAND CANYON VILLAGE NATIONAL HISTORIC LANDMARK DISTRICT	DRAWING NO. 113 20223 PKG. NO. SHEET 67 OF 67

Specific Project Recommendations

The following Specific Project Recommendations are intended to support specific park projects that are currently proposed or in the design stages, to maintain historic landscape integrity in the areas in which these projects are located, and to indicate means for implementing compatible new development within the Village Historic District and character areas. Recommendations focus on issues for designers, park consultants, and park personnel to consider when design development occurs; the recommendations also evaluate planning and design choices that have been previously set forth.

JMA prepared recommendations for the following projects, as identified in the CLR scope of work:

- Heritage Education Campus
- Light Rail Station/Pedestrian Bridge
- Bright Angel Trailhead
- Victor Hall and Annex Conversion
- Conversion of Maintenance Office
- Train Depot Rehabilitation
- Greenway Segment into Village
- Removal of Thunderbird and Kachina Lodges

Additionally, JMA prepared specific project recommendations for the Rim Trail-related project that was not included in the scope of work. For this project, JMA responded to design decisions proposed in a set of construction drawings received from the NPS.

Heritage Education Center

- Undertake all design efforts with the knowledge that the historic character of the site is one of understated, utilitarian land uses. Bright colors, complicated paving patterns, ornate fencing, and similar stylization is inappropriate for the site. Design concepts may be contemporary for the HEC, although a good compromise would be to incorporate contemporary interpretations of historic features. Refer to the *Grand Canyon National Park Architectural Character Guidelines* for further guidance regarding appropriate site elements.

- Avoid excessively altering the topography of the HEC site; earthwork, such as mounding or the creation of depressions, is inappropriate.

- Retain the key spaces described in Chapter III Existing Conditions and the treatment recommendations for the Utility Area. Avoid moving contributing buildings, altering contributing circulation patterns, removing contributing vegetation, or otherwise altering space-defining features.

- Regain the space between the Purchasing/Receiving Building and Power House by removing the electrical substation. Although the space was historically used for parking, more visitor-oriented uses would not be intrusive. These include gathering spaces, passageways, exhibit spaces, or some other type of recreational, educational, or interpretive use. Avoid siting new buildings or large structures in this space.

- Retain the spatial character of the central vehicular corridor and ensure that this corridor remains the primary circulation route through the HEC site. This corridor may be converted to pedestrian-only use, yet the alignment should remain intact. Avoid adding unnecessary curves or obliterating sections of the corridor. Avoid constructing new roads into or through the site.

- Use only native vegetation when designing and installing new plantings. New designs should draw from the historic character of surrounding vegetation. Avoid formal plantings, strict geometries, and features such as alleés of trees or clipped foundation plantings. Follow the recommendations in this CLR for the Village Historic District and Utility Area.

- Adaptively re-use as many buildings and structures as possible to retain historic character and create a more sustainable site.

- Prepare Historic Structure Reports, or similar investigations, for all historic buildings that have not yet been sufficiently documented and will be affected by the HEC development. This documentation will create a baseline of information for future work being done on these features as well as to identify their significance and importance to American history. This work should be completed for all historic buildings and structures prior to finalizing planning and design efforts.

Light Rail Station

- Ensure that the light rail and pedestrian bridge components do not detract from the importance of the surviving historic buildings and features. The new light rail and bridge pylons, platforms, stairs, and other components should avoid being massive or heavy in design or silhouette; should be neutral or dark in color; and should draw inspiration from industrial or utilitarian precedents within the Utility Area.

- Conduct a viewshed analysis to determine the extent of views through the Bright Angel Wash, and the value of these views to the cultural landscape.

- Follow the *Grand Canyon National Park Architectural Character Guidelines* when choosing exterior materials, styles, and colors for the station and bridge. Consider substituting wood and stone materials for some of the contemporary steel and metal elements shown on the 2000 Light Rail Station plans. For example, consider using native stone veneers—or colored, patterned concrete—to reflect the character of the historic masonry walls found throughout the Village Historic District, rather than the architectural concrete material and patterns specified in current designs.

- Ensure that the bus transit system drop-off—proposed between the Livery Stable and Mule Barn—respects this contributing space. Development that will likely respect this space are plazas or open-air gateways into the Heritage Education Center. Avoid locating buildings, or other construction, that would "fill up" this space or block views into the site from Village Loop Drive.

- Avoid altering or damaging the slopes of the Bright Angel Wash during the design and construction of the Light Rail Station and Pedestrian Bridge. Minimize the impact on the slopes through designing the smallest feasible bridge abutments and other structural members as possible to protect the slopes during construction.

- Avoid large expanses of concrete with typical joint patterns when designing plaza spaces such as below the proposed pedestrian bridge and between Bright Angel Lodge and Thunderbird Lodge. Consider using paving stone, patterned concrete, unit pavers, or a combination of these materials to better reflect the character of the Village Historic District and create a more interesting and attractive surface.

- Remove the metal stairs if they will no longer be needed due to construction of the pedestrian bridge.

- Follow the vegetation and planting guidelines discussed earlier in this chapter. Planting design for this project should utilize native plants, simple and understated planting designs, and avoid highly stylized, high-maintenance, or geometric designs.

- Evaluate how the proposed plaza depicted between Bright Angel Lodge and Thunderbird Lodge on the 2000 Light Rail Station plans will work if the Thunderbird and Kachina Lodges are removed.

Bright Angel Trailhead

- Follow Rim Area recommendations on Sheets 42, 43, and 44 of this chapter for guidance concerning the signage, kiosks, and revegetation efforts proposed for the trailhead. Refer to the *Grand Canyon National Park Architectural Character Guidelines* and this CLR for additional examples of compatible features and designs.

- Retain the contributing vehicular circulation patterns, particularly the loop south of the Kolb Garage and west of the Bright Angel Cabins.

- Retain the informal character of the Bright Angel Trailhead. Avoid constructing a formal plaza space, decorative elements such as ornate posts, fences, or walls, installing lights, or otherwise "over-developing" the trailhead.

- Retain the loose gravel and earth parking surfaces. Avoid paving the parking areas with asphalt or concrete. Consider, instead, resurfacing parking with additional gravel. Ensure that the new pavement matches the color of the existing surface.

- Retain as much existing, native, and non-hazardous vegetation as possible. This vegetation not only provides a source of shade for visitors and hikers, but is aesthetically-pleasing. Protect vegetation in the parking areas from being damaged by cars.

- Evaluate pedestrian circulation around the trailhead, including how visitors circulate around the parking areas, between the parking areas and the trailhead, and at the trailhead. Evaluate the reasons for the creation of desire paths; assess the need for paths that are better defined with stone edging, the affect random pedestrian circulation has on existing vegetation, and the need for additional paths or trails.

Victor Hall/Victor Annex Conversion

- Avoid moving or removing Victor Hall or Victor Hall Annex. Adaptively reuse the buildings rather than demolish or relocate them, if their current use discontinues.

- Retain the existing parking to the east of Victor Hall, if needed. Use this parking before creating additional parking spaces.

- Avoid altering the footprint or exterior appearance of the buildings, unless they will be rehabilitated to attain their character during the period of significance. Refer to the Secretary of the Interior's Standards for the Treatment of Historic Properties for guidance.

- Due to a limited amount of historical documentation regarding the landscape around these buildings, it is difficult to determine the historic character of the walks and vegetation. It is likely, however, that these features were minimal in number and understated in design, due to the buildings' close proximity to utilitarian areas and their use by staff rather than the public.

  - Design and construct only new walks that are necessary for accessibility for the physically impaired or to provide improved traffic flow. Make all attempts to inhibit the creation of desire paths, and to repair and revegetate those desire paths that already exist.

  - Retain as much existing, healthy, native vegetation as possible around the buildings.

  - New trees and shrubs should be sited at random to create a "naturalized" design, rather than in a planting bed or according to an organized scheme.

Railroad Depot Rehabilitation

- Retain character-defining, contributing features such as the iron fence and stone and concrete swales.

- Follow *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* when undertaking rehabilitation or reconstruction of the stone wall east of the Depot. Consider expanding the scope of this project to include the entire Jesus Morales-constructed wall—including portions west of the Depot.

- Document the Air Conditioning Building (Bldg. #548) prior to its removal. Although this resource is not a key character-defining feature within the Village Historic District, details about its design, construction, and location may yield important historical information in the future.

- Replace the two hazard trees, that are proposed for removal, with new trees of the same genus and species. Attempt to plant the new trees in the same location as those removed, or nearby.

Greenway Segment

- Consider siting the greenway segment so that it follows existing—and historic—circulation alignments whenever possible. For example, consider using the sidewalk that runs from Navajo Street and along Village Loop Drive. When using historic paths and sidewalks, avoid excessively re-aligning the route, widening the width, or any other work that would alter the feature's historic character.

- Consider interpreting the historic functions of circulation routes that have been adaptively re-used. For example, if portions of the greenway segment are routed along historic railroad alignments, waysides and signage may be useful in helping visitors understand the role of the railroad in the Village.

- Consider siting portions of the greenway segment along the existing alignment of the Old Village Bypass Road, as suggest in the GMP. Consider prohibiting motorized vehicles from using this portion of the greenway. This alignment option is only valid if the Light Rail Station will not obliterate the road alignment.

- Design the greenway to be accessible to all persons according to Americans with Disabilities Act Accessibility Guidelines (ADAAG). The greenway design should utilize an environmentally safe hard-surfaced pavement, if feasible. If alternatives to traditional pavements are not feasible, implement surfaces such as asphalt, to match existing paths and walks.

- Retain as much existing, healthy, and native vegetation as possible during design and construction. Protect mature vegetation by sensitively re-routing sections of the greenway. Remove vegetation that interferes with accessibility standards. New or replacement vegetation should reflect the character of existing vegetation that surrounds the greenway.

- Stone edging may be installed, where necessary or desired, along the greenway. Stone edging was historically used to delineate circulation routes and also exists at present along certain lengths of paths and trails. New stone edging should match the styles found throughout the Village Historic District. Avoid concrete or asphalt curbing.

- Perform all ground-disturbing activities during the construction of the greenway under the supervision of a qualified archeologist.

Remove Thunderbird and Kachina Lodges

- Consider removing Thunderbird Lodge and/or Kachina Lodge, as discussed in the 1995 General Management Plan, if the buildings are not found to be eligible for the National Register of Historic Places under Criterion G. These buildings do not contribute to, or reflect, the historic character of the Village Historic District or Rim Area. The removal of Thunderbird Lodge, in particularly, will promote the rehabilitation of the open space that historically stood between the El Tovar Hotel cluster and Bright Angel Lodge/Bright Angel Camp cluster.

- Consider removing only Thunderbird Lodge, if the desire for open space and views is greater than the necessity for retaining Parkscape U.S.A.-related architecture. This option will retain Kachina Lodge, and thus one example of architect Mel C. Ensign's modern architectural design, but also restore the historically open space now filled by Thunderbird Lodge.

- Consider creating a public open space if Thunderbird Lodge is removed. Revegetate the space and design nature trails, a picnic area, an outdoor classroom, an outdoor exhibit space, a plaza, or other types of elements that make use of, yet do not dominate or impair, the open space.

- New construction in this space should be low in height, limited in footprint size, and follow the *Grand Canyon National Park Architectural Character Guidelines*. Consider installing seating, small shelters, paths, informational kiosks, or waysides. Avoid large footprint buildings, expansive parking lots, or cabins.

- Minimize the impact of new buildings—those that are absolutely required for the continued function of the park and the health, safety, and welfare of visitors—by siting them in the location of missing buildings and attempting to assume the original footprint size of the missing building.

- Parking for handicapped persons, staff, Colter Hall guests, or for loading and unloading purposes should be located along the existing Thunderbird Lodge access loop and the Kachina Lodge and Colter Hall parking lots. Historically, visitors parked along the rim in this open space. Although this is no longer feasible or desired, limited parking along the southern edge of the space is acceptable.

- Follow the vegetation guidelines set forth in this CLR for the Village Historic District and Rim Area. Refer to historic aerial photographs for examples of vegetation placement. Use only native plants to create a "naturalized" landscape that is devoid of strict geometries or high-style designs. Landscape plantings should be simple in design; planting beds are acceptable.

Rim Trail

- Avoid altering the existing alignment of the Rim Trail. Alignment alterations are acceptable only if universal accessibility issues arise that require moving or widening the trail.

- Utilize an ADA-accessible hard-surfaced pavement when repairing or replacing the existing Rim Trail surface. Historically, the Rim Trail was once surfaced with wood planks—this is no longer a feasible surface material. Asphalt-based paving is acceptable as an in-kind replacement of surface materials. Any contributing flagstone paving found along the trail should be replaced in-kind.

- Protect the existing contributing, non-invasive, and native vegetation found along the trail. Use stone edging, boulder edging, or some other compatible feature to prevent visitors from walking on, or otherwise damaging, vegetation. After installing protective measures, revegetate areas where vegetation has been lost. Use native plants for all revegetation efforts.

- Install some type of edge protection along the Rim Trail pavement edges. Use of stone edging is acceptable in order to protect the pavement edges and to prevent visitors from leaving the trail and damaging surrounding natural and cultural resources. Use typical stone edging found throughout the Rim Area and along the western portions of the Rim Trail or install edging that is contemporary in design, yet compatible with the historic character of the area.

- Design seating to be compatible with historic wooden benches found along the trail. Benches should be simple in design, utilize Rustic-style design principles, and be primarily constructed of wood and/or stone. Refer to the *Grand Canyon National Park Architectural Character Guidelines* for further guidance regarding compatible site furnishings.

- Install new lighting standards that are compatible with the existing historic lights and historic character of the area, such as the 1920s light poles and the standards found around the Lookout Studio. Avoid installing lighting that might present a false sense of history, such as ornate Victorian-style lamps. Remove and replace existing lighting that does not contribute to, and is not compatible with, the historic character of the area. Non-contributing lighting includes the "Modern" style lights near Thunderbird and Kachina Lodges. Ensure that new lighting complies with any dark-sky and anti-light pollution policies in place for GRCA.

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Appendix A

Appendix A • Inventory of Landscape Features

Appendix A, Inventory of Landscape Features, contains a list of existing conditions features identified through fieldwork. Features are arranged according to landscape character area within the CLR project boundary, and then according to landscape characteristic as described in Chapter III, Existing Conditions.

This list contains the following:

- the feature's name;
- the character area in which it is located;
- the type of landscape characteristic the feature represents;
- an assessment of the feature's condition;
- a determination of it's contributing, non-contributing, or undetermined status;
- the feature's CLR-assigned inventory number; and
- any NPS-assigned building numbers.

Each feature is mapped on separate existing conditions inventory maps located in Chapter III of this CLR. More detailed information about the condition assessments is also located in Chapter III. Information regarding contributing, non-contributing, and missing features is discussed in Chapter IV.

Rim Area

Natural Systems and Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Canyon edge	Rim Area	Good	Contributing	N-1	-

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Corridor of space between buildings and rim	Rim Area	Good	Contributing	SO-1	-
Small spaces in front of buildings	Rim Area	Good	Contributing	SO-2	-
Mule corral node	Rim Area	Good	Undetermined	SO-3	-
Bright Angel Cabin interstitial spaces	Rim Area	Good	Contributing	SO-4	-
Parking and drive corridor	Rim Area	Good	Contributing	SO-5	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Village Loop Drive	Rim Area	Good	Contributing	C-1	-
Shuttle bus stops	Rim Area	Good	Non-contributing	C-2	-
Access drive to El Tovar Hotel	Rim Area	Good	Contributing	C-3	-
El Tovar turn-around	Rim Area	Good	Contributing	C-4	-
6-bay parking lot	Rim Area	Good	Non-contributing	C-5	-
Verkamp's service area	Rim Area	Good	Undetermined	C-6	-
Kachina/Colter parking lots	Rim Area	Fair	Non-contributing	C-7	-
El Tovar asphalt parking	Rim Area	Unknown	Contributing	C-8	-
El Tovar gravel parking and service area	Rim Area	Unknown	Non-contributing	C-9	-

Circulation (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Thunderbird Lodge access loop	Rim Area	Poor	Non-contributing	C-10	-
Bright Angel Lodge parking and service area	Rim Area	Fair	Undetermined	C-11	-
Bright Angel Lodge parking lot	Rim Area	Good	Contributing	C-12	-
Bus drop-off lane	Rim Area	Good	Contributing	C-13	-
Circular road within Bright Angel Cabins	Rim Area	Poor	Contributing	C-14	-
Rim Cabin parking	Rim Area	Fair	Contributing	C-15	-
Bright Angel Lodge circular drop-off	Rim Area	Fair	Contributing	C-16	-
Rim Trail	Rim Area	Fair	Contributing	C-17	-
Bright Angel Trailhead	Rim Area	Fair	Contributing	C-18	-
Kolb Studio asphalt path	Rim Area	Poor	Undetermined	C-19	-
Concrete sidewalks	Rim Area	Good	Non-contributing	C-20	-
Mortared flagstone walks	Rim Area	Good	Contributing	C-21	-
Earthen paths	Rim Area	Good	Non-contributing	C-22	-
Mule path	Rim Area	Fair	Undetermined	C-23	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Native vegetation (transplanted and naturally-occurring)	Rim Area	Fair	Contributing	Ve-1	-
Ornamental native vegetation	Rim Area	Good	Contributing	Ve-2	-
Turf grass lawn	Rim Area	Good	Non-contributing	Ve-3	-
Ornamental foundation and tree plantings (exotic)	Rim Area	Good	Undetermined	Ve-4	-

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS #
Verkamp's Gift Shop	Rim Area	Good	Contributing	B-21	0546	055480
Verkamp's Residence	Rim Area	Good	Contributing	B-22	547	-
Verkamp's Residence shed	Rim Area	Good	Undetermined	B-23	-	-
Storage shed	Rim Area	Unknown	Undetermined	S-3	-	-
Bus shelter stone wall	Rim Area	Good	Non-contributing	S-4	-	-
Mule Corral wall	Rim Area	Good	Contributing	S-5	-	-
Kolb Studio retaining walls	Rim Area	Fair	Contributing	S-6	-	-
Kolb Garage retaining wall	Rim Area	Good	Contributing	S-7	-	-
Lookout Studio stone walls	Rim Area	Good	Contributing	S-8	-	-
Rim Trail wall	Rim Area	Good	Contributing	S-9	-	-
Bright Angel Lodge parking lot wall	Rim Area	Good	Contributing	S-10	-	-
Bright Angel Lodge seat walls	Rim Area	Good	Contributing	S-11	-	-
Stone steps	Rim Area	Good	Contributing	S-12	-	-
Concrete steps	Rim Area	Good	Contributing	S-13	-	-
Wood steps	Rim Area	Good	Undetermined	S-14	-	-
Hopi House Dance Platform	Rim Area	Good	Contributing	S-15	-	-

Views and Vistas

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Panoramic views toward the canyon	Rim Area	Good	Contributing	V-1	-
Panoramic vistas of the canyon	Rim Area	Good	Contributing	V-2	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS #
Bus shelters (4)	Rim Area	Good	Non-contributing	S-1	445-448	-
Wayside exhibit structure	Rim Area	Good	Non-contributing	S-2	-	-
Red Horse Cabin	Rim Area	Good	Contributing	B-1	0526	055470
13 Bright Angel Cabins	Rim Area	Good	Contributing	B-2	0515-0519, 0521-0523, 0527-0531	055459-63, 055465-67, 055471-75
Laundry Building	Rim Area	Good	Contributing	B-3	0520	-
Utility shed	Rim Area	Good	Contributing	B-4	541	-
Equipment shed (former Phone Booth)	Rim Area	Good	Contributing	B-5	536	-
Equipment shed (former Phone Booth)	Rim Area	Good	Contributing	B-6	483	-
Comfort Station	Rim Area	Good	Contributing	B-7	0524	055468
5 Rim Cabins (part of Bright Angel Cabins)	Rim Area	Good	Contributing	B-8	0510-0514	055454-055458
Powell Lodge	Rim Area	Good	Contributing	B-9	0509	055453
Electrical storage	Rim Area	Good	Contributing	B-10	0535	056885
Buckey O'Neill Cabin	Rim Area	Good	Contributing	B-11	0508	055452
Bright Angel Lodge	Rim Area	Good	Contributing	B-12	0507	055451
Kolb Studio	Rim Area	Good	Contributing	B-13	SRB0533	007666
Kolb Studio Garage	Rim Area	Fair	Contributing	B-14	SRB0617	007667
Lookout Studio	Rim Area	Good	Contributing	B-15	0532	055476
Thunderbird Lodge	Rim Area	Good	Non-contributing	B-16	1300	-
Kachina Lodge	Rim Area	Good	Non-contributing	B-17	1320	-
Colter Hall	Rim Area	Good	Contributing	B-18	0539	055477
El Tovar Hotel	Rim Area	Good	Contributing	B-19	0542	055478
Hopi House	Rim Area	Good	Contributing	B-20	0545	055479

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Concrete and stone arch with metal gate	Rim Area	Fair	Contributing	SS-1	-
Telescopes	Rim Area	Good	Undetermined	SS-2	-
Sculptural telescope	Rim Area	Good	Contributing	SS-3	-
Painted log railings	Rim Area	Good	Contributing	SS-4	-
Metal railing	Rim Area	Good	Non-contributing	SS-5	-
Wood plank steps	Rim Area	Fair	Undetermined	SS-6	-
Cut stone curbs	Rim Area	Good	Contributing	SS-7	-
Stone edging	Rim Area	Fair	Contributing	SS-8	-
Boulders	Rim Area	Good	Undetermined	SS-9	-
Concrete or log wheel stops	Rim Area	Good	Undetermined	SS-10	-
Notched-log benches	Rim Area	Good	Contributing	SS-11	-
Wood benches	Rim Area	Good	Undetermined	SS-12	-
Wood slat fence	Rim Area	Good	Undetermined	SS-13	-
Metal pipe railing with curved supports	Rim Area	Good	Non-contributing	SS-14	-
Painted wood privacy fence	Rim Area	Good	Non-contributing	SS-15	-
Metal bollards	Rim Area	Fair	Non-contributing	SS-16	-
Bollard and chain fencing	Rim Area	Good	Non-contributing	SS-17	-
Drainage grates	Rim Area	Fair	Non-contributing	SS-18	-
Single metal light	Rim Area	Good	Undetermined	SS-19	-
Green-painted metal street light	Rim Area	Good	Contributing	SS-20	-
Modern-style lights	Rim Area	Good	Non-contributing	SS-21	-
Traditional-style lights	Rim Area	Good	Undetermined	SS-22	-
Drinking fountains	Rim Area	Fair	Contributing	SS-23	-
Flagpole	Rim Area	Good	Undetermined	SS-24	-

Small-scale Features (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Petrified wood	Rim Area	Good	Undetermined	SS-25	-
Historical markers	Rim Area	Good	Non-contributing	SS-26	-
Stone slab sign	Rim Area	Good	Non-contributing	SS-27	-
Wooden trail signs	Rim Area	Good	Undetermined	SS-28	-
Wayside exhibits	Rim Area	Good	Non-contributing	SS-29	-
Orientation signs at bus stops	Rim Area	Good	Non-contributing	SS-30	-
Brown and white NPS informational signs	Rim Area	Good	Non-contributing	SS-31	-
Vehicular traffic signs	Rim Area	Good	Non-contributing	SS-32	-
Directional sign with arrows	Rim Area	Good	Non-contributing	SS-33	-
Trash receptacles	Rim Area	Good	Non-contributing	SS-34	-
Dumpsters	Rim Area	Fair	Non-contributing	SS-35	-
Bicycle racks	Rim Area	Good	Non-contributing	SS-36	-
Portable toilets	Rim Area	Good	Non-contributing	SS-37	-
Utility meters	Rim Area	Good	Non-contributing	SS-38	-
Fire hydrants	Rim Area	Good	Non-contributing	SS-39	-

Utility Area

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Central utility yard	Utility Area	Good	Contributing	SO-6	-
Open yard space	Utility Area	Good	Contributing	SO-7	-
Corrals	Utility Area	Good	Contributing	SO-8	-
Substation space	Utility Area	Unknown	Non-contributing	SO-9	-
Community Building space	Utility Area	Good	Contributing	SO-10	-
Village Loop Drive corridor	Utility Area	Good	Contributing	SO-11	-
Vegetation masses	Utility Area	Good	Contributing	SO-12	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Village Loop Drive	Utility Area	Good	Contributing	C-1	-
Service road through Utility Area	Utility Area	Poor	Contributing	C-24	-
Victor Hall/Community Bldg. parking lots	Utility Area	Fair	Contributing	C-25	-
Old Village Bypass road	Utility Area	Poor	Non-contributing	C-26	-
Gravel service roads	Utility Area	Fair	Non-contributing	C-27	-
Gravel parking	Utility Area	Poor	Non-contributing	C-28	-
Maintenance Shop parking lot	Utility Area	Poor	Non-contributing	C-29	-
GCNPL/Blacksmith Shop parking lot	Utility Area	Fair	Contributing	C-30	-
Asphalt access drive	Utility Area	Poor	Contributing	C-31	-
Asphalt sidewalk	Utility Area	Good	Contributing	C-32	-
Earthen paths	Utility Area	Poor	Undetermined	C-33	-
Community Building paths	Utility Area	Poor	Contributing	C-34	-
Loading dock	Utility Area	Good	Contributing	C-35	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	Utility Area	Good	Contributing	Ve-5	-
Grove around Community Building	Utility Area	Good	Contributing	Ve-6	-
Grasses	Utility Area	Unknown	Non-contributing	Ve-7	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Victor Hall	Utility Area	Good	Contributing	B-24	0576	055495
Basketball court	Utility Area	Poor	Non-contributing	S-16	-	-
Victor Hall Annex	Utility Area	Good	Contributing	B-25	0578	055496
Heating Plant	Utility Area	Poor	Undetermined	S-17	576a	-
Community Building	Utility Area	Good	Contributing	B-26	SRB0044	055392
Stone walls	Utility Area	Good	Contributing	S-18	-	-
Storage Building (former Carpentry Shop)	Utility Area	Poor	Contributing	B-27	575	55494
Storage trailers	Utility Area	Good	Non-contributing	S-19	-	-
Maintenance Shop (former Paint Shop) (1931)	Utility Area	Good	Contributing	B-28	0572	055493
Concrete loading dock (at Maintenance Shop)	Utility Area	Good	Contributing	S-20	-	-
Office/storage structure	Utility Area	Unknown	Undetermined	B-29	573	-
Purchasing and Receiving (former Laundry)	Utility Area	Good	Contributing	B-30	0569	055492
Power House/Commissary	Utility Area	Good	Contributing	B-31	0567	055491
Concrete loading dock (at Power House)	Utility Area	Good	Contributing	S-21	-	-
Concrete steps	Utility Area	Poor	Non-contributing	S-22	-	-
Stone retaining wall	Utility Area	Good	Contributing	S-23	-	-
Livery Stable	Utility Area	Good	Contributing	B-32	0563	055489
Mule Barn	Utility Area	Good	Contributing	B-33	0562	055488

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Concrete and asphalt ramp	Utility Area	Poor	Undetermined	S-24	-	-
Cut-stone masonry retaining wall	Utility Area	Good	Non-contributing	S-25	-	-
Blacksmith Shop	Utility Area	Good	Contributing	B-34	0564	055490
Concrete steps and pad	Utility Area	Fair	Undetermined	S-26	-	-
GCNPL Personnel Office (former Fred Harvey Transport-ation Department Dormitory)	Utility Area	Good	Contributing	B-35	558	055487
Bus shelter	Utility Area	Good	Non-contributing	S-1	450	-
US West Office (Mountain States Telephone Bldg.)	Utility Area	Good	Contributing	B-36	0500	055449
Radio tower	Utility Area	Good	Non-contributing	S-27	-	-
Cell Phone Equipment Bldg.	Utility Area	Good	Non-contributing	S-28	1564	-
Storage shed	Utility Area	Good	Undetermined	S-29	-	-
Boy Scout building (former APS building)	Utility Area	Good	Non-contributing	B-37	241	-
Concrete platform	Utility Area	Good	Non-contributing	S-30	-	-
Electrical substation	Utility Area	Unknown	Non-contributing	S-31	-	-
Utility poles and power lines	Utility Area	Unknown	Undetermined	S-32	-	-

Views and Vistas

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
					-
Long view through central utility yard	Utility Area	Good	Contributing	V-5	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Cut stone curbs	Utility Area	Good	Non-contributing	SS-7	-
Stone edging	Utility Area	Fair	Contributing	SS-8	-
Boulders	Utility Area	Good	Undetermined	SS-9	-
Wheel stops	Utility Area	Good	Non-contributing	SS-10	-
Drainage grates	Utility Area	Fair	Undetermined	SS-18	-
Black-painted metal street lights	Utility Area	Good	Contributing	SS-40	-
Lights with acorn fixture	Utility Area	Good	Undetermined	SS-41	-
Chain-link fence	Utility Area	Good	Non-contributing	SS-42	-
Painted wood privacy fence	Utility Area	Poor	Non-contributing	SS-15	-
Metal corral fencing	Utility Area	Good	Non-contributing	SS-43	-
Hitching post	Utility Area	Good	Undetermined	SS-44	-
Corral features (water tank, hay racks, water troughs)	Utility Area	Good	Non-contributing	SS-45	-
Historical marker	Utility Area	Good	Non-contributing	SS-46	-
Vehicular traffic signs	Utility Area	Good	Non-contributing	SS-32	-
Orientation signs at bus stops	Utility Area	Good	Non-contributing	SS-30	-
Trash receptacles	Utility Area	Good	Non-contributing	SS-34	-
Dumpsters	Utility Area	Good	Non-contributing	SS-35	-
Utility meters	Utility Area	Good	Non-contributing	SS-38	-
Fire hydrants	Utility Area	Good	Non-contributing	SS-39	-
Fuel/Propane tank	Utility Area	Unknown	Non-contributing	SS-47	-
Manhole covers	Utility Area	Good	Undetermined	SS-48	-
Piles of materials	Utility Area	Poor	Non-contributing	SS-49	-
Outdoor grill	Utility Area	Fair	Non-contributing	SS-50	-
Picnic tables	Utility Area	Good	Non-contributing	SS-51	-

Railroad Area

Natural Systems and Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Bright Angel Wash	Railroad Area	Fair	Contributing	N-2	-
Drainage ditch south of tracks	Railroad Area	Fair	Contributing	N-3	-

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Linear corridor of Bright Angel Wash	Railroad Area	Good	Contributing	SO-13	-
Triangular space within railroad "wye"	Railroad Area	Good	Contributing	SO-14	-
Railroad Depot node	Railroad Area	Good	Contributing	SO-15	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Railroad tracks	Railroad Area	Unknown	Contributing	C-36	-
Village Loop Drive	Railroad Area	Good	Contributing	C-1	-
Old Village Bypass Road	Railroad Area	Poor	Non-contributing	C-26	-
Asphalt access drive	Railroad Area	Good	Contributing	C-37	-
Gravel parking lot	Railroad Area	Good	Non-contributing	C-38	-
Asphalt parking lot	Railroad Area	Good	Contributing	C-39	-
Small median north of Depot	Railroad Area	Fair	Contributing	C-40	-
Asphalt path to log bridge	Railroad Area	Good	Contributing	C-41	-
Mule path	Railroad Area	Good	Contributing	C-23	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	Railroad Area	Good	Contributing	Ve-5	-
Maple shade tree at depot	Railroad Area	Good	Undetermined	Ve-8	-
Peach tree behind Air Conditioning Building	Railroad Area	Unknown	Undetermined	Ve-9	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Railroad Depot	Railroad Area	Good	Contributing	B-38	SRB0549	055483
Air Conditioning Bldg.	Railroad Area	Poor	Non-contributing	B-39	548	-
Wood plank bridge	Railroad Area	Fair	Non-contributing	S-33	-	-
Wood and asphalt bridge	Railroad Area	Poor	Non-contributing	S-34	-	-
Log-edged bridge	Railroad Area	Good	Undetermined	S-35	-	-
Asphalt vehicular bridge	Railroad Area	Fair	Undetermined	S-36	-	-
Peeled-log bridge	Railroad Area	Good	Non-contributing	S-37	-	-
Box-culvert bridge	Railroad Area	Good	Contributing	S-38	-	-
Stone-faced bridge	Railroad Area	Good	Contributing	S-39	-	-
Stone foundation	Railroad Area	Fair	Undetermined	S-40	-	-
Rubble stone headwalls	Railroad Area	Good	Contributing	S-41	-	-
Stone-faced culvert – (west) Village Loop Drive	Railroad Area	Good	Contributing	S-42	-	-
Stone-faced culvert – (south) Village Loop Drive	Railroad Area	Good	Contributing	S-43	-	-
Pipe culvert (large)	Railroad Area	Fair	Non-contributing	S-44	-	-
Rubble retaining wall (Jesus Morales)	Railroad Area	Poor	Contributing	S-45	-	-
Stone retaining wall	Railroad Area	Good	Contributing	S-46	-	-
Stone bridge over swale	Railroad Area	Good	Contributing	S-47	-	-
Stone steps	Railroad Area	Good	Contributing	S-48	-	-
Metal staircase	Railroad Area	Good	Non-contributing	S-49	-	-

Views and Vistas

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Long views down tracks	Railroad Area	Good	Contributing	V-6	-
View to depot from tracks	Railroad Area	Good	Contributing	V-7	-
View from Railroad Depot to El Tovar Hotel	Railroad Area	Good	Contributing	V-8	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Railroad crossing gate	Railroad Area	Good	Non-contributing	SS-52	-
Boulders	Railroad Area	Good	Undetermined	SS-9	-
Cut stone curbing	Railroad Area	Good	Contributing	SS-7	-
Concrete-lined swale	Railroad Area	Poor	Undetermined	SS-53	-
Decorative cut stone arch	Railroad Area	Poor	Undetermined	SS-54	-
Stone-lined swale	Railroad Area	Poor	Undetermined	SS-55	-
Stone riprap	Railroad Area	Unknown	Undetermined	SS-56	-
Culverts	Railroad Area	Good	Contributing	SS-57	-
Historic railroad cart	Railroad Area	Good	Non-contributing	SS-58	-
Iron fence	Railroad Area	Good	Contributing	SS-59	-
Railroad-tie fence	Railroad Area	Good	Non-contributing	SS-60	-
Overhead safety lighting	Railroad Area	Good	Non-contributing	SS-61	-
Wood benches	Railroad Area	Good	Non-contributing	SS-12	-
Wayside exhibits	Railroad Area	Good	Non-contributing	SS-29	-
Railroad Crossing signs	Railroad Area	Good	Non-contributing	SS-62	-
Vehicular traffic signs	Railroad Area	Good	Non-contributing	SS-32	-
Trash receptacles	Railroad Area	Good	Non-contributing	SS-34	-
Metal standpipe	Railroad Area	Unknown	Undetermined	SS-63	-

Visitor and Community Services Area

Natural Systems and Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Ravine	Visitor/Com. Services Area	Good	Contributing	N-4	-

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Intersection of Center Rd. and Village Loop Drive	Visitor/Comm. Services Area	Good	Contributing	SO-16	-
Village Loop Drive Corridor	Visitor/Comm. Services Area	Good	Contributing	SO-17	-
Center Road Corridor	Visitor/Comm. Services Area	Good	Contributing	SO-18	-
Former Fred Harvey service station node	Visitor/Comm. Services Area	Good	Contributing	SO-19	-
Intersection of South Entrance Drive and Village Loop Drive	Visitor/Comm. Services Area	Good	Contributing	SO-20	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Center Road	Visitor/Comm. Services Area	Good	Contributing	C-42	-
Village Loop Drive	Visitor/Comm. Services Area	Good	Contributing	C-1	-
One-way wye drive	Visitor/Comm. Services Area	Good	Contributing	C-43	-
South Entrance Road	Visitor/Comm. Services Area	Good	Contributing	C-44	-
Residential asphalt loop drive	Visitor/Comm. Services Area	Fair	Contributing	C-45	-
Gravel and macadam drive	Visitor/Comm. Services Area	Poor	Contributing	C-46	-
Large asphalt parking lot	Visitor/Comm. Services Area	Good	Contributing	C-47	-
Grand Canyon Association parking lot	Visitor/Comm. Services Area	Good	Contributing	C-48	-
General Office parking lot	Visitor/Comm. Services Area	Poor	Contributing	C-49	-

Circulation (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Public Garage parking lot	Visitor/Comm. Services Area	Fair	Contributing	C-50	-
Bump-out parking near Public Garage	Visitor/Comm. Services Area	Good	Contributing	C-51	-
Semi-circular drive (Service Station)	Visitor/Comm. Services Area	Good	Contributing	C-52	-
Asphalt sidewalks	Visitor/Comm. Services Area	Good	Contributing	C-53	-
Concrete sidewalks	Visitor/Comm. Services Area	Poor	Contributing	C-54	-
Gravel paths	Visitor/Comm. Services Area	Fair	Contributing	C-55	-
Earthen paths	Visitor/Comm. Services Area	Good	Non-contributing	C-56	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	Visitor/Comm. Services Area	Fair	Contributing	Ve-5	-
Grasses	Visitor/Comm. Services Area	Unknown	Non-contributing	Ve-7	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Magistrate's Building	Visitor/Comm. Services Area	Good	Contributing	B-40	SRB0166	007663
Stone retaining wall (Magistrate's Building)	Visitor/Comm. Services Area	Good	Contributing	S-50	-	-
Ranger Operations	Visitor/Comm. Services Area	Good	Contributing	B-41	SRB0103	007660
Concrete masonry unit planting bed	Visitor/Comm. Services Area	Good	Non-contributing	S-51	-	-
Single-family residence (221 Village Loop Drive)	Visitor/Comm. Services Area	Good	Contributing	B-42	0554	055486
Garage	Visitor/Comm. Services Area	Good	Non-contributing	B-43	555	-
Single-family residence (219 Village Loop Drive)	Visitor/Comm. Services Area	Good	Contributing	B-44	0552	055485
Garage	Visitor/Comm. Services Area	Good	Contributing	B-45	552b	-
Guest House	Visitor/Comm. Services Area	Good	Contributing	B-46	552a	-

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Grand Canyon Association building (Originally hospital)	Visitor/Comm. Services Area	Good	Contributing	B-47	SRB0100	055425
Concrete masonry unit wall	Visitor/Comm. Services Area	Good	Non-contributing	S-52	-	-
Concrete masonry unit structure	Visitor/Comm. Services Area	Fair	Non-contributing	S-53	-	-
Concrete stairs	Visitor/Comm. Services Area	Good	Non-contributing	S-54	-	-
General Office & Public Garage	Visitor/Comm. Services Area	Good	Contributing	B-48	0551	055484
Mortared-stone retaining wall	Visitor/Comm. Services Area	Good	Contributing	S-55	-	-
Concrete and stone planter walls	Visitor/Comm. Services Area	Good	Undetermined	S-56	-	-
Log retaining wall	Visitor/Comm. Services Area	Fair	Undetermined	S-57	-	-
Cut stone pier	Visitor/Comm. Services Area	Good	Contributing	S-58	-	-
Original Superintendent's Residence	Visitor/Comm. Services Area	Good	Contributing	B-49	0001	012020
Stone garden and courtyard walls	Visitor/Comm. Services Area	Good	Contributing	S-59	-	-
School Maintenance office (former Fred Harvey service station)	Visitor/Comm. Services Area	Good	Contributing	B-50	0862	055554

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Wheel stops	Visitor/Comm. Services Area	Good	Non-contributing	SS-10	-
Cut stone curbing	Visitor/Comm. Services Area	Good	Contributing	SS-7	-
Stone edging	Visitor/Comm. Services Area	Good	Contributing	SS-8	-
Boulders	Visitor/Comm. Services Area	Good	Contributing	SS-9	-
Metal pipe culverts	Visitor/Comm. Services Area	Good	Undetermined	SS-64	-
Terra cotta culverts	Visitor/Comm. Services Area	Poor	Undetermined	SS-65	-
Concrete-lined swale	Visitor/Comm. Services Area	Fair	Undetermined	SS-66	-
Stone/concrete drainage structure	Visitor/Comm. Services Area	Fair	Undetermined	SS-67	-
Iron gate	Visitor/Comm. Services Area	Good	Contributing	SS-68	-

Small-scale Features (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Painted wood privacy fence	Visitor/Comm. Services Area	Good	Undetermined	SS-15	-
Post-and-rail fence	Visitor/Comm. Services Area	Good	Undetermined	SS-69	-
Picket fence	Visitor/Comm. Services Area	Good	Undetermined	SS-70	-
Stone pier and log fence	Visitor/Comm. Services Area	Good	Undetermined	SS-71	-
Log stave fence atop decorative stone wall	Visitor/Comm. Services Area	Good	Undetermined	SS-72	-
Log fence	Visitor/Comm. Services Area	Good	Undetermined	SS-73	-
Vehicular traffic signs	Visitor/Comm. Services Area	Good	Non-contributing	SS-32	-
Brown and white NPS signs	Visitor/Comm. Services Area	Good	Non-contributing	SS-31	-
Pay telephone	Visitor/Comm. Services Area	Good	Non-contributing	SS-74	-
Trash receptacles	Visitor/Comm. Services Area	Good	Non-contributing	SS-34	-
Picnic tables	Visitor/Comm. Services Area	Good	Non-contributing	SS-51	-
Fuel/Propane tanks	Visitor/Comm. Services Area	Unknown	Non-contributing	SS-47	-
Fire hydrants	Visitor/Comm. Services Area	Good	Non-contributing	SS-39	-

NPS Housing Area

Natural Systems and Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Gently sloping hill east of Center Road ravine	NPS Housing Area	Good	Contributing	N-5	-

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Residential street corridors	NPS Housing Area	Good	Contributing	SO-21	-
Pockets of space within woodland	NPS Housing Area	Good	Contributing	SO-22	-
Residential interstitial/yard spaces	NPS Housing Area	Good	Contributing	SO-23	-
Triangular space at Tapeats Circle	NPS Housing Area	Good	Contributing	SO-24	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Navajo Street	NPS Housing Area	Good	Contributing	C-57	-
Tonto Street	NPS Housing Area	Good	Contributing	C-58	-
Kaibab Street	NPS Housing Area	Good	Contributing	C-59	-
Tapeats Circle	NPS Housing Area	Fair	Contributing	C-60	-
Juniper Hill	NPS Housing Area	Good	Contributing	C-61	-
WODC/Library access drive	NPS Housing Area	Fair	Contributing	C-62	-
Asphalt driveway (Grand Canyon Association)	NPS Housing Area	Good	Contributing	C-63	-
Building #7 gravel driveway	NPS Housing Area	Fair	Contributing	C-64	-
Gravel parking (Fee Management Office)	NPS Housing Area	Good	Contributing	C-65	-
Gravel parking (Single family residence #49)	NPS Housing Area	Poor	Undetermined	C-66	-
Gravel paths	NPS Housing Area	Good	Contributing	C-67	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	NPS Housing Area	Fair	Contributing	Ve-5	-
Grasses	NPS Housing Area	Unknown	Non-contributing	Ve-7	-
Ornamental native vegetation	NPS Housing Area	Fair	Undetermined	Ve-2	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Fee Management Office	NPS Housing Area	Good	Contributing	B-51	SRB0076	007659
Single-family residence #6 Tonto St.	NPS Housing Area	Good	Contributing	B-52	SRQ0002	055372
Shed	NPS Housing Area	Good	Contributing	B-53	SRB0002A	057248
Single-family residence #8 Tonto St.	NPS Housing Area	Good	Contributing	B-54	SRQ0003	055373
Single-family residence #10 Tonto St.	NPS Housing Area	Good	Contributing	B-55	SRQ0004	055374
Garage and shed	NPS Housing Area	Good	Contributing	B-56	SRB0004A	057250
Single-family residence #12 Tonto St.	NPS Housing Area	Good	Contributing	B-57	SRQ0005	055375
Duplex #1 A/B Tonto St.	NPS Housing Area	Good	Contributing	B-58	SRQ0024	055388
Garage and shed	NPS Housing Area	Good	Contributing	B-59	SRB0024C	057261
Duplex #7 A/B Tonto St.	NPS Housing Area	Good	Contributing	B-60	SRQ0006	055376
Garage and shed	NPS Housing Area	Fair	Contributing	B-61	SRB0006C	057251
Duplex #9 C/D Tonto St.	NPS Housing Area	Good	Contributing	B-62	SRQ0007	055377
Garage and shed	NPS Housing Area	Good	Contributing	B-63	SRB0007A	057252
Single family residence #9 Navajo St.	NPS Housing Area	Good	Contributing	B-64	SRQ0009	055378
WODC/Library	NPS Housing Area	Good	Contributing	B-65	SRB0208	055447
Stone pedestrian bridge	NPS Housing Area	Unknown	Contributing	S-59a	-	-
Single family residence #11 Kaibab St.	NPS Housing Area	Good	Contributing	B-66	SRQ0011	055379
Garage and shed	NPS Housing Area	Good	Contributing	B-67	SRB0011A	057255
Single family residence #13 Kaibab St.	NPS Housing Area	Good	Contributing	B-68	SRQ0013	055381
Single family residence #15 Kaibab St.	NPS Housing Area	Good	Contributing	B-69	SRQ0015	055383
Shed	NPS Housing Area	Good	Contributing	B-70	SRB0015A	057257
Single family residence #17 Kaibab St.	NPS Housing Area	Good	Contributing	B-71	SRQ0017	055385
Single family residence #19 Kaibab St.	NPS Housing Area	Good	Contributing	B-72	SRQ0019	055386
Garage and shed	NPS Housing Area	Good	Contributing	B-73	SRB0019A	057259

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Single-family residence #21 Kaibab St.	NPS Housing Area	Good	Contributing	B-74	SRQ0021	055387
Single family residence #14 Kaibab St.	NPS Housing Area	Good	Contributing	B-75	SRQ0014	055382
Shed	NPS Housing Area	Good	Contributing	B-76	14A	-
Single family residence #16 Kaibab St.	NPS Housing Area	Good	Contributing	B-77	SRQ0016	055384
Shed	NPS Housing Area	Good	Contributing	B-78	SRB0016A	057258
Single family residence #49 Juniper Hill	NPS Housing Area	Good	Contributing	B-79	SRQ0012	055380
Garage and shed	NPS Housing Area	Good	Contributing	B-80	SRB0012A	057256
Single family residence #51 Juniper Hill	NPS Housing Area	Good	Contributing	B-81	SRQ0051	055398
Single family residence #53 Juniper Hill	NPS Housing Area	Fair	Contributing	B-82	SRQ0053	055400
Single family residence #55 Juniper Hill	NPS Housing Area	Good	Contributing	B-83	SRQ0054	055401
Single family residence #57 Juniper Hill	NPS Housing Area	Good	Contributing	B-84	SRQ0055	055402
Single family residence #59 Juniper Hill	NPS Housing Area	Good	Contributing	B-85	46	055393
Single family residence #61 Juniper Hill	NPS Housing Area	Good	Contributing	B-86	SRQ0047	055394
Single-family residence #65 Juniper Hill	NPS Housing Area	Good	Contributing	B-87	SRQ0066	055409
Log structure	NPS Housing Area	Good	Undetermined	S-60	66A (?)	-
Single-family residence #67 Juniper Hill	NPS Housing Area	Good	Contributing	B-88	SRQ0067	055410
Single-family residence #50 Juniper Hill	NPS Housing Area	Good	Non-contributing	B-89	1140	-
Single family residence #54 Juniper Hill	NPS Housing Area	Good	Contributing	B-90	SRQ0050	055397
Single family residence #56 Juniper Hill	NPS Housing Area	Good	Contributing	B-91	SRQ0159	055439
Single family residence #58 Juniper Hill	NPS Housing Area	Good	Contributing	B-92	SRQ0161	055440
Single family residence #60 Juniper Hill	NPS Housing Area	Good	Contributing	B-93	SRQ0163	055441
Single family residence #64 Juniper Hill	NPS Housing Area	Good	Non-contributing	B-94	472	-
Single family residence #68 Juniper Hill	NPS Housing Area	Good	Contributing	B-95	169	-
Single family residence #23 Tapeats Circle	NPS Housing Area	Good	Contributing	B-96	SRQ0023	057285

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Single family residence #25 Tapeats Circle	NPS Housing Area	Good	Contributing	B-97	SRQ0025	057286
Single family residence #27 Tapeats Circle	NPS Housing Area	Good	Contributing	B-98	SRQ0027	057287
Stone retaining wall	NPS Housing Area	Good	Contributing	S-61	-	-
Stone wall – Navajo Street	NPS Housing Area	Poor	Contributing	S-62	-	-
Stone wall – Bldg. #SRQ0016	NPS Housing Area	Good	Undetermined	S-63	-	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Wood accessibility ramp	NPS Housing Area	Good	Non-contributing	SS-75	-
Wood railing	NPS Housing Area	Good	Non-contributing	SS-76	-
Stone edging	NPS Housing Area	Good	Contributing	SS-8	-
Boulders	NPS Housing Area	Good	Undetermined	SS-9	-
Cut stone curbing	NPS Housing Area	Good	Contributing	SS-7	-
Wheel stops	NPS Housing Area	Poor	Non-contributing	SS-10	-
Drainage grates	NPS Housing Area	Fair	Undetermined	SS-18	-
Metal pipe culverts	NPS Housing Area	Good	Undetermined	SS-77	-
Post-and-rail fencing	NPS Housing Area	Good	Undetermined	SS-69	-
Log fence	NPS Housing Area	Good	Undetermined	SS-73	-
Wire fencing	NPS Housing Area	Good	Non-contributing	SS-78	-
Green-painted lighting standards	NPS Housing Area	Good	Contributing	SS-79	-
Street signs	NPS Housing Area	Good	Non-contributing	SS-80	-
Vehicular traffic signs	NPS Housing Area	Good	Non-contributing	SS-32	-
Brown and white NPS signs	NPS Housing Area	Good	Non-contributing	SS-31	-
Trash receptacles	NPS Housing Area	Good	Undetermined	SS-34	-

Small-scale Features (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Dumpster	NPS Housing Area	Good	Non-contributing	SS-35	-
Picnic tables	NPS Housing Area	Good	Non-contributing	SS-51	-
Clothesline	NPS Housing Area	Good	Non-contributing	SS-81	-
Satellite dish	NPS Housing Area	Good	Non-contributing	SS-82	-
Woodpile	NPS Housing Area	Good	Non-contributing	SS-83	-
Fuel/propane tanks	NPS Housing Area	Unknown	Non-contributing	SS-47	-

Archeological Sites

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Lithic scatter	NPS Housing Area	Unknown	Undetermined	A-1	-

NPS Service Area

Natural Systems and Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Gently sloping hill	NPS Service Area	Good	Contributing	N-6	-

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Central work plaza	NPS Service Area	Good	Contributing	SO-25	-
Mule Barn node	NPS Service Area	Good	Contributing	SO-26	-
Vehicular corridor	NPS Service Area	Good	Contributing	SO-27	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Sunset Drive	NPS Service Area	Fair	Contributing	C-68	-
Juniper Hill	NPS Service Area	Good	Contributing	C-69	-
Expanse of gravel and asphalt pavement	NPS Service Area	Poor	Contributing	C-70	-
Gravel service drive – east of Storage shed	NPS Service Area	Poor	Contributing	C-71	-
Gravel access drive – Mule Barn	NPS Service Area	Fair	Contributing	C-72	-
Gravel drive – behind Lumber Shed	NPS Service Area	Fair	Contributing	C-73	-
Asphalt drives	NPS Service Area	Good	Undetermined	C-74	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	NPS Service Area	Good	Contributing	Ve-5	-
Screening vegetation	NPS Service Area	Good	Contributing	Ve-10	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
5 Labor Cabins	NPS Service Area	Good	Contributing	B-99	SRQ0061-SRQ0065	055404-055408
Labor Cabin comfort station	NPS Service Area	Good	Contributing	B-100	SRB0060	055403
Temporary Housing units	NPS Service Area	Fair	Non-contributing	B-101	(TH-01, TH-02, TH-03)	-
Boat Shop	NPS Service Area	Fair	Contributing	B-102	SRB0069	055411
Storage shed	NPS Service Area	Fair	Contributing	B-103	SRB0043	057249
Fire and Security Building	NPS Service Area	Good	Contributing	B-104	97	055422
Horse Barn	NPS Service Area	Good	Contributing	B-105	SRB0074	055412
Livestock shelter	NPS Service Area	Good	Non-contributing	S-64	-	-
Paint Shop	NPS Service Area	Good	Contributing	B-106	SRB0080	055416
Prefabricated storage shed	NPS Service Area	Good	Non-contributing	S-65	-	-
Jail	NPS Service Area	Good	Contributing	B-107	SRB0087	055417
Storage shed	NPS Service Area	Good	Contributing	B-108	SRB0088	055418
Blacksmith Shop	NPS Service Area	Good	Contributing	B-109	SRB0075	055413
Old NPS gas station	NPS Service Area	Good	Contributing	B-110	SRB0079	055415
Warehouse	NPS Service Area	Good	Contributing	B-111	SRB0078	055414
Warehouse	NPS Service Area	Good	Contributing	B-112	SRB0090	055419
Lumber shed	NPS Service Area	Good	Contributing	B-113	SRB0094	055421
Masonry retaining wall	NPS Service Area	Poor	Undetermined	S-66	-	-
Wood retaining wall	NPS Service Area	Poor	Undetermined	S-67	-	-
Mule Barn	NPS Service Area	Fair	Contributing	B-114	SRB0098	055423
Mule pole shelter	NPS Service Area	Good	Non-contributing	S-68	1125	-
Pole hay shed	NPS Service Area	Good	Non-contributing	S-69	1124	-
Equipment shed	NPS Service Area	Good	Contributing	B-115	SRB0099	055424
3 Equipment sheds	NPS Service Area	Good	Contributing	B-116	SRB0183, SRB0184, SRB0185	055444-055446
Metal storage containers	NPS Service Area	Good	Non-contributing	B-117	-	-

Views and Vistas

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Internal views of buildings around central work plaza	NPS Service Area	Good	Contributing	V-9	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Boulders	NPS Service Area	Good	Undetermined	SS-9	-
Wheel stops	NPS Service Area	Fair	Non-contributing	SS-10	-
Wood bollards	NPS Service Area	Fair	Non-contributing	SS-84	-
Metal Bollards	NPS Service Area	Fair	Non-contributing	SS-85	-
Chain-link fence	NPS Service Area	Good	Non-contributing	SS-42	-
Metal corral fencing	NPS Service Area	Good	Non-contributing	SS-43	-
Metal pipe fencing	NPS Service Area	Fair	Non-contributing	SS-86	-
Corral features (hay racks, water troughs, water tank)	NPS Service Area	Good	Non-contributing	SS-45	-
Abandoned gas pumps	NPS Service Area	Poor	Contributing	SS-87	-
Portable toilet	NPS Service Area	Good	Non-contributing	SS-37	-
Storage containers	NPS Service Area	Good	Non-contributing	SS-88	-
Piles of materials	NPS Service Area	Unknown	Non-contributing	SS-89	-
Overhead parking lights	NPS Service Area	Good	Non-contributing	SS-90	-
Street signs	NPS Service Area	Good	Non-contributing	SS-80	-
Trash receptacles	NPS Service Area	Good	Non-contributing	SS-34	-
Dumpster	NPS Service Area	Good	Non-contributing	SS-35	-
Fuel/Propane tanks	NPS Service Area	Unknown	Non-contributing	SS-47	-
Satellite dish	NPS Service Area	Unknown	Non-contributing	SS-83	-

Concessionaire Housing Area

Natural Systems and Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Gently sloping hill west of Center Road	Concessionaire Housing Area	Good	Contributing	N-7	-

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Vehicular corridors	Concessionaire Housing Area	Good	Contributing	SO-28	-
Pockets of space within woodland	Concessionaire Housing Area	Good	Non-contributing	SO-29	-
Interior/yard spaces	Concessionaire Housing Area	Unknown	Contributing	SO-30	-
Pedestrian corridor	Concessionaire Housing Area	Good	Non-contributing	SO-31	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Coconino Street	Concessionaire Housing Area	Poor	Contributing	C-75	-
Apache Street	Concessionaire Housing Area	Good	Contributing	C-76	-
"Neck-down" street parking	Concessionaire Housing Area	Good	Non-contributing	C-77	-
Apache Alley	Concessionaire Housing Area	Fair	Contributing	C-78	-
Boulder Street	Concessionaire Housing Area	Poor	Contributing	C-79	-
Boulder Alley	Concessionaire Housing Area	Poor	Contributing	C-80	-
Gravel driveway off of Boulder Street	Concessionaire Housing Area	Poor	Non-contributing	C-81	-
Gravel parking in alleys	Concessionaire Housing Area	Fair	Contributing	C-82	-
Gravel drive and parking lot between duplexes	Concessionaire Housing Area	Fair	Non-contributing	C-83	-
Concrete sidewalks	Concessionaire Housing Area	Good	Undetermined	C-84	-
Asphalt path	Concessionaire Housing Area	Good	Non-contributing	C-85	-
Earthen path	Concessionaire Housing Area	Good	Non-contributing	C-86	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	Concessionaire Housing Area	Good	Contributing	Ve-5	-
Ornamental native vegetation	Concessionaire Housing Area	Good	Undetermined	Ve-2	-
Grasses	Concessionaire Housing Area	Unknown	Non-contributing	Ve-7	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Single family residence #26 Apache St.	Concessionaire Housing Area	Good	Contributing	B-118	SRQ0799	055528
Stone pier	Concessionaire Housing Area	Good	Contributing	S-70	-	-
Garage	Concessionaire Housing Area	Fair	Contributing	B-119	SRB0790	057273
Single-family residence #24 Apache St.	Concessionaire Housing Area	Good	Contributing	B-120	SRQ0800	055529
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-121	SRB0777	057266
Stone planter walls	Concessionaire Housing Area	Good	Undetermined	S-71	-	-
Duplex #20 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-122	SRQ0802	055531
Duplex #22 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-123	SRQ0801	055530
Garage	Concessionaire Housing Area	Fair	Contributing	B-124	SRB0791	057274
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-125	SRB0779	057267
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-126	SRB0792	057275
Single family residence #18 Apache St.	Concessionaire Housing Area	Good	Contributing	B-127	SRQ0803	055532
Garage	Concessionaire Housing Area	Fair	Contributing	B-128	SRB0793	057276
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-129	SRB0780	057268
Duplex #16 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-130	SRQ0804	055533
Duplex #14 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-131	SRQ0805	055534
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-132	SRB0781	057269
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-133	SRB0783	057270
Garage	Concessionaire Housing Area	Fair	Contributing	B-134	SRB0794	057277

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Garage	Concessionaire Housing Area	Fair	Contributing	B-135	SRB0795	057278
Single family residence #12 Apache St.	Concessionaire Housing Area	Good	Contributing	B-136	SRQ0806	055535
Garage	Concessionaire Housing Area	Fair	Contributing	B-137	SRB0796	057279
Duplex #10 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-138	SRQ0807	055536
Duplex #8 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-139	SRQ0808	055537
Garage	Concessionaire Housing Area	Fair	Contributing	B-140	SRB0797	057280
Garage	Concessionaire Housing Area	Fair	Contributing	B-141	SRB0798	057281
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-142	SRB0788	057271
Storage shed	Concessionaire Housing Area	Fair	Contributing	B-143	SRB0789	057272
Single family residence #4 Apache St.	Concessionaire Housing Area	Good	Contributing	B-144	SRQ0809	055538
Single family residence #2 Apache St.	Concessionaire Housing Area	Good	Contributing	B-145	SRQ0810	055539
Single family residence #29 Apache St.	Concessionaire Housing Area	Good	Contributing	B-146	0812	055541
Single family residence #25 Apache St.	Concessionaire Housing Area	Good	Contributing	B-147	0814	055543
Duplex #27 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-148	0813	055542
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-72	0835	056889
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-73	0827	056887
Duplex #21 Apache St.	Concessionaire Housing Area	Good	Contributing	B-149	SRQ040	055391
Garage	Concessionaire Housing Area	Fair	Contributing	B-150	0837	056890
Single family residence #19 Apache St.	Concessionaire Housing Area	Good	Contributing	B-151	0815	055544
Duplex #17 A/B Apache St.	Concessionaire Housing Area	Good	Contributing	B-152	0816	055545
Garage	Concessionaire Housing Area	Fair	Contributing	B-153	0839	056892
Garage	Concessionaire Housing Area	Fair	Contributing	B-154	0840	056893
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-74	0829	056888
Single family residence #15 Apache St.	Concessionaire Housing Area	Good	Contributing	B-155	0817	055546
Single family residence #13 Apache St.	Concessionaire Housing Area	Good	Contributing	B-156	0818	055547

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Single family residence #11 Apache St.	Concessionaire Housing Area	Good	Contributing	B-157	0819	055548
Single family residence #9 Apache St.	Concessionaire Housing Area	Good	Contributing	B-158	0820	055549
Single family residence #7 Apache St.	Concessionaire Housing Area	Good	Contributing	B-159	0821	055550
Stone wall – behind Residence #7	Concessionaire Housing Area	Good	Contributing	S-75	-	-
Garage	Concessionaire Housing Area	Fair	Contributing	B-160	0841	056894
Single family residence #5 Apache St.	Concessionaire Housing Area	Good	Contributing	B-161	0822	055551
Garage	Concessionaire Housing Area	Fair	Contributing	B-162	0842	056895
Garage	Concessionaire Housing Area	Fair	Contributing	B-163	0843	056896
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-76	832	-
Single family residence #3 Apache St.	Concessionaire Housing Area	Good	Contributing	B-164	0823	055552
Shed	Concessionaire Housing Area	Fair	Non-contributing	B-165	823A	-
Prefabricated storage shed	Concessionaire Housing Area	Good	Non-contributing	S-77	-	-
Single family residence #1 Apache St.	Concessionaire Housing Area	Good	Contributing	B-166	SRQ0824	055553
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-78	SRB0834	057282
Garage	Concessionaire Housing Area	Fair	Contributing	B-167	SRB0844	057283
Single family residence #35 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-168	847	-
Single family residence #37 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-169	848	-
Single family residence #38 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-170	855	-
Single family residence #39 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-171	849	-
Single family residence #40 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-172	854	-
Single family residence #41 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-173	850	-
Single family residence #42 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-174	853	-
Single-family residence #43 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-175	851	-
Single family residence #44 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-176	852	-
Single family residence #46 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-177	856	-

Buildings and Structures (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS#
Single-family residence #33 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-178	846	-
Garage	Concessionaire Housing Area	Fair	Contributing	B-179	0857	056897
Garage	Concessionaire Housing Area	Fair	Contributing	B-180	0858	056898
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-79	859	-
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-80	860	-
Coal shed	Concessionaire Housing Area	Fair	Contributing	S-81	861	-
Single-family residence #31 Boulder St.	Concessionaire Housing Area	Good	Contributing	B-181	845	-
Single family residence #45 Boulder St.	Concessionaire Housing Area	Good	Non-contributing	B-182	1376	-
Duplex #47 A/B Boulder St.	Concessionaire Housing Area	Good	Non-contributing	B-183	325	-
Duplex #49 A/B Boulder St.	Concessionaire Housing Area	Good	Non-contributing	B-184	326	-
Storage shed	Concessionaire Housing Area	Fair	Non-contributing	B-185	-	-
Prefabricated storage shed	Concessionaire Housing Area	Good	Non-contributing	S-82	-	-
Duplex #53 A/B Boulder St.	Concessionaire Housing Area	Good	Non-contributing	B-186	322	-
Single family residence #55 Boulder St.	Concessionaire Housing Area	Good	Non-contributing	B-187	506	-
Stone foundations	Concessionaire Housing Area	Good	Contributing	S-83	778, 778A, 784	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Cut stone curbing	Concessionaire Housing Area	Good	Contributing	SS-7	-
Concrete curbing	Concessionaire Housing Area	Good	Non-contributing	SS-91	-
Stone edging	Concessionaire Housing Area	Good	Contributing	SS-8	-
Boulders	Concessionaire Housing Area	Good	Undetermined	SS-9	-
Culverts	Concessionaire Housing Area	Fair	Undetermined	SS-92	-
Log stave fence	Concessionaire Housing Area	Fair	Undetermined	SS-93	-
Picket fence	Concessionaire Housing Area	Good	Undetermined	SS-70	-

Small-scale Features (continued)

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Painted wood privacy fence	Concessionaire Housing Area	Good	Non-contributing	SS-15	-
Chain-link fence	Concessionaire Housing Area	Good	Non-contributing	SS-42	-
Vehicular traffic signs	Concessionaire Housing Area	Good	Non-contributing	SS-32	-
Street signs	Concessionaire Housing Area	Good	Non-contributing	SS-80	-
Metal drum container	Concessionaire Housing Area	Unknown	Non-contributing	SS-94	-
Trash receptacles	Concessionaire Housing Area	Good	Non-contributing	SS-34	-
Dumpsters	Concessionaire Housing Area	Good	Non-contributing	SS-35	-
Picnic tables	Concessionaire Housing Area	Good	Non-contributing	SS-51	-
Fuel/Propane tanks	Concessionaire Housing Area	Unknown	Non-contributing	SS-47	-
Woodpile	Concessionaire Housing Area	Good	Non-contributing	SS-95	-

Community School Area

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Asphalt paths	Community School Area	Fair	Contributing	C-87	-
Concrete sidewalks	Community School Area	Good	Contributing	C-88	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Woodland vegetation	Community School Area	Good	Contributing	Ve-5	-
Ornamental native plantings	Community School Area	Good	Undetermined	Ve-2	-
Grasses	Community School Area	Unknown	Non-contributing	Ve-7	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS #
Grand Canyon Middle School	Community School Area	Good	Contributing	B-188	0227	055448
Grand Canyon Elementary School	Community School Area	Good	Non-contributing	B-189	323	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Stone edging	Community School Area	Good	Contributing	SS-8	-
Boulders	Community School Area	Good	Undetermined	SS-9	-
Stone-lined swales	Community School Area	Good	Undetermined	SS-96	-
Culverts	Community School Area	Good	Undetermined	SS-97	-
Metal railings	Community School Area	Good	Non-contributing	SS-98	-
Vehicular traffic signs	Community School Area	Good	Non-contributing	SS-32	-
Brown and white NPS signs	Community School Area	Good	Non-contributing	SS-31	-
Trash receptacles	Community School Area	Good	Non-contributing	SS-34	-
Compost bin	Community School Area	Good	Non-contributing	SS-99	-

Camp Area

Spatial Organization

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Vehicular corridors	Camp Area	Good	Contributing	SO-32	-
Interstitial cabin spaces	Camp Area	Good	Contributing	SO-33	-
Woodland masses	Camp Area	Good	Contributing	SO-34	-
Gravel-floored open space (Former amphitheater node)	Camp Area	Fair	Contributing	S0-35	-

Circulation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Village Loop Drive	Camp Area	Good	Contributing	C-1	-
Concrete drop-off lane	Camp Area	Good	Non-contributing	C-89	-
Access road through Maswik Cabins	Camp Area	Poor	Contributing	C-90	-
Gravel parking spaces	Camp Area	Fair	Contributing	C-91	-
Asphalt sidewalks	Camp Area	Good	Contributing	C-92	-
Northern amphitheater asphalt path	Camp Area	Poor	Undetermined	C-93	-
Southern amphitheater asphalt path	Camp Area	Good	Undetermined	C-94	-

Vegetation

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Screening vegetation	Camp Area	Good	Contributing	Ve-10	-

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS #
Maswik Cabin 101N	Camp Area	Unknown	Contributing	B-190	0595	055506
Maswik Cabin 210N	Camp Area	Unknown	Contributing	B-191	0596	055507
Maswik Cabin 203N	Camp Area	Unknown	Contributing	B-192	0597	055508
Maswik Cabin 205N	Camp Area	Unknown	Contributing	B-193	0598	055509
Maswik Cabin 207N	Camp Area	Unknown	Contributing	B-194	0599	055510
Maswik Cabin 209N	Camp Area	Unknown	Contributing	B-195	0600	055511
Maswik Cabin 112N	Camp Area	Unknown	Contributing	B-196	0601	055512
Maswik Cabin 114N	Camp Area	Unknown	Contributing	B-197	0602	055513
Maswik Cabin 116N	Camp Area	Unknown	Contributing	B-198	0603	055514
Maswik Cabin 118N	Camp Area	Unknown	Contributing	B-199	0604	055515

Buildings and Structures

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #	LCS #
Maswik Cabin 119N	Camp Area	Unknown	Contributing	B-200	0605	055516
Maswik Cabin 120N	Camp Area	Unknown	Contributing	B-201	0606	055517
Maswik Employee Cabin 221N&213N	Camp Area	Unknown	Contributing	B-202	0607	055518
Maswik Employee Cabin 100N&102N	Camp Area	Unknown	Contributing	B-203	0610	055521
Maswik Employee Cabin 103N&105N	Camp Area	Unknown	Contributing	B-204	0611	055522
Maswik Employee Cabin 104N&106N	Camp Area	Unknown	Contributing	B-205	0612	055523
Maswik Employee Cabin 107N&109N	Camp Area	Unknown	Contributing	B-206	0613	055524
Maswik Employee Cabin 108N&110N	Camp Area	Unknown	Contributing	B-207	0614	055525
Maswik Employee Cabin 111N&113N	Camp Area	Unknown	Contributing	B-208	0615	055526
Maswik Employee Cabin 115&117N	Camp Area	Unknown	Contributing	B-209	0616	055527
Maswik Quad Cabin 6711-14	Camp Area	Unknown	Contributing	B-210	0581	055497
Maswik Quad Cabin 6735-38	Camp Area	Unknown	Contributing	B-211	0582	055498
Maswik Quad Cabin 6731-34	Camp Area	Unknown	Contributing	B-212	0583	055499
Maswik Quad Cabin 6727-30	Camp Area	Unknown	Contributing	B-213	0584	055500
Maswik Quad Cabin 6723-26	Camp Area	Unknown	Contributing	B-214	0585	055501
Maswik Quad Cabin 6719-22	Camp Area	Unknown	Contributing	B-215	0586	055502
Maswik Quad Cabin 6715-18	Camp Area	Unknown	Contributing	B-216	0587	055503
Storage Cabin	Camp Area	Unknown	Contributing	B-217	0588	055504
Maswik Cabin Comfort Station	Camp Area	Unknown	Contributing	B-218	0589	055505
Maswik Cabin Comfort Station	Camp Area	Unknown	Contributing	B-219	0609	055520
Cut-stone planter wall	Camp Area	Good	Non-contributing	S-84	-	-

Small-scale Features

Landscape Feature	Sub-Area	Condition Assessment	Contributing/ Non-contributing	CLR #	NPS Bldg. #
Stone edging	Camp Area	Good	Contributing	SS-8	-
Boulders	Camp Area	Good	Undetermined	SS-9	-
Cut stone curbing	Camp Area	Good	Contributing	SS-7	-
Concrete bollards	Camp Area	Good	Non-contributing	SS-100	-
Trench-style storm drains	Camp Area	Good	Non-contributing	SS-101	-
Drainage grates	Camp Area	Good	Undetermined	SS-18	-
Green-painted metal street lights	Camp Area	Good	Contributing	SS-102	-
Other lighting standards	Camp Area	Good	Undetermined	SS-103	-
Brown and white NPS signs	Camp Area	Good	Non-contributing	SS-31	-
Vehicular traffic signs	Camp Area	Good	Non-contributing	SS-32	-
Orientation signs at bus stops	Camp Area	Good	Non-contributing	SS-30	-
Maswik Lodge sign	Camp Area	Good	Non-contributing	SS-104	-
Trash receptacles	Camp Area	Good	Non-contributing	SS-34	-
Dumpsters	Camp Area	Good	Non-contributing	SS-35	-

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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