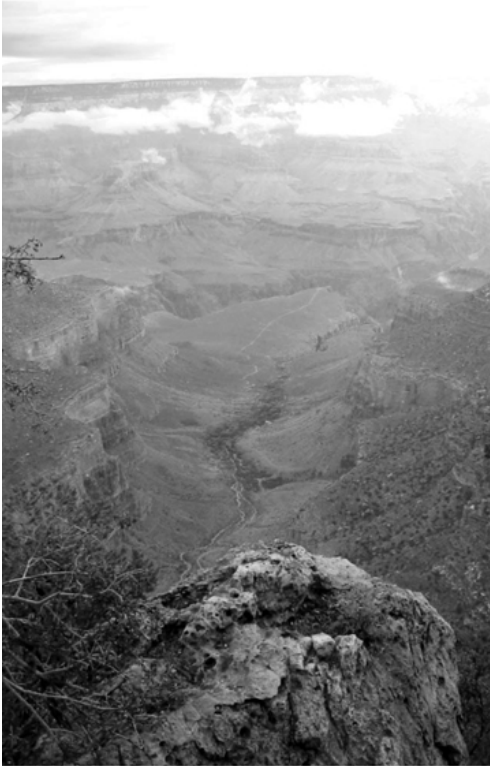

National Park Service
Cultural Landscapes Inventory

2011



Bright Angel Trail and River Trail Corridor
Grand Canyon National Park

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Cultural Landscapes in the Cultural Resources Inventory System:

The Cultural Resources Information System (CRIS)

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archeological sites, historic structures, ethnographic resources and cultural landscapes. The set of CRIS records for cultural landscapes is referred to as CRIS-CL. CRIS-CL records conform to a standardized data structure known as the Cultural

Landscapes Inventory (CLI).

The legislative, regulatory and policy directions for conducting and maintaining the CRIS are: Section 110 of the National Historic Preservation Act, NPS Management Policies (2006), Director's Order 28 (Cultural Resources) and Director's Order 28a (Archeology).

The Cultural Landscapes Inventory (CLI)

The CLI is the data structure within CRIS used to document and evaluate all potentially significant cultural landscapes in which NPS has, or plans to acquire any enforceable legal interest.

Each CRIS-CL record is certified complete when the landscape is determined to meet one of the following:

- Landscape individually meets the National Register of Historic Places criteria for evaluation; or,
- Landscape is a contributing element of a property that is eligible for the National Register; or,
- Landscape does not meet the National Register criteria, but is managed as cultural resources because of law, policy or decisions reached through the park planning process.

Cultural landscapes vary from historic sites, historic designed landscapes, historic vernacular landscapes to historic ethnographic landscapes, but may also fit within more than one type. Those eligible for the National Register have significance in the nation's history on a national, state or local level, as well as integrity or authenticity.

The legislative, regulatory and policy directions for conducting and maintaining the CLI within CRIS are: *National Historic Preservation Act of 1966 (16 USC 470h-2(a)(1)). Each Federal agency shall establish...a preservation program for the identification, evaluation, and nomination to the National Register of Historic Places...of historic properties...*

Executive Order 13287: Preserve America, 2003. Sec. 3(a)...Each agency with real property management responsibilities shall prepare an assessment of the current status of its inventory of historic properties required by section 110(a)(2) of the NHPA...No later than September 30, 2004, each covered agency shall complete a report of the assessment and make it available to the Chairman of the Advisory Council on Historic Preservation and the Secretary of the Interior...

Executive Order 13287: Preserve America, 2003. Sec. 3(c) Each agency with real property management responsibilities shall, by September 30, 2005, and every third year thereafter, prepare a report on its progress in identifying... historic properties in its ownership and make the report available to the Council and the Secretary...

The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act, 1998. Standard 2: An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110 (a)(2)(A) Management Policies 2006. 5.1.3.1 Inventories: The Park Service will (1) maintain and expand the following inventories...about cultural resources in units of the national park system...Cultural Landscape Inventory of historic designed landscapes, historic vernacular landscapes,... and historic sites...

Cultural Resource Management Guideline, 1997, Release No. 5, page 22 issued pursuant to Director's Order #28. As cultural resources are identified and evaluated, they should also be listed in the appropriate Service-wide inventories of cultural resources.

Inventory Unit Description:

This document constitutes a Cultural Landscape Inventory (CLI) for the Bright Angel Trail Corridor, a component landscape of Grand Canyon National Park. For the purposes of this CLI, the component landscape is further divided into two Landscape Areas. They are the Bright Angel Trail Landscape Area and the Indian Garden Landscape Area. The information for the Bright Angel Trail Landscape Area contained herein was developed from research and a field visit completed in 2009. The information for the Indian Garden Landscape Area contained in this CLI was adapted from the Indian Garden Cultural Landscape Report, prepared in June 2005 by John Milner Associates, Inc. (JMA) for the Grand Canyon National Park's Indian Garden, a rest stop and campground along the Bright Angel Trail located approximately 3,200 feet below the South Rim. In addition, basic information on the Bright Angel Trail Corridor from the existing Bright Angel Trail National Register Nomination has been incorporated. National Park Service (NPS) trails historian, Mike Anderson, and others prepared the nomination in 1991 and revised it in 2002.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The Bright Angel Trail is approximately 7.8 miles in length and traverses almost 4,800 feet of elevational change from the South Rim of the Grand Canyon to the Colorado River. At the Colorado River, the Bright Angel Trail converges with the River Trail and continues 1.8 miles to its terminus at Phantom Ranch. From its inception, it has functioned as a transportation corridor for the Native Americans, north and south rim residents, miners and prospectors, and tourists and recreationists. For this reason, the Bright Angel Trail remains the Grand Canyon National Park's most travelled trail and considered the safest because of its regular maintenance and comfort stations that supply shade, potable water, emergency phones, and a ranger presence.

While Ralph Cameron is credited with initially "building" the Bright Angel Trail in 1891 to access mining claims in the inner Canyon, he quickly realized the true worth of his efforts would be better realized by soliciting the tourism trade and charging a toll for their visitations. The use of the trail as a "toll road" became the source of much controversy and subsequent legal battles with railroad companies and the federal government. As a result, the trail was turned over to the National Park Service in 1928.

Contributing features of the Bright Angel Trail Landscape include the CCC-era construction of the trail itself, native stone rest houses, retaining walls, steps, and the trans-canyon telephone line. For the most part, these features were built between 1929 and 1939. The construction of these features probably removed most, if not all, of the trail features built during Cameron's initial development of the trail.

As a natural characteristic of trails, on-going maintenance and repairs of the trail and its features post-period of significance has not affected its integrity. The overall condition of the Bright Angel Trail Landscape Area remains much as it was during the period of significance. The overall physical condition of the Bright Angel Trail Landscape Area is considered to be fair.

According to the National Register of Historic Places criteria, the Bright Angel Trail Landscape Area is significant to an understanding of American History at the national level under Criteria A, B, and C. Under Criterion A, the Bright Angel Trail is significant within the areas of Recreation and Tourism and Politics and Government, and for the landscape's association with the CCC. Under Criterion B, the Bright Angel Trail is significant because of its association with Arizona entrepreneur and politician, Ralph Henry Cameron. Under Criterion C, the Bright Angel Trail is significant within the area of Architecture, for its collection of NPS rustic-style buildings.

INDIAN GARDEN LANDSCAPE AREA

Indian Garden is located nearly 4.5 miles along the Bright Angel Trail and can also be accessed by the Tonto Trail. The site of Indian Garden has been continually used as a stopping point for hikers, campers, and mule riders for over 100 years, although the fertile landscape of water-bearing creeks, springs, and seeps was used by Native Americans and miners for many years prior to the beginning of tourism.

Part of the trans-canyon telephone line, which is listed on the National Register of Historic Places

(NRHP), is also included. The remnants of this system in this location include three telephone poles located east of, but in close proximity to, Indian Garden.

Indian Garden is a palimpsest whose earlier traces of history are still faintly visible in today's multi-layered landscape. Whether ensuing generations of management and design were based on hand-over of legal control, the need to rebuild due to flood damage, or the necessity of enhancing facilities for an ever-growing number of visitors, Indian Garden has been a model of how to keep pace with change. The issues that face Indian Garden most often are those that involve mitigation of water—this element is both welcome as a source of cool and refreshment, yet is also a source of apprehension when flash floods rush through the landscape. Throughout history, it is water that has both drawn people to this site and shaped the form and appearance of the cultural landscape seen today.

The JMA CLR team identified the period of significance for Indian Garden to be from 1903 until 1942 (though the period of significance for the Bright Angel Trail Corridor as a whole is 1890 to 1942). 1903 marks the year when Ralph Cameron began his tourism facilities at Indian Garden in earnest. The latter year marks the end of the CCC involvement in Indian Garden and the final implementation of NPS rustic-style design aesthetics within the landscape. Within this overall period of significance exist two sub-periods: from 1903 until 1927, marking the years of Ralph Cameron's influence upon the site, and 1928 until 1942, marking the years of NPS and CCC influence on Indian Garden.

After evaluating Indian Gardens according to the NRHP's seven aspects of historic integrity, the CLR team found that Indian Garden does not retain integrity for the period of significance as an individual district. This finding was based on the fact that Indian Garden has undergone considerable alterations since the period of significance—changes that have impeded Indian Garden's ability to convey its historical significance and importance within American history. For this reason, Indian Garden is not individually eligible for listing in the NHRP as a district or a site. Portions of the landscape, however, including all contributing resources, should be included in the Bright Angel Trail Corridor National Register nomination and should be preserved and protected as part of the park's management plans. These portions are the historic character areas within the CLI project boundary and consist of the Bright Angel Trail, Day Use Area, Pump Station and Corral Area, and North Indian Garden Area. The remaining character areas that were constructed outside the Bright Angel Trail Corridor CLI's period of significance—the Administration and Campground Areas—are considered non-contributing features and will not be included in the Bright Angel Trail Corridor nomination.

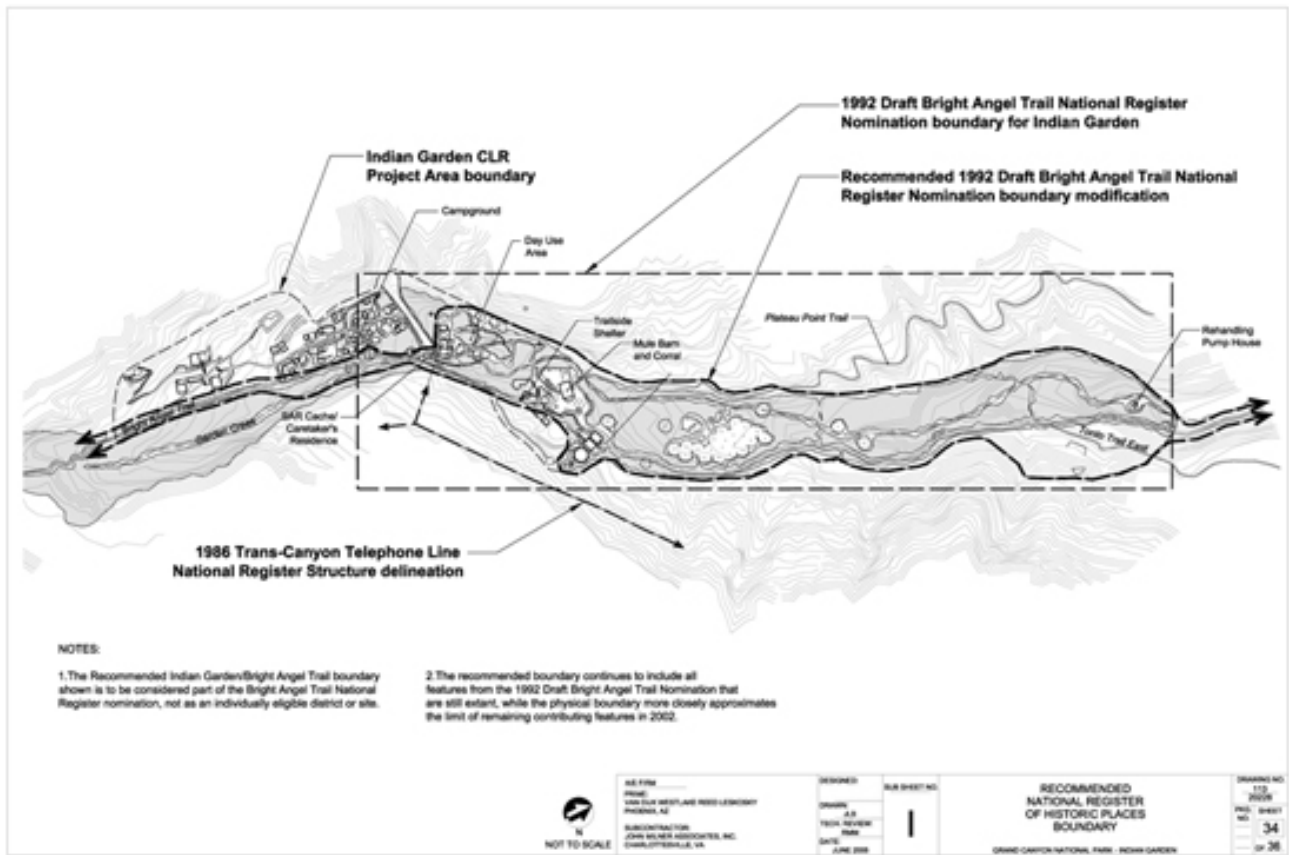
Although Indian Garden may not retain integrity sufficient for NRHP eligibility, it is still an important historic landscape. According to guidelines provided by the NHRP, Indian Garden draws its significance in American history under Criteria A, B, and C. Under Criterion A, Indian Garden is significant within the areas of Recreation, for the landscape's association with tourism-related activities and Politics/Government, and for the landscape's association with the CCC. Under Criterion B, Indian Garden is significant because of its association with Arizona entrepreneur and politician, Ralph Henry Cameron. Under Criterion C, Indian Garden is significant within the area of Architecture, for its collection of rustic-style buildings.

The overall condition of the Indian Garden Landscape Area portion of the component landscape is fair.

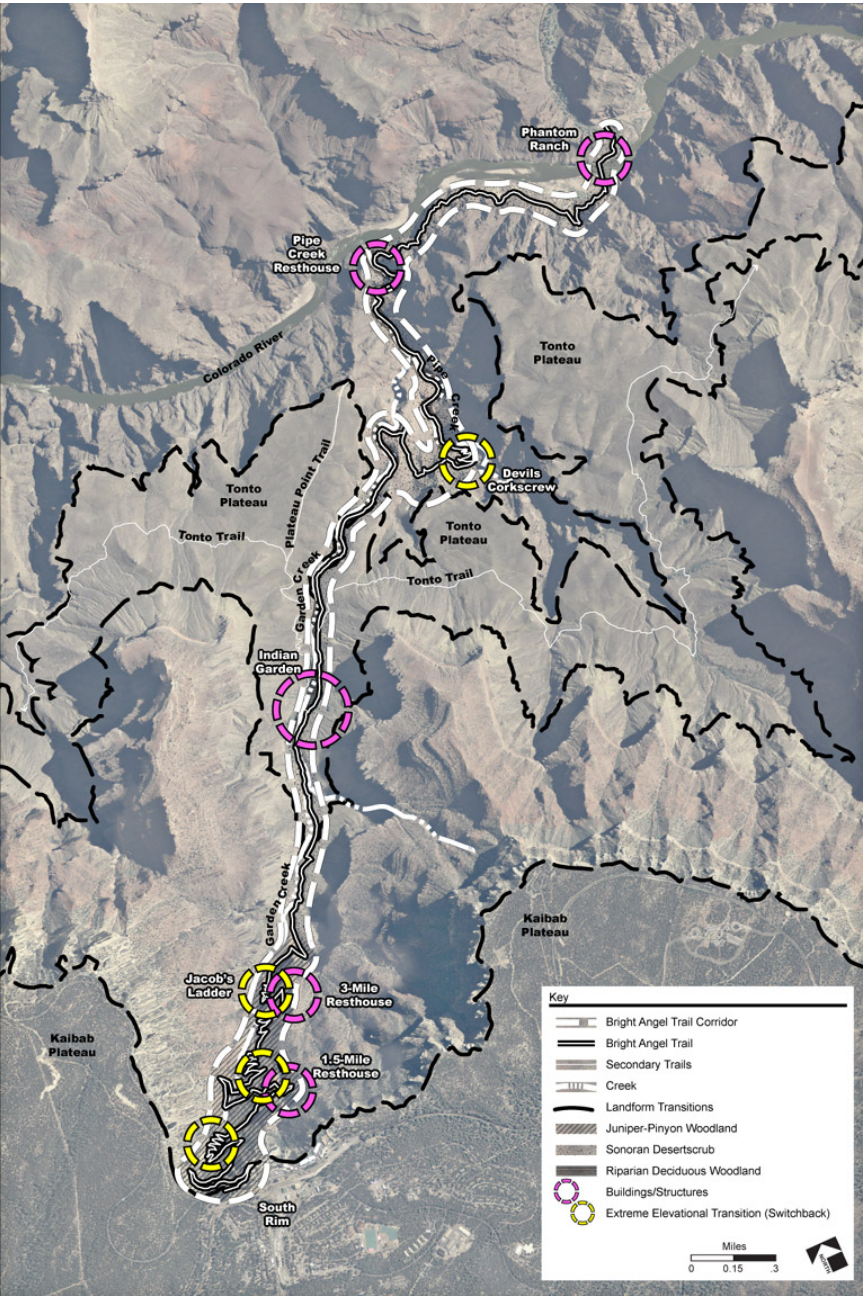
PHANTOM RANCH LANDSCAPE AREA

While Phantom Ranch is not included in this CLI, it is considered a distinct Landscape Area of the Bright Angel Trail Corridor landscape component. Phantom Ranch is addressed as a separate CLI and is also a component of the Cross Canyon Corridor Historic District.

Site Plan



Site plan for Indian Garden, 2006. Source: John Milner Associates (JMA).



Site plan for Bright Angel Trail, 2010. Source: Logan Simpson Design (LSD).

Property Level and CLI Numbers

Inventory Unit Name:	Bright Angel Trail and River Trail Corridor
Property Level:	Landscape
CLI Identification Number:	975142
Parent Landscape:	850122

Park Information

Park Name and Alpha Code:	Grand Canyon National Park - Bright Angel Trail and River Trail Corridor - GRCA
Park Organization Code:	8210
Park Administrative Unit:	Grand Canyon National Park

CLI Hierarchy Description

The Bright Angel Trail is one of several component landscapes within Grand Canyon National Park.

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

Portions of this CLI were adapted from the Bright Angel Trail nomination and the 2005 Cultural Landscape Report for Indian Garden, by John Milner Associates (JMA). The Bright Angel Trail Landscape Area sections of the CLI were completed in the fall of 2009 by Logan Simpson Design Inc (LSD). As of 2010, the Phantom Ranch CLI has yet to be completed.

Concurrence Status:

Park Superintendent Concurrence:	Yes
Park Superintendent Date of Concurrence:	09/20/2011
National Register Concurrence:	Ineligible -- Managed As Cultural Resource
Date of Concurrence Determination:	09/20/2011

National Register Concurrence Narrative:

This CLI has not had concurrence with SHPO on eligibility but the property is being managed as a cultural resource. NPS believes the property is eligible and is managing it accordingly. IMR CL program to undertake a strategy to move this CLI through the concurrence process in FY2020.

Geographic Information

Geographic Information & Location Map

State and County:

State:	Arizona
County	Coconino County

Size (Acres) 232.7

Land Tract Number(s)

Inventory Unit Boundary Description:

This CLI Inventory Unit boundary is based on the existing alignment of Bright Angel Trail. For the purposes of this CLI, the Bright Angel Trail Corridor includes a 200-foot corridor (100 feet on either side of the trail), except for the Indian Garden Landscape Area (see site plan).

Boundary Coordinates:

Source:	USGS Map 1
Type of Point:	Line
Latitude:	-112.144602712232
Longitude:	36.0567014519103

Narrative:

Source:	USGS Map 1
Type of Point:	Line
Latitude:	-112.146625988225
Longitude:	36.0591794141337

Narrative:

Source: USGS Map 1
Type of Point: Line
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Longitude: 36.0592090410677
Narrative:

Source: USGS Map 1
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Narrative:

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Narrative:

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Narrative:

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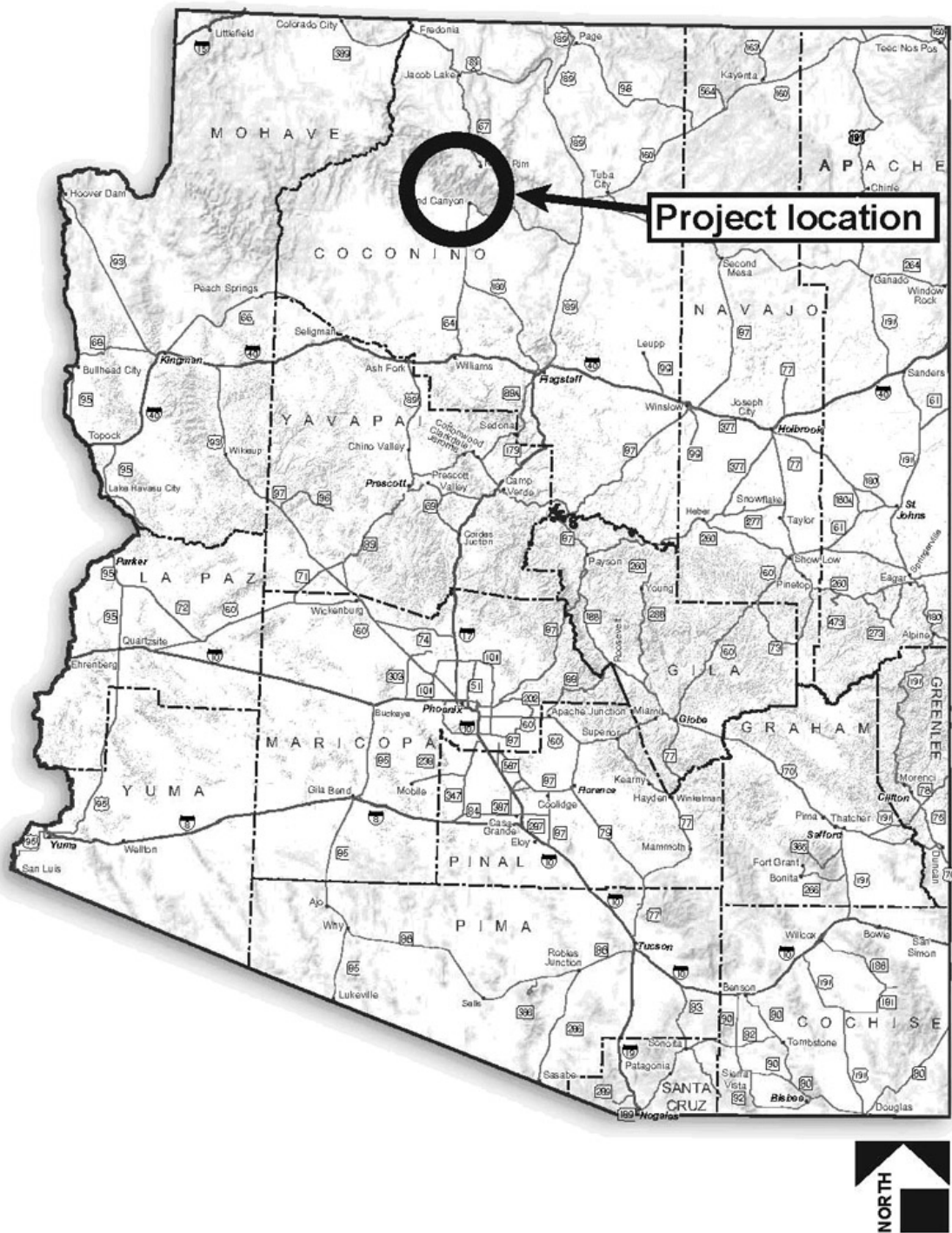
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Narrative:

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Longitude: 36.1001389443793
Narrative:

Location Map:



Location Map for Grand Canyon and the Bright Angel Trail.

Regional Context:

Management Information

General Management Information

Management Category: Should be Preserved and Maintained

Management Category Date: 08/28/1997

Management Category Explanatory Narrative:

A Determination of Eligibility (DOE) for the Bright Angel Trail was received 8/28/1997. As a result, the Bright Angel Trail should be preserved and maintained.

Agreements, Legal Interest, and Access

Management Agreement:

Type of Agreement: Concession Contract/Permit

Type of Context:

Management Agreement Explanatory Narrative:

The maintenance of the Bright Angel Trail is managed through an concession contract/permit between the NPS and Xanterra.

NPS Legal Interest:

Type of Interest: Fee Simple

Narrative: The NPS owns the Bright Angel Trail outright in fee simple.

Located in managed wilderness?: Unknown

Public Access:

Type of Interest: Unrestricted

Explanatory Narrative:

The public has unrestricted access to the Bright Angel Trail.

Adjacent Lands Information

Do Adjacent Lands Contribute? No

Adjacent Land Narrative:

National Register Information

Documentation Status:

SHPO Inadequately Documented

National Register Explanatory Narrative:

The Bright Angel Trail Corridor is not currently listed in the National Register of Historic Places. However, the Trans-Canyon Telephone Line, a contributing feature of the Bright Angel Trail Corridor Cultural Landscape, was listed in the National Register of Historic Places on May 13, 1986. Although there are many cultural resources listed in Grand Canyon National Park on both the North and South Rims, the telephone line represents the only listed property within the Canyon.

There have been multiple efforts on the part of the National Park Service to list the Bright Angel Trail. In 1975, a National Register nomination was prepared for the Cross Canyon Corridor Historic District, of which the Bright Angel Trail was identified as a contributing property. In 1992, a draft Multiple Property Documentation Form was prepared for "Historic Trails and Roads of the Grand Canyon," as well as individual draft nominations of the Bright Angel Trail and the Colorado River Trail. Documentation was submitted to the Keeper and the SHPO. The Keeper and the SHPO determined that the district was eligible for listing in the NRHP; however, it was not formally listed.

Concurrence Narrative:

This CLI has not had concurrence with SHPO on eligibility but the property is being managed as a cultural resource. NPS believes the property is eligible and is managing it accordingly. IMR CL program to undertake a strategy to move this CLI through the concurrence process in FY2020.

National Register Eligibility

National Register Concurrence:	Ineligible -- Managed As Cultural Resource
Contributing/Individual:	Individual
National Register Classification:	District
Significance Level:	State
Significance Criteria:	A - Associated with events significant to broad patterns of our history
Significance Criteria:	B - Associated with lives of persons significant in our past
Significance Criteria:	C - Embodies distinctive construction, work of master, or high artistic values

Period of Significance:

Time Period:	CE 1890 - 1942
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Recreation
Facet:	Tourism
Other Facet:	None
Time Period:	CE 1890 - 1942
Historic Context Theme:	Developing the American Economy
Subtheme:	Extraction or Mining Industries
Facet:	Iron And Ferro Alloys
Other Facet:	None
Time Period:	CE 1890 - 1942
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Architecture
Facet:	Rustic Architecture
Other Facet:	None
Time Period:	CE 1890 - 1942
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Landscape Architecture
Facet:	Impacts Of Railroads On The American Landscape
Other Facet:	None

Time Period: CE 1890 - 1942

Historic Context Theme: Expressing Cultural Values

Subtheme: Landscape Architecture

Facet: The 1930's: Era Of Public Works

Other Facet: None

Time Period: CE 1890 - 1942

Historic Context Theme: Peopling Places

Subtheme: Post-Archaic and Prehistoric Developments

Facet: Southwestern Farmers

Other Facet: None

Time Period: CE 1890 - 1942

Historic Context Theme: Peopling Places

Subtheme: Westward Expansion of the Colonies and the United States, 1763-1898

Facet: The Mining Frontier

Other Facet: None

Time Period: CE 1890 - 1942

Historic Context Theme: Shaping the Political Landscape

Subtheme: Political and Military Affairs 1865-1939

Facet: The Great Depression And The New Deal, 1929-1941

Other Facet: None

Time Period:	CE 1890 - 1942
Historic Context Theme:	Transforming the Environment
Subtheme:	Conservation of Natural Resources
Facet:	Origin And Development Of The National Park Service
Other Facet:	None

Area of Significance:

Area of Significance Category:	Entertainment - Recreation
Area of Significance Sub Category:	None
Area of Significance Category:	Politics - Government
Area of Significance Sub Category:	None
Area of Significance Category:	Architecture
Area of Significance Sub Category:	None
Area of Significance Category:	Engineering
Area of Significance Sub Category:	None
Area of Significance Category:	Transportation
Area of Significance Sub Category:	None

Statement of Significance:

The Bright Angel Trail is eligible for listing in the National Register of Historic Places under Criterion A, not only as a historically popular route into the canyon, but also for its role in the political debate regarding public versus private control at the Grand Canyon and over public lands in general. Debates over the ownership of the Bright Angel Trail began shortly after the arrival of the Grand Canyon Railway on the South Rim of the Canyon, marking the first location in this conflict for control. Although other areas of the Grand Canyon came under question in this same debate, ownership of the Bright Angel Trail remained in contention well through the 1920s, long after other arguments regarding control of the Canyon were settled. Thus, the trail represents the unique struggle between the federal government, individual enterprise, and big business, as each agency fought for control over this most heavily traversed central section of the Canyon. Additional detail about the debate between public versus private control within the Grand Canyon is included under the discussion of Criterion B.

The Bright Angel Trail was originally constructed for mining purposes between 1890 and 1891. The trail shares this mining history with other trails in the Canyon, such as the Grandview and Hance Trails, which were all constructed for the purposes of conveying burros to transport mining equipment and ore in and out of the Canyon. As prospecting and mining enterprises decreased with the arrival of the railroad in 1901, large numbers of tourists were introduced to the South Rim, and the Bright Angel Trail became a popular route for these visitors to experience the Canyon. Until the construction of the South Kaibab Trail in the 1920s, competition with the Bright Angel Trail was non-existent and nearly all traffic within the central corridor into the Canyon went through the Bright Angel Trail Corridor. Thus, the trail also conveys the growth of tourism at the Grand Canyon in the early 20th century (Anderson 2002, 12).

The Bright Angel Trail is also significant under Criterion A for the influence of the CCC on the trail landscape and the architecture of resting houses along the trail and within Indian Garden. CCC workers constructed all support structures along the trail, including trail shelters at the 1.5 mile mark, 3 mile mark, Indian Garden, and at the mouth of Pipe Creek in the 1930s. The entirely new trail these workers constructed, which included some rerouting and gradient adjustments, was completed in 1939. The adjustments to the original trail carried out by CCC workers were so extensive that Cameron's trailhead was demolished and a new trailhead constructed. The CCC had a particular influence over the reconstruction of Indian Garden which was in need of intensive clean up and improved rest houses. The CCC played an important role in the development of the National Park Service during this period, and their influence is evident in the existing trail today (Anderson 2002, 23).

The Bright Angel Trail is also significant under Criterion B for its association with Ralph Henry Cameron, who developed the original trail in the late 19th century. Cameron was born in Southport, Maine in 1863 and moved to the west in 1881. He arrived in Flagstaff, Arizona in 1883 with the Atlantic and Pacific Railroad and worked at a local sawmill, as a railroad clerk, as an agent for the Haywood Cattle Company, and as a manager of a general merchandise store which he later purchased. During his years in Flagstaff, he also ran 6,000 sheep on shares, on which he accumulated the capital to make his Grand Canyon investments. Cameron's reputation increased through the 1890s as he helped to form Coconino County in 1891. He was also appointed as the first sheriff in the county by the territorial governor (Anderson 2002, 13).

Once in the Southwest, Cameron demonstrated a great interest in the Grand Canyon's South Rim, particularly for its potential mining profitability. Cameron, Pete Berry and Cameron's brother Niles filed a copper claim in 1890, which became one of the very few inner-canyon mines that ever produced ore for a profit. In order to assist in this endeavor, the group purchased the existing Havasupai Trail that lead into the canyon, which they later renamed the Bright Angel Trail (Hirst 2006). Cameron and his team worked to construct the trail to convert it from a pedestrian walking trail to a road that could support burros carrying mining equipment. Cameron's interests did not end with the Bright Angel Trail, and by the first few years of the 20th century, he controlled approximately 13,000 acres within the canyon and along the South Rim through mining and water claims. This hold on the South Rim created the most formidable legal obstacle to federal control of the Grand Canyon (Anderson 2002, 13).

Cameron was popular with the people in the newly established Coconino County, and in 1904, he earned a position as Chairman of the County's Board of Supervisors. Cameron often used his political strength to aid in his battles to maintain control over the canyon's South Rim. In 1909, Cameron was elected as a territorial delegate to Congress, and in 1921, he was given a seat in the United States Senate, a position he held until 1927. This political weight enabled Cameron to maintain ownership of the Bright Angel Trail, Indian Garden, and other property within the Canyon, even as governmental agencies and private enterprises such as the U.S. Forest Service, the Santa Fe Railroad, and the Fred Harvey Company, formed alliances to gain control of the South Rim Corridor (Anderson 2002, 13).

Cameron's position created a debate regarding private versus public access to land rights and served as a catalyst to similar discussions in other areas of the Grand Canyon and other lands in general. Cameron's claims questioned the power of the NPS and his efforts temporarily eliminated park service appropriations from the national budget, an action that rallied congressional leaders to the side of the NPS and increased its administrative strength. He was also able to influence voters in Coconino County to defeat a proposal that would sell the Bright Angel Trail to the federal government. This action influenced the construction of the South Kaibab Trail, which gave visitors to the South Rim an alternative to the Bright Angel Trail on federal lands. Cameron maintained strong beliefs that the government should not interfere with the individual rights to

property, which carried him so far as to file claims on the proposed site of the Hoover Dam within the Black Canyon of the Colorado River (Anderson 2002, 13).

Cameron lost his reelection in 1926, and thus his influence over the Grand Canyon diminished. Cameron and his family then moved to the east, though he maintained his belief that private developmental rights superseded those of the government. The Bright Angel Trail came under the jurisdiction of the NPS in 1928 (Anderson 2002, 13).

The Bright Angel Trail Corridor is also recommended eligible for listing under Criterion C, within the area of Architecture, for its collection of buildings designed in the NPS Rustic architectural style. Indian Garden may also be significant under Criterion C within the area of Engineering, for the design and construction of the Santa Fe Railroad's water pumping system. A quote from *Polishing the Jewel, An Administrative History of Grand Canyon National Park* suggests that the water system may be eligible for the National Register as an example of innovative engineering:

"Completed in August 1932, the new system consisted of a pumping plant with two sets of two turbine pumps, together capable of delivering eighty-five gallons per minute from a 70,000-gallon concrete reservoir through 12,000 feet of six-inch pipe against a static head of 3,300 vertical feet. Some of its more 10 sophisticated features included remote operation from the village power plant, auxiliary pumps at lower springs that fed the upstream reservoir, a photoelectric cell that automatically diverted silty water before reaching the pumps, thermostats that warned plant operators to start idle pumps to keep pipes from freezing, water softeners, and chlorinators" (Anderson 2000, 27).

At present, it is not known how the design and complexity of this historic water system compares to other systems built during the same era. Additional engineering-related research and comparison should be undertaken to determine whether the pipeline embodies the distinctive characteristics of a type, period, or method of construction; in other words, whether the water pumping system was innovative or unusual for its time or if its method of construction was once widely practiced but is now represented in only a few locations. Research must also be undertaken to assess the integrity of the water system and whether it exists much as it did during the period of significance or if it has undergone so many changes that no historic portions remain.

PERIOD OF SIGNIFICANCE

The period of significance of A.D. 1890 to A.D. 1942 established for the Bright Angel Trail Corridor within the Grand Canyon National Monument frames the trail's most significant period as a historic vernacular landscape. The year 1890 marks the date when Ralph Cameron and others first began to develop the trail as a road for both mining entrepreneurs and visitors to the Grand Canyon. During this period, Cameron and others, such as the Kolb Brothers, made the trail the most popular tourist route into the Canyon. In 1928, the NPS took control of the trail, marking the beginning of a new, yet equally important era in the trail's history. Through the 1930s, CCC workers developed the trail, adding numerous shelter checkpoints and telephone lines, while performing maintenance work on the trail. In 1939, workers finished reconstructing the last segment of the trail, marking the completion of the nominated district. The CCC was disbanded in 1942, and all CCC contributions to the Bright Angel Trail and the Grand Canyon Region ceased in this year. Therefore, 1942 serves as an appropriate endpoint for the period of significance for the proposed corridor.

For purposes of this CLI, the single period of significance has been separated into two analytical phases. The period from 1890 to 1927, commonly referred to as the "Cameron Years," addresses the initial development of the trail corridor for industrial mining purposes, as well as the early years of the trail's evolution into the primary recreational corridor for tourists wishing to recreate in the Grand Canyon. The period spanning from 1928 to 1942, documents the transfer of the trail from private ownership to NPS management, as well as the distinctive CCC-era improvements to the trail that have contributed significantly to the appearance of the cultural landscape.

The following paragraphs explain how the proposed district corridor meets the listing requirements of the National Register under Criteria A, B, and C, specifically, and how the cultural landscape reflects the National Register historic themes of significance in American history.

HISTORICAL CONTEXTS

FOR BRIGHT ANGEL TRAIL CORRIDOR:

1890-1928: Politics, Government, and Conservation

The Bright Angel Trail was central to the debate over public versus private rights, and the fight for federal control of Grand Canyon roads and trails into the early 1940s (see nomination).

1892-1942: Entertainment/Recreation

As it does today, the Bright Angel Trail played a central role in the recreational experience of tourists to the Grand Canyon during the historic period. In 1981 the Department of the Interior recognized the trail's continued importance to Grand Canyon tourism by designating it (and the associated North Kaibab, South Kaibab, and Colorado River trails) as a National Recreation Trail (see nomination).

1891-1942: Transportation

The Bright Angel Trail Corridor is one route used by the Havasupai and their predecessors to access Inner Canyon resources from the South Rim. Those who constructed the first Euro-American trail during the late 19th century also did so for the purposes of transportation, using the trail to access mineral resources and scenic resources. From this time to the late 1920s, the trail served as a major regional transportation route, as residents of the Arizona Strip used the corridor as the most efficient route to Flagstaff and Kingman. Gradually its importance as a route of travel waned, especially since the introduction of air travel in the 1940s; yet the trail continues to be an important trans-canyon link (see nomination).

FOR INDIAN GARDEN FROM CLR:

1100 BP-1860s: Native American Use and Occupation of Indian Garden

The presence of Native American cultures in and near Indian Garden represents an intermittent yet continuous use and occupation of a singular area within the Grand Canyon. According to Teri Cleeland's thesis, archeological evidence from Indian Garden indicates the presence of prehistoric ancestral Puebloan and Cohonina cultures from 1100 BP (Cleeland 1986, 27-28). Chronometric data from recent archaeological investigations at 3-Mile Rest House and Hermit Road sites suggest occupation of the canyon may have occurred even earlier, dating to the late Archaic (1460-1410 B.C.) (Collette et. al. 2009). Prehistoric inhabitants of the canyon seasonally migrated to and from Indian Garden to take advantage of Garden Creek and other surrounding resources. Garden Creek provided these peoples with water for drinking, cooking, and irrigation.

Beginning about 700 BP, the Havasupai and other Pai people began to migrate into the Grand Canyon and inner canyon. These peoples, particularly the Havasupai, spent winters on the rim and planting and harvesting seasons in the inner canyon where water was available. Havasupai seasonal use of Indian Garden continued until the late 19th century. "Big Jim" was one of the Havasupai who was born in the vicinity of Indian Garden and whose family seasonally occupied the site until the 1910s. The Havasupai eventually abandoned Indian Garden, likely due to the growing presence of European Americans at the Grand Canyon in the late 19th century.

1903-1927: Tourism and Early Development in Indian Garden

Anglo-American usage of Indian Garden began largely with mining claims. Garden Creek ran through Indian Garden and provided a constant source of water for the operation of small mining facilities nearby. Tourism in Indian Garden began in earnest when a few miners and their compatriots discovered that providing mule rides into the inner canyon and refreshments brought a larger income than their earlier entrepreneurial efforts.

Expecting great returns on their investments in mining claims, and encouraged by the increasing network of

railroad lines, people moved to the Grand Canyon region to exploit its potential resources. When these ventures did not produce great financial returns, and shipping ore became too expensive due to transportation limitations, some miners turned to tourism operations to recoup their losses (Hughes 1978, 47).

With the growing mobility provided by railroad lines and eventually the automobile, American interest in tourism grew rapidly—encouraging the new mule ride and refreshment concessions and increasing trail toll collections at the Grand Canyon. Railroads and improved automobile roads were able to bring tourists to the South Rim and Grand Canyon Village in high numbers. The Bright Angel Trail provided a recreational opportunity for these tourists, who stopped at Indian Garden on their journey along the trail. Indian Garden was one of the few tourist facilities below the rim that provided an oasis of relative comfort in a region known for its heat and aridity. The amenities, particularly drinking water and shade, provided at Indian Garden made the trip down the Bright Angel Trail more accessible for mule riders and hikers, thus increasing the number of people who were willing and able to travel into the canyon. The luxuries, however minimal, created by Ralph Cameron's tourist camps and later continued by the NPS, likely helped increase the number of Grand Canyon visitors while opening up the inner canyon to people interested in going beyond the typical South Rim experience.

1927-1942: National Park Service and Concessionaire Development of Indian Garden

In 1927, after years of legal battles with Ralph Cameron, the NPS finally gained control of Indian Garden and Bright Angel Trail. Over the next few years, the NPS—with the help of Santa Fe Railroad engineers—made efforts to clean up, develop, and manage Indian Garden, because much of Ralph Cameron's original Indian Garden was abandoned or in disrepair and Garden Creek was polluted from visitor overuse.

Similar to the Grand Canyon Village on the South Rim, development in Indian Garden was fueled by both the NPS and the Santa Fe Railroad. These two entities worked together to construct and improve facilities that shaped Indian Garden. Development followed no apparent plan, except for initially being located near the boundaries of Cameron's former camp site, along the course of the Bright Angel Trail, and partially out of the path of flooding. While Indian Garden's development was minimal in comparison to that of the Village and Bright Angel Peninsula on the North Rim, the effort to construct facilities below the rim—in manpower, mule-power, and engineering ingenuity—was considerable.

The Santa Fe Railroad began constructing its water pumping system in 1931, which included the South Pump House, the Reservoir, the Rehandling Pump House, and the Pump Caretaker's Residence. Perhaps the most important feature of this system was the pipeline which pumped water from Indian Garden to the South Rim, providing thousands of people with a reliable water source and eliminating the need to haul water to the rim by train.

The NPS built and planned facilities to provide comfort and safety to park visitors and staff. These facilities included the Trail Shelter, Caretaker's Residence, a mule barn and corral, comfort stations, and a picnic area. Consequently, trails and paths were built to access each feature.

NPS development also included extensive utility systems, such as underground power lines, sewer lines and sludge trenches, telephone lines, and water hydrants. Because of frequent flooding, NPS engineers also devised various methods of erosion control that were implemented throughout Indian Garden. Slope-stabilizing vegetation was also introduced into Indian Garden to help control erosion along the Garden Creek banks, while the Garden Creek channel was rip-rapped and mortared to prevent wash-outs.

By 1942, Indian Garden was one of the few developed areas along the Bright Angel Trail, providing shady spots to gather, a place to corral mules, a water pumping system, and year-round housing for NPS park and regional staff, as well as the infrastructure to support these features.

1927-1942: National Park Service Architecture in Indian Garden

In their post-Cameron rehabilitation of Indian Garden, the NPS implemented typical rustic-style architectural principles seen more prominently in the Grand Canyon Village on the South Rim and Bright Angel Point of the North Rim. The primary intent of the Rustic Style was to subordinate or harmonize a structure to its environment (U.S. Department of the Interior, National Park Service, Grand Canyon National Park Architectural Character Guidelines 1994, 14). This unique architectural style was an effort to fit human-made objects into a

natural landscape with minimal intrusion or disruption in the visual experience. To this end, much of the architecture designed and constructed by the NPS in Indian Garden featured wood construction, steeply-pitched overhanging roofs, and foundations, walls, and piers built of locally-available stone. Examples of Rustic Style architecture in Indian Garden include the Caretaker's Residence/SAR Cache, the South Pump House, and the Trailside Shelter.

1933-1942: Role of Federal Relief Programs in the Development of Indian Garden

Beginning in 1933, CCC crews were assigned to work in the Grand Canyon National Park. The CCC was part of the U.S. government's effort to relieve some effects of the Great Depression by creating federally-funded jobs for men. The result was crews of laborers who were often sent to state and national parks to undertake construction and development projects.

Indian Garden was one of the recipients of CCC attention during this era. CCC crews built the trans-canyon telephone line, improved the Indian Garden campgrounds, constructed the Trailside Shelter in Indian Garden, built the original mule barn, constructed an interpretive exhibit about trilobites, and performed erosion control work, as well as maintained the entire Bright Angel Trail (Mott 1983). Other work likely consisted of constructing or improving parts of the water pipeline system, irrigation systems throughout Indian Garden, wastewater treatment facilities, and trails. Without the efforts of CCC laborers, Indian Garden would not have developed in the manner and to the extent that it did.

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Historic Designed Landscape

Current and Historic Use/Function:

Primary Historic Function:	Pedestrian-Related
Primary Current Use:	Pedestrian-Related
Other Use/Function	Other Type of Use or Function
Hiking Trail	Current, Historic
Horse/Bridle Trail	Current, Historic
Interpretive Trail	Current,
Outdoor Recreation-Other	Current, Historic
Pedestrian Circulation	Current, Historic
Scenic Landscape-Other	Current, Historic
View	Current, Historic

Current and Historic Names:

Name	Type Of Name
Bright Angel Trail	Both Current And Historic
Bright Angel Toll Road	Historic
Cameron's Trail	Historic
Indian Garden(s)	Both Current And Historic

Chronology:

Year	Event	Annotation
	Built	Ancestral Puebloans also constructed small stone walls that served as check dams to capture alluvial soils and moisture. The rock walls also may have served as passive solar devices by storing heat and preventing frost damage to spring seedlings. Several habitation sites near Indian Garden have small rock walls that may have served as check dams (Hughes 1967, 8; Babbitt 1978, 178-179).
	Farmed/Harvested	Formative Period sites testify that the Indian Garden area was inhabited, at least on a seasonal basis. Twenty-eight Formative Period sites, including habitation structures, granaries, check dams, artifact scatters, and rock shelters, were documented during a recent archaeological survey of the Indian Gardens area. Surface structures identified at the sites were located on terraces and promontories overlooking Garden Creek. The expedient construction of these structures and their proximity to arable land and dependable water sources indicate that the sites represent farming stations that were occupied seasonally by people living on the canyon rim or near the river. While the structures were likely constructed by Ancestral Puebloan peoples, they could have been built by the Cohonina or subsequent inhabitants of the canyon (Collette et al. 2010; Coulam, "Archeological Survey," 16).

Year	Event	Annotation
BCE 9600 - 8500	Inhabited	During the Archaic Period, humans began to intensively utilize all areas of the Grand Canyon, including the inner canyon. The disappearance of megafauna led to the hunting of smaller game such as bighorn sheep, elk, deer, rabbit, and turkey, as well as the increased exploitation of wild flora for food, medicine, and functional and ceremonial uses. Archaic peoples often used caves and rock shelters throughout the Grand Canyon for campsites and ritual/religious use, as evidenced by the recovery of split twig animal figures and the development of petroglyph and pictograph galleries. Archaeological evidence suggests that Archaic hunters and gatherers utilized areas of the Grand Canyon with high resource variation, such as the South Rim, more than areas with only minor environmental variation. Additionally, the location of sites adjacent to specific ecological resources and evidence for their reuse suggests that toward the Late Archaic Period, a semi-sedentary lifestyle was adopted (Collett
	Inhabited	Puebloan peoples practiced widespread agriculture and engaged in hunting and the gathering of wild plant foods. Archaeological evidence suggests that between AD 400 and AD 950, Ancestral Puebloans utilized the Grand Canyon area for farming as well as seasonal foraging. After AD 950 during the Pueblo II Period, however, Puebloan peoples practiced widespread agriculture and cultivated maize, squash, cotton and beans. The Cohonina also practiced agriculture but to lesser extent than the Ancestral Puebloans (Babbitt 1978, 178-179; Fairley 2003; Wright 2009).
	Land Transfer	The NPS gained full control of Indian Garden (Hughes 1967, 140; Indian Garden Cultural Landscape Report 2005, 60).
	Inhabited	Toward the end of the Pleistocene Period, Paleo-Indians inhabited portions of the Southwest, relying heavily on megafauna including mammoth, mastodon, long-horned bison, giant sloth, camel, and horse. They also exploited wild plants for food, fuel, and tools, although little archaeological evidence has been recovered to indicate their subsistence. Within the Grand Canyon environs, Paleo-Indians likely traveled from the canyon rim to the inner canyon, following routes tied to local topography. Evidence for Paleo-Indian occupation within the canyon is limited to a pre-form Folsom Point found in Marble Canyon and a fragment of a base of a Clovis projectile point discovered 30 miles east of the Bright Angel Trail (Ahlstrom et al. 1992; Babbitt 1978, 175; Cordell 1997, 67-99; Fairley 1989, 88; Fairley 2003, 75; Mabry et al. 1998; Nelson 1990; NPS site files).

Year	Event	Annotation
CE 1000 - 400	Inhabited	The Preformative Period (also known as early Basketmaker) is characterized as the transition from a hunting and gathering lifestyle during the Archaic Period to a lifestyle founded on farming. Little direct evidence for this period has been recovered from the Grand Canyon.
CE 1200	Moved	1200s: Prehistoric Pueblo groups migrated away from the Grand Canyon, probably within the first two decades of the century; however, they continued to reoccupy and reuse the central and eastern areas of the Grand Canyon until the mid-1200s (Fairley et al. 1991, 193-195; Schwartz 1989).
CE 1300 - 1540	Built	Pai peoples constructed pits to roast piñon nuts and agave (mescal). The pits usually consisted of a shallow circular hole lined with stone, which was constructed close to the resources harvested. Two such roasting pits have been identified along the Bright Angel Trail, south of Indian Garden. Archaeological excavations indicate that both pits were used to roast agave. The Pai also made extensive use of rockshelters for agave roasting and other activities, and rock art including pictographs and petroglyphs is common within the shelters (Collette et al. 2009; Whitney 1982, 41).
CE 1300 - 1540	Developed	Mallery's Grotto, an archaeological site that occupies a rock shelter in the Kaibab limestone, contains pictographs representing successful hunting activities. Another set of pictographs is present south of Indian Garden near the two mile point of the Bright Angel Trail. Both of these pictograph panels have been attributed to the Havasupai; however, a recent re-examination of Mallery's Grotto suggests that several images may also date to the Archaic Period (Christensen and Dickey 2005, 2006; Cleeland 1978, 1).
CE 1300 - 1540	Established	Protohistoric inhabitants of the Grand Canyon region used formal routes and trails that linked the canyon rims with the Colorado River. For example, the Havasupai, and possibly earlier inhabitants, used the route availed by the Bright Angel Fault to access the Indian Garden area. The trails and routes led to natural resources and to irrigated gardens and fields in minor canyons. The trails also enabled different groups to interact regularly with one another. For example, the Hopi maintained active trade relationships with both the Paiute and Havasupai (Anderson 2002, 3; Wilson 1999).
CE 1300 - 1540	Farmed/Harvested	The Pai and Paiute depended on agricultural fields generally located in canyon bottoms adjacent to water resources. They adopted some of the cultivars and agricultural practices of their Puebloan and Cohonina predecessors through trade and interaction with the Hopi and Zuni to the east (Babbitt 1978, 183).

Year	Event	Annotation
CE 1300 - 1900	Inhabited	The Havasupai lived intermittently at Indian Garden into the 20th century. They established irrigated fields, collected agave and the seeds of the Blazing Star, and lived in brush wickiups (Hirst 2006; Hughes 1978, 14; Whitney 1982, 41).
CE 1350 - 1540	Inhabited	During the Protohistoric Period, the Havasupai, Hualapai, and Paiute occupied the Grand Canyon region. The Havasupai and Hualapai inhabited the south side of the Grand Canyon and the Coconino Plateau while the Paiute inhabited the north side of the Grand Canyon and the Kaibab Plateau. Each group utilized habitations that were formerly occupied by the Ancestral Puebloan and Cohonina groups, and the inner canyon where springs and agriculturally suitable lands were located. In addition, the Hopi used the Grand Canyon and surrounding area intermittently during the late Protohistoric Period and maintained trade relationships with the Havasupai, Hualapai, and Paite (Bratz 2003; Euler 1972; Fairley et al. 1991, 110-111; Martin 1985).
CE 1350 - 1540	Inhabited	The historic Havasupai, and to a lesser degree the Hualapai and Southern Paiute, practiced semi-sedentism, wintering at more permanent sites on or adjacent to the rim and spending planting and harvesting seasons within the Grand Canyon and tributary canyon bottomlands (Effland, Jones, and Euler 1981, 43-44; Hughes 1967, 11; Schwartz 1983; Schwartz 1989, 43-47).
CE 1540	Explored	Friar Alvar Nuñez is credited as the first Spaniard to discover the Grand Canyon. Coronado orders Garcia Lopez de Cardeñas to explore the canyon further. Under direction from Viceroy Antonio de Mendoza, Francisco Vasquez de Coronado and his expedition were charged to “explore the country North of Culiacán in an effort to find seven rich cities of Cibola” (Verkamp 1940, 1; Whiting 1909, 325).
CE 1550	Abandoned	1550s: The Spaniards abandon explorations of the Grand Canyon believing the Canyon would not yield significant resources through mining (Hughes 1967, 21).
CE 1600 - 1800	Inhabited	1600s to 1800: Historical and ethnographic accounts document ancestral Navajo use of the Grand Canyon and Coconino Plateau region by the end of the 17th century. By the early to mid-1700s, Navajo occupation of the Coconino Plateau was well established, and by 1800, Navajos had settled along the Colorado River. Along with the Hualapai, Havasupai, and Southern Paiute, the Navajo practiced seasonal migration and relied upon the resources of the inner canyon and rims. Unlike the Pai and Paiute, however, Navajo settlement patterns were primarily based on herding (Ahlstrom et al. 1992; Hughes 1967, 13; Sullivan 1986; Begay and Roberts 1996, 197).

Year	Event	Annotation
CE 1700	Cultivated	The Hualapai, Havasupai, and Southern Paiute continued to plant maize, beans, and squash. By the 18th century, peach, apricot, and fig trees, originally introduced by the Spanish and obtained through trade with the Hopi, grew within the inner canyon agricultural fields. The Southern Paiute were dependent to a greater degree on hunting and gathering (Hughes, 1967, 5-13).
CE 1776	Explored	Franciscan missionary, Father Francisco Tomás Garcés, visits the Havasupai and travels along the South Rim. He is the first to consistently refer to the river of the Grand Canyon as the Rio Colorado (Hughes, 1967, 22-25).
CE 1826	Explored	James Ohio Pattie, George Yount, and a number of other trappers journey along the rim of the canyon. Although it is uncertain whether the trappers visited the South or North Rim, they are believed to be the first non-hispanic Euro-Americans to journey to the Grand Canyon (Hughes 1967, 32).
CE 1848 - 1880	Inhabited	Like their predecessors, the Havasupai seasonally occupied and cultivated the Indian Garden area, attracted to its lush riparian environment and numerous springs that supported a wide variety of native flora and fauna. The Havasupai likely reoccupied earlier Puebloan Period habitation sites or constructed their own along the prominent ridge slopes above the Indian Garden project area, and wintered on the South Rim. The Havasupai living seasonally at Indian Garden planted traditional cultivars including maize, squash, and beans and possibly fruits such as peaches, apricots, figs, and melons (Hirst 2006; Whitney 1982, 41).
CE 1869	Explored	Major John Wesley Powell and his team of nine men are the first to systematically explore the Grand Canyon. Because of his expedition, the name "Grand Canyon" became the most common name to refer to the canyon (Whiting 1909, 324; Whitney 1982, 45).
CE 1880	Inhabited	It is likely that prospectors William Ashurst and John Marshall built a small shelter for themselves or occupied a pre-existing one within the Indian Garden vicinity during the winter of 1880. It is also likely that Ralph Cameron built a shelter in Indian Garden during the same winter (Anderson 1998, 57).
CE 1880	Ranched/Grazed	Prospector and miner William Ashurst is recorded to have herded his horses and other livestock down to Indian Garden for pasturage (Anderson 1998, 57).

Year	Event	Annotation
CE 1880 - 1882	Established	In 1880, President Hayes established the Havasupai Indian Reservation within a 5-mile-wide by 12-mile-long area of the canyon. In 1882, President Arthur reduced the reservation to 518.6 acres, which included only the village and the cultivated field areas. This action was likely motivated by the pressure to free up additional lands for mining prospects (Hughes 1967, 91).
CE 1880 - 1901	Mined	In the late 19th century, early regional prospectors searched for valuable minerals in the vicinity of Indian Garden. They mined claims within Indian Garden and the surrounding Tonto Plateau. As a result of extensive prospecting in the Indian Garden vicinity, numerous audits and tunnels were excavated in an attempt to find valuable minerals and demonstrate proof that mining claims were being worked (Anderson 2002, 3).
CE 1882 - 1883	Developed	Senator Benjamin Harrison of Indiana introduced a bill to establish Grand Canyon National Park; a second bill was introduced in 1883 (Beal 1972; Billingsley 1976).
CE 1890	Built	Daniel Hogan, Jeffrey Sykes, and Charles McLane constructed a “stacked stone cabin with canvas roof to serve as a winter home” for themselves within the Indian Garden vicinity during 1890 (Anderson 1998, 77).
CE 1890	Exploited	William Ashurst and John Marshall claimed the old Havasupai trail along Bright Angel Fault leading from the South Rim to Indian Garden for mining purposes. In December, Pete Berry, Niles Cameron, Robert A. Ferguson, Curtis H. McClure, and Millard G. Love made camp on the South Rim above the fault and began construction on the old trail to the springs and mining claims below (Anderson 1998, 57; Verkamp 1940, 16).
CE 1890 - 1891	Developed	The old Havasupai trail leading down to Indian Garden was documented by William Ashurst (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 20).
CE 1890 - 1891	Purchased/Sold	Pete Berry and Ralph Cameron purchased Ashurst’s trail claim and began construction of a crude trail extending from Mallery’s Grotto to Indian Garden. The primary purpose of the trail was to make an expedient path to mining claims. Construction of the trail took several months and cost \$500. In 1891, they recorded the trail with Yavapai County as the “Bright Angel Toll Road” (Anderson 1992, 32; Anderson 1998, 86).

Year	Event	Annotation
CE 1891	Established	Pete Berry and Niles Cameron measured the new trail with a steel tape to plan for its improvement. The improvement process included clearing, widening, stabilizing and rerouting the existing pedestrian trail to safely accommodate pack animals bearing mining supplies and equipment. Berry filed on a trail that continued to the mouth of Pipe Creek on the Colorado River. However, there is no indication that the trail work completed during that year went beyond Indian Garden (Anderson et al. 2002, 4).
CE 1891 - 1901	Inhabited	Pete Berry and Ralph Cameron work and operate the trail for tourists and travelers as a toll road. Berry, Cameron, and others testified that they worked on the trail every year from 1891 to 1901 (Anderson et al. 2002, 4).
CE 1892	Established	Sanford Rowe began to lead tourists down the trail. He would continue to lead tours of the canyon through the 1890s (Anderson 2002, 4).
CE 1892 - 1893	Established	John Woods began to lead tourists down the trail for Rowe. Woods testified that the trail was continuously maintained and suitable for travel during this time (Anderson 1992, 32).
CE 1896	Built	J. Wilbur Thurber began construction on the Bright Angel Lodge at the trailhead (Hughes 1967, 10).
CE 1897	Established	The Santa Fe and Grand Canyon Railroad Company was established to build a spur line to the Anita Mines south of the Grand Canyon.
CE 1898	Developed	During the spring of 1898, Lombard, Goode, and Company, in cooperation with William O. "Bucky" O'Neil, made improvements to "Cameron's Trail," as it was commonly known. Improvements included modifications to the trailhead and first several hundred feet of trail, minor reroutes to reduce gradients, and rubble clearing (Anderson et al. 1998, 86).
CE 1898	Developed	Lombard, Goode, and Company began to lay tracks for the Grand Canyon Railway from Williams toward the South Rim (Anderson 1992, 33).
CE 1898 - 1902	Expanded	In anticipation of increased tourism due to arrival of the Grand Canyon Railway, Berry and Cameron hired several laborers including Robert Ferguson, Dan Hogan, Curtis McClure, John R. Holford, D.W. Barter, Adam Molenpah, and Ralph and Niles Cameron to extend the trail north from Indian Garden to the Colorado River. Additionally, the trail was expanded to the mouth of Pipe Creek to gain access to mining claims and the upper portion of the trail known as the "Zig Zags" was reconstructed. Construction and maintenance efforts along the trail cost nearly \$6,000.00 in 1902 alone (Anderson 1992, 33; Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 21; Anderson 1998, 73).

Year	Event	Annotation
CE 1899 - 1900	Built	The Santa Fe and Grand Canyon Railroad Company's spur line to the Anita Mines was constructed.
CE 1901	Developed	The Anita Mines spur line was purchased by the Atchison, Topeka, and the Santa Fe Railroad, which renamed the company the Grand Canyon Railway. The new company made its first trip from Williams to the South Rim of the Grand Canyon on September 17th, 1901. Thereafter, the Railroad became the leading promoter and developer of the Grand Canyon (Hughes 1967, 90).
CE 1901 - 1903	Inhabited	Martin Buggeln purchased the Bright Angel Hotel and began to lead tourists down the Bright Angel Trail. Buggeln charged \$3.00 per day per horse and \$5.00 a day per guide. Trail guides, Thomas Smith and Frank Cornette, commented that the trail was in "fine condition" for the "many hundreds" of tourists that traveled the route in 1902 (Anderson 1992, 35).
CE 1901 - 1928	Cultivated	Extensive vegetable and fruit gardens were established and cultivated for the support of Indian Garden personnel and possibly for sale as well (Anderson 1998).
CE 1901 - 1928	Developed	Much of the development at Indian Garden was clustered within two small water power claims established by Ralph Cameron. Administrative buildings and gardens were located in the northern portion known as the Willow Mill site, and the tent cabins and other features were generally located in the southern portion, known as the Alder Mill site (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 21; Hughes 1978, 68).
CE 1901 - 1928	Developed	Over the course of the first three decades of the 20th century, Indian Garden became one of the more popular destinations for inner canyon travelers.
CE 1901 - 1928	Developed	The Bright Angel Trail emerged as the most popular inner canyon trail due to its location adjacent to the railroad and the fact that it was a relatively well-maintained system (Anderson 2002, 21).
CE 1901 - 1928	Mined	Prospecting and mining for valuable minerals in the Indian Garden vicinity was continued by Ralph Cameron and others (Hughes 1967, 76).
CE 1901 - 1928	Planted	Ralph Cameron planted an unknown number of cottonwood trees in at least three linear rows within the Garden Creek floodplain to provide shade for visitors to his Indian Garden Camp. (Indian Garden Cultural Landscape Report 2005, 63),
CE 1902	Established	Photographers Ellsworth and Emery Kolb establish a shop at the Bright Angel Trailhead for processing photographs of tourists on the trail (Hughes, 1967, 118-119).

Year	Event	Annotation
CE 1903	Established	Ralph Cameron began tourist enterprises along the Bright Angel Trail. Cameron charged \$1.00 per day per horse, \$4.00 per day per guide, and a \$1.00 toll per rider; pedestrian travel was free of charge until April, when all trail users were charged a \$1.00 fee. By the middle of 1903, Cameron constructed a hotel and camp at the trailhead, and a camp at Indian Garden with several buildings, tent cabins, and a telephone (Anderson 1992, 35).
CE 1904 - 1907	Inhabited	Nearly 2,000 tourists registered annually for accommodations at Cameron's hotel and tent camps. Cameron provided meals, rim rides, riding skirts, and other sundries for a nominal fee to trail users and paying guests. In 1907, Cameron received \$2,996.00 in trail tolls over a six-month period (Anderson 1992, 35).
CE 1906	Built	A two-story stone and frame building was constructed in 1906 adjacent to the Garden Creek drainage by Emory Kolb. The structure had a porch on its eastern side and served as the Kolb brothers' photo studio at Indian Garden (Anderson 1998, 90).
CE 1906 - 1913	Built	Sometime prior to 1913, Ralph Cameron built the two tunnels along the upper segment of the Bright Angel Trail through which today's trail passes. Art Metzger, an early Canyon resident recalled that the tunnels were built between 1906 and 1908, and they were definitely in place by 1913. Neither tunnel was originally part of the early trail alignment (Anderson et al. 2002, 5).
CE 1907	Built	Grand Canyon Transportation Company employee, David Rust, constructed a single strand cable system across the Colorado River at the mouth of Bright Angel Creek. The cable system was accessed using the Cable Trail, a precursor of the South Kaibab Trail. The system served as the terminus of the Bright Angel Trail until construction of the Colorado River Trail commenced in 1933 (USDI/NPS NHRP Property Documentation Form, Colorado River Trail, date unknown, GRCA Trail Archives files).
CE 1908	Established	President Roosevelt established the Grand Canyon National Monument on January 11th. (Hughes 1967, 102; Warner 1925, 481)
CE 1915	Inhabited	The trail was noted to be in poor condition and Cameron's camp at Indian Garden was referred to as an eyesore (Anderson 1992, 36).

Year	Event	Annotation
CE 1916	Built	A large amount of work was performed on the trail and at Indian Garden in 1916. Photographic evidence shows that some structures were in place prior to 1916. A part frame and part tent structure, which served as a kitchen and root cellar, was built by Ralph Cameron prior to 1916 at Indian Garden. Photographs document that this structure may have had two construction phases. A laundry tent, similar to the frame and canvas camp tents, and at least seven, possibly eight, frame and canvas tents were constructed for overnight guests. The frame tents were covered by a canvas shell that included a roof and sides. Each tent had a door and at least two windows. Documentary evidence indicates that there was also a tool shed constructed (though it is unknown what the structure looked like), and two frame and canvas tents for the trail maintenance supervisor, all of which were located below Indian Garden proper on an eastern slope above the Kolb Brothers studio. The platform supporting the tents
CE 1916	Developed	A 1916 map produced by the Fred Harvey Company of the Indian Garden vicinity indicates a number of buildings, structures and features had been constructed by this time. These included eight tents, a stone house, a kitchen, a stable area, a laundry, a former garden, a former alfalfa patch in the upper garden area, two trail maintainer's tents, the Kolb "cottage" or photo studio, and two unidentified structures/tents in the "lower garden area." The area was divided into several distinct spaces based on land use. On the map three areas are labeled "Vegetable Garden", "Alfalfa Field", and "Corral," all surrounded by fence enclosures. The corral, which occupied an area south of the Alder Mill claim, also included two unidentified structures, most likely mule shelters (Fred Harvey Company, "Plat 'A' Showing Present Plan of Indian Gardens," 1916. Grand Canyon National Park, Museum Collection).
CE 1919	Established	The Grand Canyon National Park (GRCA) was established. Habitation structures, called wickiups, were still present at Indian Garden when GRCA was established (Hughes 1967, 129-133).
CE 1921	Built	The NPS constructed a swinging suspension bridge at the site of Rust's cable system to address safety concerns for those using the Cable Trail (USDI/NPS NRHP Property Documentation Form, Colorado River Trail, date unknown, GRCA Trail Archives files).
CE 1924	Removed	Beginning in 1924, the NPS began a program of removal of Havasupai cultural remains from Indian Garden. The NPS posted signs calling attention to the contaminated water at Indian Garden. Engineers for the Santa Fe Railroad also constructed a stone weir and gauge in Garden Creek below the Kolb Brothers photo studio (Anderson 2002, 7).

Year	Event	Annotation
CE 1925	Reconstructed	In 1925, the NPS rerouted part of the Bright Angel Trail out of Garden Creek at Indian Garden. They also installed chemical toilets at Indian Garden to replace the old Cameron-era pit toilets and erected new watering troughs for mule trains. It is not known where the toilets were located or what materials were used in their construction (Anderson 2002, 8).
CE 1925	Retained	Coconino County proposed to sell the Bright Angel Trail to the NPS. Ralph Cameron opposed the sale and voters rejected the proposition. The Kaibab Trail was built as a response to Bright Angel Trail remaining private property (Hughes 1978, 88).
CE 1926	Land Transfer	Cameron's mining claims on the rim and along the trail are invalidated by the federal government because they were not being properly excavated and actively mined (Hughes 1978, 88).
CE 1927	Developed	In 1927, the Santa Fe Railroad accomplished "minor development" of the springs at Indian Garden to monitor their water flow (Hughes 1967, 140).
CE 1928	Land Transfer	Coconino County sells the Bright Angel Trail to the NPS for \$100,000. The Bright Angel Trail, previously controlled by Ralph Cameron, was deeded to the federal government on May 22, 1928. At this time, the \$1.00 toll was rescinded, marking the closure of the last toll road or trail within the NPS (Anderson 1992, 37; Hughes 1967, 137-140).
CE 1929 - 1930	Built	Park Superintendent, M.R. Tillotson, and Park Engineer, C.M. Carrel, allocated \$20,000 for reconstruction of the Bright Angel Trail in 1929. Between 1929 and 1930, NPS crews created a new 2.09-mile-long segment of trail from Indian Garden to Pipe Creek. The new alignment followed the east and south banks of Garden Creek through the Tapeats Narrows and across Salt Creek before descending a new Devils Corkscrew constructed approximately 50 ft from the terminus of the old corkscrew. The old alignment of the trail, which proceeded east along the Tonto Plateau from the northern end of Indian Garden, is still visible west of Pipe Creek (Anderson 1992, 37-38; Anderson 2002, 5).
CE 1930 - 1931	Reconstructed	Between October 1930 and May 1931, the NPS completed most of the reconstruction of the trail segment between Indian Garden and the South Rim at Kolb Studio. The completed trail segment contained an average grade of less than 13 percent, with a maximum of 17 percent. It was built to the standard width of four feet and required extensive reconstruction of Jacob's Ladder and the tunnel (Anderson 1992, 38; Anderson et al. 2002, 6).
CE 1930 - 1935	Demolished	During the early 1930s, the Cameron era structures at Indian Garden including the stone house, tent frames, and Kolb Brothers photo studio were razed (Anderson 1998, 74).

Year	Event	Annotation
CE 1930 - 1939	Demolished	During the 1930s, the CCC removed the old trailhead on the South Rim (Anderson 2002, 3).
CE 1931	Built	A cable tramway was constructed in 1931 from the South Rim to Indian Garden to transport labor and materials for the construction of a new water system. The cable tramway was located adjacent to Indian Garden on the eastern slope (Anderson 1998, 74).
CE 1931	Reconstructed	NPS relocated and reconstructed the upper section of the trail, built caretaker's cabins in Indian Garden and constructed four trailside cabins (Anderson 2002, 5).
CE 1931 - 1932	Built	Two and one-half miles of six-inch water pipe were laid from Indian Garden to the South Rim between 1931 and 1932 (Anderson 1998, 74).
CE 1932	Built	350 feet of electrical line was laid from the new NPS Caretaker's Residence to the new Santa Fe Railroad pump station along the trail (Anderson et al. 2002, 7).
CE 1932	Built	A 1932 NPS map shows the presence of three earthen terraces near the NPS' Caretaker's Residence. The earth was retained by an eighteen-inch high stone wall on its northern or downslope side. It is not known whether these terraces were Cameron-era features or whether they were constructed by the NPS (Anderson et al. 2002, 6).
CE 1932	Built	In 1932, the NPS built a two-room stone and frame cabin for their caretaker at Indian Garden. Two latrines located north of and downstream from the NPS Caretaker's Residence were also constructed for the use of visitors to Indian Garden. The latrines were connected to a latrine pump and sludge trench (Indian Garden Cultural Landscape Report 2005, 92).
CE 1932	Reconstructed	Shortly after the completion of the new water system at Indian Garden in 1932, the cable tramway was removed (Anderson 2002, 6).
CE 1932	Removed	In 1932, the Santa Fe Railroad constructed a Rehandling Pump House within the Garden Creek drainage adjacent to the Kolb Brothers photo studio. The pump house and 70,000 gallon reservoir, constructed out of native stone, served to collect water and pump it to the upper pump house (Anderson 2002, 6).
CE 1932 - 1937	Developed	Portions of the Bright Angel Trail were oiled by both machine and hand in an attempt to reduce dust levels. It is not known if the portion of the Bright Angel Trail that ran through Indian Garden was oiled. During this time the NPS did not undertake major trail improvements (Anderson et al. 2002, 6).
CE 1933	Expanded	November 1. The CCC began construction on the Colorado River Trail which connected the terminus of the Bright Angel Trail to the South Kaibab Trail two miles upriver (Anderson 1998, 74; Purvis 1989, 99).

Year	Event	Annotation
CE 1933	Removed	CCC crews obliterated the zig-zag path that descended southwest from Kolb's studio on the South Rim to the second tunnel. The original alignment is still visible from the Trail Overlook along West Rim Drive (Anderson 1992, 39).
CE 1933	Restored	The CCC began cleanup of Indian Garden which had fallen into disrepair. The water supply was also made potable for tourists (Warner 1925, 481).
CE 1935	Built	The CCC erected a single circuit trans-canyon phone line along Cameron's original trail. Indian Garden served as a "side camp" for laborers who were installing the phone line (Anderson 1998, 7; Tillotson and Sevey 1935, 2).
CE 1935	Built	Under the direction of Louis Purvis, the CCC constructed a half-mile section of the Colorado River Trail through granite cliffs to the sand dune area between January and June. That same year, CCC workers Guy Semple, A.T. Sevey, Eugene Mott, and Donald Campbell completed a 0.4-mile-long section of the Colorado River Trail through the sand dunes (USDI/NPS NRHP Property Documentation Form, date unknown, GRCA Trail Archive files; Purvis 1989, 109-111).
CE 1935	Established	A 1935 NPS map indicates that a latrine pump was present at Indian Garden in between the two latrines. The latrine pumped the sewage upslope to a sludge trench. The map also identifies that a water pipe was laid connecting the two latrines to the latrine pump, and connecting the latrine pump to the sludge trench. A sludge trench was excavated at Indian Garden on a slope west of Garden Creek and above the two latrines and latrine pump. A barrel spring was present at Indian Garden just south of the mule barn and corral according to this map, and a water trough was present at Indian Garden, just north of the barrel spring (Anderson et al. 2002, 8).
CE 1935	Excavated	Two open irrigation ditches for watering new plantings were excavated within the Garden Creek floodplain at Indian Garden (Anderson et al. 2002, 7).
CE 1935	Planted	After creating a stabilized channel in 1935, CCC landscape architects planted what they believed to be native vegetation including "willows, grapes, blackberry, raspberry, burro brush and redbud" along the banks of Garden Creek. Willow, burro bush, Arizona grapes, and redbud are considered native to the Grand Canyon region. Blackberry and raspberry bushes are not native to the American Southwest. New cottonwood trees were also planted to supplement and eventually replace the old trees at Indian Garden (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 25-26).

Year	Event	Annotation
CE 1935	Stabilized	In an effort to control damage stemming from periodic flooding of Garden Creek, the NPS constructed rip-rap walls along the creek channel and reinforced existing tent platforms with rock.
CE 1936	Built	Electrical line was laid from the new Santa Fe Railroad Pump Caretaker's Residence (Rock House) to the new Santa Fe Pump Station in 1936 (Anderson 2002, 6).
CE 1936	Built	The Santa Fe Railroad constructed a frame cabin for the pump caretaker in 1936. The cabin was located west of and adjacent to the NPS Caretaker's Residence (Anderson 2002, 7).
CE 1936	Developed	The CCC constructed shelters at the 1.5 mile mark (Mile-and-a-Half House) and the Pipe Creek-Colorado River junction (River Rest House) (Anderson 1998, 74).
CE 1936	Developed	The Colorado River Trail was completed on January 20. Shortly after its completion, Fred Harvey packer and mule driver, Shorty Yarberry, made the inaugural trip along the trail to Phantom Ranch (USDI/NPS NRHP Property Documentation Form, Colorado River Trail, date unknown, GRCA Trail Archives files; Purvis 1989, 101).
CE 1936	Planned	A 1936 NPS map denotes a "Garden Area" surrounded by stone walls at Indian Garden. It is not known if this was an area meant to produce edible crops, or if the term was meant to convey a vegetated seating or picnic area. Later plans created in the 1950s and 1960s show a campground and picnic area in this location. The map shows the garden area surrounded by a stone wall and accessed by a set of steps (Indian Garden Cultural Landscape Report 2005, 87).
CE 1936 - 1937	Restored	A major flood damaged Indian Garden. Restoration efforts included the construction of rip-rap along the main erosion channel of Garden Creek and new plantings of native vegetation (Anderson et. al 2002, 6; Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 27).
CE 1937	Built	A stone, frame, and bark trail shelter with benches and a water fountain was constructed adjacent to and west of the Bright Angel Trail at Indian Garden (GRCA 29888 Accession 1195, E.C.W. Trailside Shelters, 1936-1937).
CE 1937	Built	A stone, frame, and thatch mule barn was constructed at Indian Garden south and upstream from the NPS Caretaker's Residence, and a stone and wood corral was built adjacent to the mule barn (Anderson 2002, 7).
CE 1937	Built	An unidentified "trail-side exhibit" was erected at an unknown location within Indian Garden (Hughes 1967, 170).

Year	Event	Annotation
CE 1937	Built	The Indian Garden Rest House was constructed by CCC workers (Anderson 1998, 74).
CE 1937	Moved	400 feet of the Bright Angel Trail at Indian Garden was relocated (Anderson 2002, 6).
CE 1938	Expanded	The Santa Fe Railroad initiated improvements to the facilities and equipment in its Rehandling Pump House and reservoir unit at Indian Garden (Anderson 1998, 74).
CE 1938	Inhabited	Park Engineer C.M. Carrel reported that traffic on the Bright Angel Trail averaged 18,000 people per year (USDI/NPS NRHP Property Documentation Form, date unknown, GRCA Trail Archive files).
CE 1938 - 1939	Expanded	The existing poles of the trans-canyon telephone line were modified by the addition of a new cross-arms and a second circuit (Anderson 2002, 6).
CE 1938 - 1939	Reconstructed	On February 1, 1938, crews began reconstructing the third and last segment of the Bright Angel Trail, from the base of the new Devil's Corkscrew to the junction of the recently completed Colorado River Trail at the mouth of Pipe Creek. Construction of the trail was completed in 1939 (Anderson et al. 2002, 6).
CE 1942	Abandoned	CCC employees working on a number of projects in the Grand Canyon, including reconstruction of the Bright Angel Trail, are disbanded when the relief program is terminated by the U.S. Congress on June 30th, 1942 (Hughes 1967, 144).
CE 1942	Destroyed	The Santa Fe Railroad Pump Caretaker's Residence was destroyed by fire (Anderson 2002, 6).
CE 1942	Expanded	The Santa Fe Railroad improved its facilities at the Rehandling Pump House and reservoir unit again, this time excavating a new well and tunnel approximately forty feet north of the existing facility (Anderson 2002, 6).
CE 1943	Built	The Santa Fe Railroad rebuilt the Pump Caretaker's Residence in the same location as the original building that was destroyed by fire. The residence was constructed entirely of native stone (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 27).
CE 1950 - 1969	Retained	1950s - 1960s: Plans created during this period show a campground and picnic area surrounded by a wall in the location of the old "garden" area within Indian Garden. This marks a change in land use (Indian Garden Cultural Landscape Report 2005, 87).

Year	Event	Annotation
CE 1952 - 1959	Established	A 1952 NPS map identifies that a leaching field was excavated west of and upslope from the sludge trench. The leaching field was connected to the sludge trench; it is not known when this feature was constructed. Also, a tent frame was present just north of the rebuilt Santa Fe Railroad Pump Caretaker's Residence (Rock House). The map further depicts two retaining walls located between the mule barn and corral and the NPS Caretaker's Residence at Indian Garden. the walls were built between 1952 and 1959 to channel a western drainage into Garden Creek. the map notes that cacti were planted adjacent to and east of the Bright Angel Trail between the NPS Caretaker's Residence and the trail shelter. A lawn area located east of and adjacent to the NPS Caretaker's Residence was present, and a blackberry thicket was located just north of the picnic area and mule hitching posts. Additionally, a tool shed was depicted just north of and adjacent to the rebuilt Santa Fe Railroad Pump Caretake
CE 1960	Altered	A two-room addition to the western side of NPS Caretaker's Residence was built. In the process, two original stone columns were removed and a stone porch built (Anderson 2002, 6).
CE 1960 - 1965	Maintained	The leach field located above the old sludge trench was renovated in the early 1960s (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 29).
CE 1960 - 1969	Altered	1960s: In an effort to control damage stemming from periodic flooding of Garden Creek, the NPS continued to practice erosion control by erecting a gabion wall in the late 1960s.
CE 1960 - 1969	Built	1960s: The Silver Bridge is constructed on the Colorado River Trail just below the mouth of Bright Angel Creek. Construction of the bridge facilitated travel by reducing the trek from the Bright Angel Trail to Phantom Ranch by a mile (USDI/NPS NRHP Property Documentation Form, date unknown, GRCA Trail Archive files).
CE 1960 - 1979	Developed	The Bright Angel Trail and spur to Plateau Point, one of the more popular inner canyon trails, continued to attract thousands of day and overnight hikers as the popularity of recreational hiking increased during the 1960s and 1970s (Anderson 2002, 6).
CE 1961	Established	In 1961, a new campground and picnic area was established in the Cameron-era cottonwood grove. The area was graded and a new twenty site campground was established, complete with picnic tables, fireplaces and drinking fountains (Indian Garden Cultural Landscape Report, June 2005, II.106; original source: "Indian Gardens Topo, Grand Canyon National Park," ca. 1963. Grand Canyon Museum Collection #60577; "SAR," 1961. Grand Canyon Museum Collection).

Year	Event	Annotation
CE 1963	Built	A 1963 NPS map indicates that a new, larger comfort station was built at Indian Garden. The comfort station was connected to a new pump station and replaced the two earlier latrines. A new sewage pump station was constructed at Indian Gardens. The new pump station was connected to the leaching field upslope, replacing an earlier pump station, and a footbridge was placed at Indian Garden. The footbridge spanned Garden Creek and led from the picnic area to the new comfort station (Indian Garden Cultural Landscape Report, June 2005, II.106; original source "Indian Gardens Topo, Grand Canyon National Park," ca. 1963. Grand Canyon Museum Collection #60577; "SAR," 1961. Grand Canyon Museum Collection).
CE 1963 - 1964	Maintained	After major flood damage, the Rehandling Pump House was repaired and installed with new machinery. A 100-foot-long, 4-foot-wide masonry rock wall was constructed along the bank of Garden Creek through the campground area in 1964 (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 29).
CE 1963 - 1965	Demolished	Between 1963 and 1965, the tool shed at Indian Garden was razed for the construction of a new bunkhouse. Construction of the bunkhouse was completed in 1965 (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 29).
CE 1964	Built	A masonry rock wall was constructed around the Rehandling Pump House unit (Anderson 2000, 259-260; Hughes 1978, 108).
CE 1965 - 1970	Built	The construction of a trans-canyon water system connecting Roaring Springs to the South Rim via Indian Gardens began. In 1966, completed portions of the pipeline were destroyed by flooding. Reconstruction of the line began shortly after the flood, and the water system was completed in 1970. Vestiges of the water system are visible along the trail today (Silver Bridge Interpretative Sign, Bright Angel Trail).
CE 1967	Built	In association with the construction of the trans-canyon water system, a second pump house was built in 1967, west of and adjacent to the earlier upper pump house and reservoir at Indian Garden (Indian Garden Cultural Landscape Report, June 2005, II.107; original source: "Narrative Statement – Project B-39 – Indian Gardens: Repair Storm Damage to Buildings and Utilities." Ca. January 1965. Grand Canyon Museum Collection, #4750).

Year	Event	Annotation
CE 1969 - 1970	Built	An earlier CCC-era mule barn was razed and a new barn and corral were constructed within Indian Gardens; both the barn and corral were built in the same location as the CCC-era structures. The new corral was enclosed by a wood post and wire fence. In association with the construction project, retaining walls along Garden Creek were replaced with gabion walls. The purpose of the walls was to control floodwaters from a western drainage leading into the creek (Indian Garden Cultural Landscape Report, June 2005, II.107; original source: "Narrative Statement – Project B-39 – Indian Gardens: Repair Storm Damage to Buildings and Utilities." Ca. January 1965. Grand Canyon Museum Collection, #4750).
CE 1981	Conserved	The Bright Angel Trail, along with the North Kaibab, South Kaibab and Colorado River trails, were designated as National Recreation Trails within the National Trails System.
CE 1981	Planted	Native grass seed was sown in trampled areas alongside the Bright Angel Trail and adjacent to facilities. Approximately one-third of an acre was reseeded (Anderson 2001, 70).
CE 1985	Built	Four new Clivus Multrum composting toilets were constructed at Indian Garden; one north of and adjacent to the existing comfort station; one on a slope east of the Indian Garden trail shelter, and two in the area out of the 100-year floodplain proposed for the new campground (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 30).
CE 1985	Built	The main erosion channel of Garden Creek was stabilized with rip-rap to control flooding at Indian Garden. In association with the water system improvements, water service was terminated to Indian Garden facilities (Indian Garden Cultural Landscape Report 2005, 107).
CE 1985	Expanded	The old 6-inch water supply pipe at Indian Garden, dating to 1932, was replaced with a new eight-inch steel pipe (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 30).
CE 1985 - 1986	Altered	As part of an acoustical treatment to isolate noise, the North Pump House at Indian Garden received a new stone veneer and the windows of the South Pump House were covered with board siding (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 30-31).
CE 1986	Conserved	The trans-canyon telephone line is listed in the National Register of Historic Places on May 13, 1986.

Year	Event	Annotation
CE 1986 - 1988	Built	A second bunkhouse was constructed west of and adjacent to the 1943 Santa Fe Railroad Pump Caretaker's Residence (Rock House) (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 31).
CE 1987	Removed	Six hazardous Fremont cottonwood trees (<i>Populus fremontii</i>) were removed from the Cameron-era cottonwood grove. The remains of the trees were left or burned on-site (Anderson 2001, 71).
CE 1988	Built	A new Storage/Laundry/First Aid building was constructed as part of the new administration complex. A new Ranger Residence was constructed as part of the new administration complex upstream and out of the 100-year floodplain. A new Pump Operator's Residence was constructed in 1988 as part of the new administration complex (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 31).
CE 1988	Built	New stairs and pathways connecting the facilities in the new ranger station complex were constructed in 1988. A new sand filter system and sludge-drying bed was constructed north of and adjacent to the new ranger complex in 1988. A new helicopter-landing pad was constructed in 1988 south of and adjacent to the new ranger complex (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 31).
CE 1988	Moved	In 1988, a bunkhouse was moved from its former location west of the Pump Caretaker's Residence (Rock House) to the new administration complex upstream. A native stone veneer was added to the structure. A new mule barn was constructed in 1988 west of the Pump Houses (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 31).
CE 1989	Built	Four new signs were installed in the old Indian Garden campground designating it for day use only. A new information and rest area east of and adjacent to the new mule barn was constructed. The rest area included an information kiosk, a drinking fountain, and nine benches (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1989	Demolished	Three 20th century buildings—the 1970 mule barn, the 1965 bunkhouse, and the 1961 comfort station—were razed at Indian Garden (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 31).

Year	Event	Annotation
CE 1989	Established	On the recommendations of a floodplain study and Development Concept Plan, the campground was moved due to persistent and damaging flooding. The new campground was established upstream and out of the 100-year floodplain. A total of 16 new camping sites complete with shade structures, picnic tables, and backpack racks were installed. An area central to the campground contained an information stand, a water fountain and benches. Each individual site was connected by short paths leading to a central north-south path through the area (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1989	Removed	All signage associated with the old campground and picnic area within the 100-year floodplain was removed. Four new signs identifying the space's new use as a Day Use Area were installed. All drinking fountains located in the old campground and picnic area within the 100-year floodplain were removed. The old pump station and septic tank located in the Old campground and picnic area within the 100-year floodplain were removed (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1989	Stabilized	In 1989, the Caretaker's Residence (the old NPS ranger station) was stabilized (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1989 - 1990	Planted	New grass seed mix was planted in the northeast corner of the new campground (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1989 - 1990	Planted	New plantings and irrigation systems were placed in and around the new ranger complex and adjacent sand filter system and sludge drying bed, as well as in the new campground and around the new mule barn and corral. Plantings included netleaf hackberry, cat claw acacia, datil yucca, bear grass, prickly pear cactus, Colorado four-o'clock, and velvet ash (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1993	Removed	After a flash flood in 1993, the footbridge was razed, while the concrete abutments on either side of Garden Creek were left in situ (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 32).
CE 1997	Conserved	The Bright Angel Trail is determined eligible for inclusion in the National Register of Historic Places (Reba Grandrud to Bruce Kilgore, August 1997, GRCA Trails Archive File).
CE 1997	Conserved	The NPS initiated plans to eradicate and control the spread of the Himalaya Blackberry at Indian Garden. Plants were cut at their base and then sprayed with a chemical herbicide (Bright Angel Trail Corridor Cultural Landscape Inventory 2006, 33).

Year	Event	Annotation
CE 1998	Established	The trail is mapped using a GPS receiver. Plans for this survey indicate the information will be used to identify agents and causes of deterioration along the trail (GRCA Current Status: Trails, 1998, GRCA Trail Archives Files).
CE 2001	Stabilized	A letter from Superintendent Joseph F. Alston to Historic Preservation Officer, James Garrison on April 9, 2001 reveals plans to stabilize and repair the Bright Angel Trail, Plans include an inventory of the trail, and an assessment of current conditions (Joseph F. Alston to James Garrison, April 2001, GRCA Trails Archive File). In addition, another report in November 2001 notes that "maintenance of existing structural features (retaining walls, check-dams)" is the primary focus of the project. "Specific areas of work on the Bright Angel Trail that have the most urgent need include the section between 3 mile and 1.5 mile. Work on this section include retaining wall repair, and log and rock check dam replacement" (Grand Canyon National Park Assessment of Actions having an Effect on Cultural Resources, November 7, 2001, GRCA Trails Archive File).
CE 2005	Preserved	A Cultural Landscape Report for Indian Garden is prepared by John Milner Associates.
CE 2006	Preserved	The CLR for Indian Garden is adapted to create an incomplete Cultural Landscape Inventory of the Bright Angel Trail Corridor. The draft CLI focuses only on Indian Garden and excludes the Bright Angel Trail corridor.
CE 2009 - 2010	Preserved	The Bright Angel Trail Corridor Cultural Landscape Inventory is revised by Logan Simpson Design, Inc. to include the Bright Angel Trail sections omitted from the 2006 draft.
CE 2010	Maintained	2010 - Present: The trail is still maintained by the NPS and made available to hundreds of guests every year.
CE 300 - 1200	Inhabited	Ancestral Puebloan and Cohonina peoples built granary structures from native stone, wood, and mortar that were utilized exclusively for the storage of surplus grain. Archaeological evidence indicates that these granary features were often attached to habitation structures or located on isolated canyon precipices. Vestiges of more than a dozen granary structures were identified at seven archaeological sites near Indian Garden. The structures are typically tucked under ledges of the canyon wall (Babbitt 1978, 178-179; Collette 2010).

Year	Event	Annotation
CE 400 - 1250	Inhabited	Formative Period (also known as Puebloan period) lifeways in the Southwest included the practice of agriculture, and archaeological sites contain extensive domestic complexes and technologically sophisticated agricultural features. During this period, two farming cultures—the Cohonina and the Kayenta and Virgin Ancestral Puebloan traditions—occupied or made use of the Grand Canyon Region. Like their predecessors, these groups utilized all areas of the Grand Canyon and exploited a wide variety of canyon resources. Formative period inhabitants hunted many species including bighorn sheep, deer, bear, bobcat, rabbits, and mountain lions, and mined mineral resources such as pigments and salt from the inner canyon (Anderson et al. 2002, 3; Fairley 2003; Slaughter 1992, 13; Schwartz 1989).
CE 400 - 1250	Inhabited	The Cohonina lifeway was characterized by seasonal movement among different locales. Archaeological evidence indicates that the Cohonina established residential complexes along the canyon rim and utilized foraging sites within the inner canyon and Colorado River basin. This differed from that of the Ancestral Puebloans, who also exploited seasonal resources but led a more sedentary existence (Ahlstrom 1986; Babbitt 1978, 177; Sullivan 1986, 324-326; Wilcox 2009).

Physical History:

9,500 B.C.–1859 Native American Occupation and Early Euro-American Exploration

Ancient and historic peoples including the Cohonina, Ancestral Puebloan, and Havasupai traversed the general route of the Bright Angel Trail for thousands of years before the first Euro-American visit to the Grand Canyon. The area around the current trail contains evidence of this use in the form of archaeological sites, petroglyphs and pictographs, and non-native vegetation. Mallery's Grotto, located beneath the rim and west of the former Kolb Brothers studio near the trailhead, contains pictographs dating to this early time period. Two miles down the trail, a second set of pictographs is clearly visible from the plateau at Indian Garden. Early Euro-American explorers of the area noted decayed ladders of douglas fir (*Pseudotsuga menziesii*) beneath the Redwall formation and at today's second tunnel. This evidence does not give a clear indication of the route used by a majority of prehistoric peoples; however, it does establish that the current trail corridor represents one of the more formal trail routes within the canyon. Additionally, Indian Garden contains 15 prehistoric sites that indicate seasonal habitation (Anderson 2002, 3; Wilson 1999).

In 1540, Spanish Friar Alvar Nuñez reported discovery of the canyon (Whiting 1909, 325). In the same year, under direction of Viceroy Antonio de Mendoza, Francisco Vasquez de Coronado was charged to "explore the country North of Culiacán in an effort to find the seven rich cities of Cibola" (Verkamp 1940, 1). However, the Spanish abandoned their exploration of the canyon in 1550, believing that the canyon would not yield any significant resources through mining. At these early stages, there is little record of any interaction that may have occurred between the native inhabitants of the canyon and European-American explorers (Hughes 1967, 21). Nevertheless, numerous explorers continued to visit the canyon searching for mineral wealth and the thrill of personal adventure. In 1776, Franciscan missionary, Father Francisco Tomás Garces traveled along the South Rim of the canyon and visited the Havasupai living in the canyon. He was the first European to consistently refer to the river in the canyon as the Río Colorado. It is evident that during this same period the Havasupai seasonally occupied the Indian Gardens. The Havasupai made use of the numerous streams to cultivate maize, squash, and beans, and possibly newly-introduced fruits such as peaches, apricots, figs and melons. While explorers came and went through the canyon, the Havasupai called Indian Garden home, at least during certain months of the year, and where others overlooked the rich agricultural lands available within the canyon, they found means to cultivate it (Whitney 1982, 41).

1860s–1928 — Early Claims and Cameron's Trail

By the mid-19th century, European-Americans had made significant advances to explore the canyon in its entirety. Major John Wesley Powell and his team made their famous journey through the canyon in 1869 and brought great attention to the Grand Canyon through their systematic exploration. By the 1880s, prospectors searched the area around Indian Garden and the Bright Angel Trail for valuable minerals (Anderson 1998, 57). Among these men were William Ashurst and John Marshall, who in 1890 documented and claimed the trail along the Bright Angel Fault that led from the South Rim to Indian Garden. Near the end of December 1890, Pete Berry, Niles Cameron, Robert A. Ferguson, Curtis H. McClure, and Millard G. Love, who had interests in the mining claims within the area of the canyon around Indian Garden, camped on the South Rim. The team of men began construction on what was then referred to as "the old Havasupai trail" (Bright Angel Trail). In order to improve the route, the job required clearing, widening, stabilizing and rerouting the trail to accommodate pack animals that would carry mining and camp supplies and equipment into the canyon. All of this was accomplished with the intention of making mining in the canyon more accessible (Anderson 1998, 73).

After realizing the trail's importance to the accessibility of mining claims in the canyon, Pete Berry and Ralph Cameron purchased Ashurst's trail claim and recorded it as the Bright Angel Trail with Yavapai County in 1890. Within the next year, Berry filed on a trail claim that continued the Bright Angel Trail route to the mouth of Pipe Creek on the Colorado River. Even with this claim in hand, Berry made no indication of carrying out construction work beyond Indian Gardens, demonstrating the team's focus on mining prospects rather than creating a transportation route. Also during 1890, numerous prospecting explorations took place along the trail and in Indian Garden, and numerous

excavations occurred in an attempt to locate minerals as well as prove that the mining claims were active (Anderson 2002, 4).

By 1891, Berry and Cameron recognized the trail's potential for tourism rather than simply providing transportation for mining operations. The pair re-recorded the route with Yavapai County as the "Bright Angel Toll Road" and began to operate the trail for tourists and travelers, charging a use fee of one dollar a person. While reports state the trail was in great disrepair during this early period of tourism at the canyon, Sanford Rowe, who Cameron allowed to lead tourists down the trail in 1892, indicated that the trail was passable during this period. Berry and Cameron also testified that trail improvements continued during this period to ensure safe passage for those that traveled down it either on foot or by mule (Anderson 1998, 86).

As knowledge of the canyon increased, so too did its popularity with visitors looking for a route into the canyon. Holding claims to the trail and the trailhead, Ralph Cameron began construction of a lodge at the trailhead in 1896. In 1898, Cameron and Berry made improvements to the trailhead and the first several hundred feet of the trail, which included a few route changes to decrease the gradients and the removal of rubble along the trail for easier passage. During this same year, Berry and Cameron took the initiative to expand the toll road further north from Indian Garden to the Colorado River. This maneuver, carried out by Curtis McClure, John R. Holford, D.W. Barter and Niles Cameron, was initially undertaken with the intention of gaining further access to mining claims, rather than expanding the tourist route. Cameron would continue to prospect for minerals in the vicinity of the trail during the entire length of his hold on the land; however, he eventually recognized that there was more economic value in opening the property to tourism than there was in mineral development of the canyon. Many of his mining claims reflected this change in his thinking, as additional routes were developed for those looking to experience the canyon views rather than for strict access to mineral deposits.

The "Cameron Trail," as it was commonly referred to in the late 19th and early 20th centuries, quickly became the most popular trail into the canyon. With the arrival of the railroad to the South Rim in 1901, the trail's popularity as a route into the canyon for tourists greatly increased, and most significant attempts at mining the canyon were abandoned for this new enterprise. The original franchise to operate the trail expired in this year, and Pete Berry was granted a five-year extension from the recently formed Coconino County. However, once Cameron discovered that the Santa Fe Railroad planned to extend their lines to the South Rim, he secured total rights to the trail. Cameron bought out Pete Berry's share and that of the other partners and immediately invested in extensive reconstruction of the trail. In 1903, he completed Cameron's Hotel and Camps at the Bright Angel trailhead and Cameron's Indian Garden Camp in Indian Garden.

The South Rim and the Bright Angel Trail quickly became the most popular way to experience the Grand Canyon. To cater to the growing number of visitors, photographers Ellsworth and Emery Kolb established a shop at the trailhead of the Bright Angel Trail. Anderson (1998) reports:

The Kolbs opened their studio in a floorless tent beside Cameron's hotel, used a shallow mine shaft as a darkroom, and developed prints with murky water obtained from cattle ponds as far away as Rain Tank. In 1904, they upgraded to a small frame studio on Cameron's mining claim at the Bright Angel trailhead which, with additions in 1915 and 1925, still stands as one of the oldest buildings within Grand Canyon National Park (Anderson 1998, 95).

The pair of brothers photographed tourists on their way down the trail, processed the prints, and had prints available for purchase in the shop upon the caravan's return. In 1906, the brothers moved their studio to a two-story stone and frame building which Emery constructed adjacent to the Garden Creek drainage corridor at Indian Garden, "but for years thereafter Emery still had to jog the nine-mile round trip from rimside studio to inner-canyon cabin...as many as three times each day for the luxury of clean water" (Anderson 1998, 95). The pair produced thousands of photographs during their years at the canyon, which have since become iconic images of the canyon. The Kolb brothers' photographs of mule caravans on traversing the steepest grade of the trail are particularly iconic (Anderson 1998, 95).

In order to secure their interests in the trail, Cameron and his brother Niles filed numerous mining and water claims at strategic locations along the trail. In addition, Cameron secured William Ashurst's claims to Indian Garden and placed numerous claims along the trailhead, including Copper King by 1901, and Cape Horn and Golden Eagle in April of 1902 (Anderson 1998, 90). By 1904, Cameron filed the Willow Claim at the base of the Devil's Corkscrew, and the Wizard Claim and Willow Mill site near the mouth of Pipe Creek. The federal government later rejected Cameron's claims since they could find no evidence that they were ever developed for mining. However, Cameron, well versed in mining law, made modest claim improvements, which helped tie the claim locations to the larger trail into the early 1920s. This practice of filing mining claims to acquire land for the tourist trade was not unique to Cameron, as many entrepreneurs used this method to ensure rights to lands. Cameron's claims, though ultimately temporary, would later make it difficult for others, including the NPS, to gain control of the property.

Legal battles over use of the Bright Angel Trail began in 1902 with a challenge by the Santa Fe Railroad over Cameron's claims to the railroad station site and his ownership of the trail. Martin Buggeln and the Santa Fe Railroad developed the Bright Angel Hotel and adjacent tents, known as the Bright Angel Camp, on the rim, infringing on Cameron's Cape Horn and Golden Eagle claims. The courts allowed the railway's twenty-acre station to remain on the rim, though they allowed Cameron to keep the remainder of the property. Thus, the rim became a battle ground for competing tourist enterprises. The conflict escalated in 1903 when Cameron initiated a toll of one dollar per animal to descend the trail. Buggeln had long charged three dollars a day per horse and five dollars a day per guide, sharing his earnings with the railroad and not paying anything for the use of the trail. Cameron discovered he had the legal right to charge a toll for use of the trail and wasted no time in erecting a toll gate. The railroad in return filed the Territory of Arizona vs. Ralph H. Cameron, the first of many lawsuits in the over 20-year debate over public vs. private use of lands at the canyon (Anderson 1998, 90).

In 1906 the lawsuit found that Pete Berry did not have the right to transfer the toll franchise to Cameron, though it was determined that Berry did have the right to collect tolls and that he had simply allowed his friend to work the trail. When the lawsuit found that both Cameron and Berry maintained the legal rights to the trail and to its toll, the partners came back at the railroad with a lawsuit for damages incurred from the seven-month injunction and tried to collect the \$5,000 bond Buggeln and the Santa Fe Railroad had posted (Anderson 1998, 90). At this point, the railroad tried to buy out Cameron; however, Cameron refused to talk to the railroad regarding a sale. A number of lawsuits ensued between the two parties, mostly regarding the payment of taxes and land claims. Cameron lost a bit of control over his claims in 1906, when the Berry franchise expired and Coconino County would not allow Cameron to renew it in his name. The trail was awarded to Lannes L. Farrall, the manager of the Cameron Hotel & Camps, and one of Cameron's closest friends. Cameron continued to maintain his mining claims along the trail (Anderson 2002, 17).

Recognizing the Cameron-Farrall partnership, the Santa Fe Railroad filed a number of lawsuits to gain control of the trail. They first requested permission from the Bureau of Forestry to operate and control the trail, attempting to remove the trail from the county's jurisdiction. When the Bureau refused to issue the permit, the railroad filed a suit against the county, claiming it had no right to operate a toll road. Cameron persuaded the Arizona legislature to pass the "Cameron Bill," confirming the county maintained the right to operate a toll road and returned the franchise to Cameron's name. Throughout the ordeal, Cameron received continued support by the people in the county, angered over the governmental interference and big business' attempts to dictate law (Anderson 1998, 91).

After 1910, the Santa Fe Railroad and Fred Harvey Company, who had been battling with Cameron over land claims on the rim and the location of their hotel, eased their efforts to chase Cameron out of the Grand Canyon. The federal government subsequently focused on Cameron's fraudulent mining claims. In order to demonstrate his intention to develop his claims for production level mining, Cameron drafted plans to construct a hydroelectric plant above Pipe Creek to power his mills with the intention of extracting and processing platinum. However, the government, Santa Fe Railroad, Fred Harvey Company, and the general public were concerned with the impact of large scale mining operations within the canyon. Though the plans never materialized, Cameron's proposal motivated

governmental officials to take action against Cameron. Between 1913 and 1920, numerous lawsuits ensued until the United States Supreme Court ruled most of Cameron's claims invalid and declared Cameron and his associates trespassers on the Grand Canyon National Monument, which had been established in 1919 (Anderson 2002, 19).

The period between 1906 and 1913 consisted of a number of construction projects along the trail and within Indian Garden. Early Canyon residents recall that sometime between 1906 and 1908 Cameron constructed two tunnels on the upper portion of the trail, which were completed by 1913. By 1916, Cameron built a number of structures at Indian Garden including a root cellar and kitchen, a laundry tent, at least seven frame and canvas tents, and a pit toilet. Evidence shows that there was also a tool shed constructed (though it is unknown what the structure looked like), and two frame and canvas tents for the trail maintenance supervisor which were located below Indian Garden proper, on an eastern slope above the Kolb Brothers studio. The platform supporting the tents was excavated out of a ridge just east of Garden Creek, and each tent had a door and two windows. The pit toilet was located west of the tent camp and cottonwood area for use by visitors. At least three unidentified structures also occupied Indian Garden prior to 1916, one of which likely served as a mule shelter due to its adjacent fence enclosure. Cameron also constructed a mule hitching post and a pond, which may have served as a watering hole for the mules or as a catchment basin to water the alfalfa field. Even with these upgrades, tourists complained about the trail condition in 1915. Cameron continued to collect about \$20,000 in tolls that year, suggesting that 20,000 stock riders traveled the trail, as pedestrians could now travel the trail free of charge. Even as the trail began to fall into disrepair in the 1920s, it continued to be the most popular route into the canyon for tourists (Anderson 2002, 19).

The NPS became Cameron's primary antagonist during the 1920s. Winning a seat in the Senate in 1921, Cameron used his position in politics to secure his claim to his property. However, over time, most of Cameron's long time supporters withdrew their support, leaving Cameron as the remaining original mining/tourism entrepreneur to continue fighting for private rights to land along the South Rim. Coconino County was also beginning to recognize the advantages of NPS control of the trail to provide effective management of the increasing number of visitors. Cameron, though willing to fight to keep his claim on the trail, lacked a comprehensive plan for dealing with the ever-growing number of visitors to the Grand Canyon's South Rim and the Bright Angel Trail. His overnight tents and Indian Garden fell into disrepair and it became increasingly difficult to manage the trail and housing at the trailhead. Sanitation problems intensified both at the trailhead and at Indian Garden, a sign of Cameron's lack of management. Cameron's attitudes toward the NPS and his insistence on maintaining control of the trail proved to be the only motivating factors keeping the trail out of NPS ownership (Anderson 2002, 20).

The beginning of Cameron's loss of control over the Bright Angel Trail came with the loss of his reelection in 1926. Without his political position to leverage his fight for control, Cameron left ownership of the Bright Angel Trail to the County and returned to the east coast. Coconino County began negotiations for the trail in 1927, which included a proposition that the federal government open an approach road from the National Old Trails Highway (U.S. Route 66) to the South Rim. The U.S. government agreed to the offer and the Bright Angel Trail was transferred to the federal government as part of the Grand Canyon National Park on May 22, 1928 (Anderson 2002, 20).



The Kolb Studio at Indian Garden, 1906. Source: Northern Arizona University.



View of the Bright Angel Trail and the South Rim, no date. Source: Ratz 41.



View of the Kolb Studio at the South Rim of the Grand Canyon with the start of the Bright Angel Toll Road, 1916. Source: Northern Arizona University.



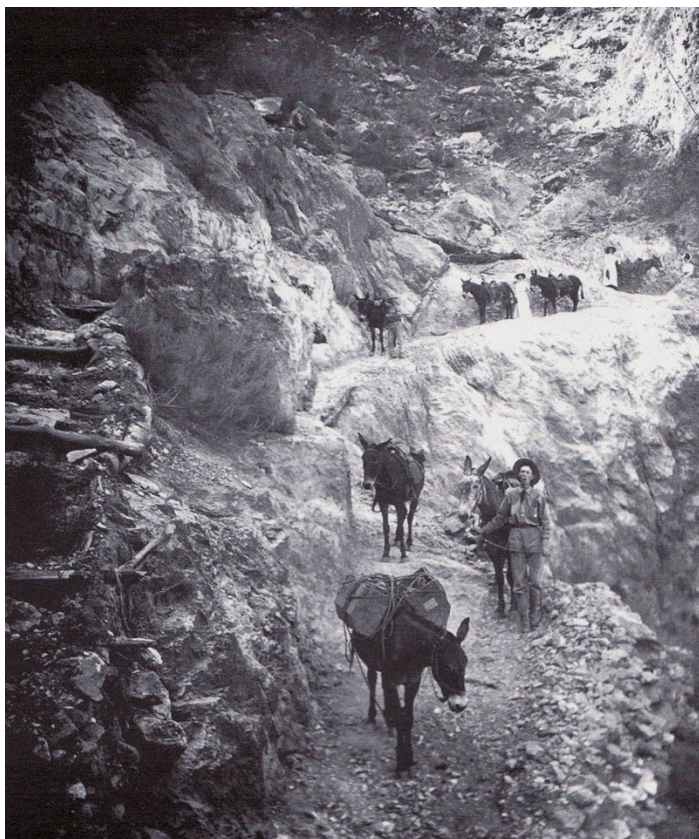
Indian Gardens with tourist camp and young deciduous trees, early 20th century. Source GRCA #12065.



John Hance (left) and a party of three at the Bright Angel Trail trailhead, early 20th century. Source: GRCA #823.



View of the Bright Angel Trail descending from the South Rim into the canyon, no date. The Kolb Studio is in the upper left. Source: L.C. McClure, Western History Collection, Denver Public Library.



Jacob's Ladder along the Bright Angel Trail, early 20th century. Source: L.C. McClure, Western History Collection, Denver Public Library.



Attorney William Jennings Bryan along the Bright Angel Trail, 1904. Source: GRCA #5564.



Pumping station at Indian Gardens, early 20th century. Source: Ratz 2009, 68.



Tourist group on mules at Indian Gardens, November 1908. The landscape consists of buildings, stone walls, fence, and young deciduous trees. Source: Ratz 69.



The Los Angeles Chamber of Commerce at the end of the Bright Angel Trail and start of the River Trail near the Colorado River, 1906. Source: GRCA #13655.



"On the Zig Zags of Bright Angel Trail" taken near 2-mile corner, 1902. Source GRCA 9834.

1928–1942 — National Park Service and CCC

Once the NPS gained ownership of the trail, numerous construction projects commenced. In 1929, Park Superintendent M.R. Tillotson and Park Engineer C.M. Carrel allocated \$20,000 for the reconstruction of the trail; work began that same year. By May of 1931, the pair had completed most of the reconstruction from the rim at Kolb Studio to Indian Garden. The completed trail maintained an average gradient of less than thirteen percent, with a maximum of seventeen percent. The trail required extensive reconstruction at Jacob's Ladder and the upper tunnel, as well as a complete rerouting along the slopes of the Bright Angel Fault (Anderson 2002, 23).

During the early years of NPS control in the 1930s, many of Cameron's structures, including the stone house, tent frames and Kolb Brothers photo studio at Indian Garden were razed. During this time, the original trailhead was relocated, which involved reconstruction of the upper portions of the trail by CCC workers. Workers also laid 2.5 miles of 6-inch water pipe from the South Rim to Indian Garden in order to improve the water supply at the plateau. Continual improvements to both the trail and Indian Garden were undertaken during the CCC years at the Grand Canyon National Park (Anderson 2002, 23).

In 1932, the Bright Angel Trail Corridor received substantial improvements. The Santa Fe Railroad constructed a rehandling pump house within the Garden Creek drainage corridor adjacent to the Kolb Brothers studio and another pump house to the east of Garden Creek. The pump station, constructed out of native stone, served to collect water and pump it up to the South Rim. Workers also built a two-room stone and frame cabin for the caretaker of the area with latrines constructed downstream of Indian Garden. The appropriate siting of sanitation facilities greatly increased the quality of the water supply at Indian Gardens. Latrines were connected to the pump and sludge trench and were made

available for visitor use (Anderson 2002, 22).

In addition to the multiple structures the workers constructed along the trail corridor, the trail itself was continuously improved during the CCC era. Between 1932 and 1939, CCC workers oiled portions of the trail both by machine and by hand. Workers also constructed the shelters along the trail route, including the Three Mile House at the three-mile mark in 1935, and the Mile-and-a-Half House at the one and half-mile mark and the River Rest House at the Pipe Creek-Colorado River Junction in 1936.

Expanding the trail route, the CCC constructed the Colorado River Trail (commonly known as the River Trail) which connected the terminus of the Bright Angel Trail with the Kaibab Trail near the bridge; thus, the two trail corridors were effectively connected in 1935. Up until the construction of the River Trail, the Bright Angel Trail ended at the mouth of Pipe Creek. The River Trail was completed and opened to visitors on approximately January 20, 1936 (Mike Anderson, Colorado River Trail National Historic Register Nomination, 1992). On February 1, 1938, workers began construction on the last section of the trail, from the base of the Devil's Corkscrew to the junction of the recently completed Colorado River Trail at the mount of Pipe Creek (Anderson 1998, 74).

CCC worker Louis Purvis worked on the Bright Angel Trail and River Trail during this period. He explained the strenuous work that was involved in creating and sustaining these trails in an interview on October 5, 1985. Describing his work on the River Trail, Purvis explained,

I resurfaced that area where the sandbar was close to the Silver Bridge on the cliff down below. Then he [the superintendent] sent me to Indian Garden after an air compressor. He gave me fifty or sixty kids to go do it. We brought that air compressor down the Corkscrew switchbacks down to the foot of Bright Angel Trail, and started the trail back toward the camp. I put some in front pulling, and some behind holding back, and a couple with bars to get it around the corner switchback, and two on the tongue, and we brought it down the trail. Then when we got it down there, he gave me orders to start breaking trail back toward a foreman by the name of Danny Campbell. So that's how we started the other end of Colorado River Trail (Interview with Louis Purvis, conducted by Susan Lamb, 1985).

Purvis worked within the canyon with the CCC for three years, working a number of different jobs including trail construction and fighting fires. His testimony is evidence of the difficult and labor intensive work that was required of the men constructing the trails.

Anderson (1998) further describes changes to the trail landscape during this period. He notes,

the first 1.82 mile segment which completely bypassed the Tonto Trail-Salt Creek alignment got underway in November 1929. Trail crews used tons of powder, compressed air jackhammers, as well as picks and shovels to manufacture a new trail through Tapeats Narrows along Garden Creek to the top of Vishnu Schist, then blasted down and across Salt Creek perpendicular to the old trail to a lower point above Pipe Creek, then down a new Devils Corkscrew at maximum 16 percent grades to the creekbed. Construction costs totaled \$19,000. (Anderson 1998, 74)

He continues,

a second project ran from October 1930 through May 1931 as crews at Indian Garden and the Kolb Studio worked toward each other to reconstruct the upper trail. Allocated \$30,000 for this segment, Carrel chose a completely new alignment in order to reduce grades to an average of 13 percent (17 percent maximum), retaining on the path of Jacob's Ladder which required extensive blasting to bring the ledge out to the standard width of four feet. Crews 'shot through' the upper tunnel, built earlier by Cameron to access Mallery's Grotto, and routed the trail through it in a wide arc to gain the easiest grade possible above the Coconino Sandstone. Carrel added downslope, dry-rubble retaining walls and water breaks for safety before running out of money (Anderson 1998, 74)

A third project carried out by the CCC workers reconstructed the trailhead and constructed a number of rest houses which are still present today: Three-Mile Resthouse, 1935; Mile-and-a-Half Resthouse, 1936; the river, 1936; and Indian Garden, 1937. By February 1938, the workers also completed construction along Pipe Creek from the base of the new corkscrew (Anderson 1998, 74).

During the 1930s, Indian Garden served as a “side camp” for laborers working on the trail and other activities occurring in the area. In 1935, workers stayed at Indian Garden while they were installing a trans-canyon telephone line, which was completed in the same year. The telephone lines were modified between 1938 and 1939 by the addition of a new cross-arm and a second circuit. A contemporary plaque along the rim identifies the work of the CCC on the historic telephone lines. CCC workers at Indian Gardens also constructed permanent shelters during these years, as well as a mule stable or barn and residences for the campsite caretaker and the Santa Fe Pump Station caretaker (Anderson 1998, 74).

Steady visitation to Indian Gardens and the Bright Angel Trail continued under NPS management. “Superintendent Miner R. Tillotson noted in 1937 that ‘annual travel [along the Bright Angel] has been as follows: 1933-12,725; 1934-17,403; 1935-20,515; 1936-20,607’” (Anderson 2002). The trail faced the same competition with other trails on the South Rim both before and after its passage into federal hands. However, the meticulous care and maintenance the trail received- and continues to receive- under NPS management, made the trip more pleasurable for tourists and has resulted in the Bright Angel Trail becoming the most popular hiking trail for tourists to experience the Grand Canyon. In 1981, the Bright Angel Trail, along with the North Kaibab, South Kaibab and Colorado River trails, were designated as National Recreation Trails within the National Trails System. In 1997, the Bright Angel Trail was determined eligible for inclusion in the National Register of Historic Places (Reba Grandrud to Bruce Kilgore, August 2009, GRCA Trail Archives File).

Portions of this history were constructed from information in the Bright Angel Trail Corridor CLI produced in 2006, as well as the Bright Angel Nomination written by Mike Anderson in 2002.



View of the Kaibab Suspension Bridge, built in 1928. The bridge marks the end of the Colorado River Trail
Source: Ratz 82.



View of the Colorado River Trail, constructed by the CCC between December 1933 and January 1937. Date of photo unknown. Source: Ratz 2009, 71.

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

BRIGHT ANGEL TRAIL LANDSCAPE AREA

This analysis and evaluation of the Bright Angel Trail Landscape Area is based on a field review conducted in October 2009. The general overall alignment of the trail and the landscape it traverses has changed very little since the period of significance (1890-1942). Any upgrades to the trail since 1942 reflect the vernacular characteristics of the park's rustic style architecture developed during the second sub-period of significance (1928-1942). The majority of upgrades to lessen the gradient in excessively steep areas and to provide visitor comfort stations occurred between 1929 and 1939 during the CCC-era. The existing trail, rest houses, native stone walls/retaining walls, native stone steps and trail edging, cobblestone pavement and drainage crossings, and wooden pine log steps integrate well into the natural landscape to maintain the integrity of the inner canyon views.

The buildings and engineering systems (i.e., rest houses, trans-canyon telephone and water lines) of the Bright Angel Trail Corridor remain intact in their original locations and have been upgraded or repaired as required to maintain their original use. Therefore the trail's spatial organization of subsidiary features and land uses still remains much like it was during the period of significance.

The traditional use of the trail as a transportation corridor for visitors and park personnel still remains today. As the most travelled trail in the Grand Canyon trail system, the overall route and its amenities are kept in good condition. Rockslides, drainage, erosion, and user impacts require constant on-going maintenance. The use of materials and workmanship exhibited in the current trail repairs reflect the CCC-era construction techniques well

and provide an overall aesthetic that integrates with and continues the rustic park architecture. The trail and its features serve to provide a continuous fabric between its destination points.

CONTRIBUTING ELEMENTS INCLUDE:

1. Buildings and structures—rest houses, trans-canyon telephone line, native stone retaining walls and steps
2. Circulation—Bright Angel Trail
3. Cluster Arrangement
4. Cultural tradition
5. Land use
6. Natural systems and features
7. Spatial organization
8. Topography
9. Vegetation
10. Views and vistas

NON-CONTRIBUTING ELEMENTS (BUILT PRE- or POST-PERIOD OF SIGNIFICANCE) INCLUDE:

1. Archaeological sites (pre-period of significance)
2. Buildings and structures—restrooms, trans-canyon water line, bridges, native stone walls/retaining walls, native stone and wooden pine log steps, cobblestone pavement and drainage crossings (post-period of significance)
3. Small-scale features—informational/interpretive signs, hand rails, water spigots, emergency phones, benches (post-period of significance)

INDIAN GARDEN LANDSCAPE AREA

Indian Garden is an oasis of water and lush vegetation within a generally arid environment. This sliver of greenery created by the perennially-wet Garden Creek is located 4.5 miles down the Bright Angel Trail and 3,000 feet below the South Rim of the Grand Canyon. The shady spot rests upon the Tonto Platform of the inner canyon and between two steep cliffs. Indian Garden is currently used, as it was historically, as a rest stop for tourists and campers traversing the Bright Angel Trail.

Indian Garden was once a treeless spot that appeared very similar to the surrounding desertscrub community. Native Americans used the perennial flow Garden Creek as a water source for their daily activities.

Indian Garden has changed substantially over time, both during and after the period of significance. Initial development of Indian Garden occurred in 1903 when Cameron bought mining claims and water rights to the area and established a camp adjacent to the Bright Angel Trail on the edge of the Tonto Platform (Indian Garden Cultural Landscape Report 2005, 52). Because of frequent flood events that required reconstruction of the landscape, and the need to continually develop—and redevelop—the site to meet the needs of visitors and park personnel, the NPS has rehabilitated Indian Garden several times. The most marked changes occurred in the late 1920s and 1930s, when the NPS removed Ralph Cameron's tent camps and tourist concession facilities and implemented their own plans in conjunction with the CCC and Santa Fe Railroad; in the 1960s, when the NPS added more buildings and rearranged the spatial organization; and in the late 1980s, when the NPS created entirely new spaces, constructed and relocated several buildings and structures, and altered much of the historic character that was present between 1903 and 1942. As a credit to the designers of the 1989 rehabilitation, however, new features and work was completed in such a way to be generally compatible with the historic character, as well as the character of the surrounding inner canyon landscape. Through the use of Rustic Revival architecture, local materials such as native plants, stone, and wood, many new features can be classified as supporting (non-contributing, compatible) rather than non-contributing, as noted later in this CLI.

The greatest difference between the landscape during the period of significance and at present is the organization of spatial patterns and the number and location of buildings and structures. These two landscape characteristics, more than any other, suggest the extent to which Indian Garden has irreversibly changed since the period of significance. The current location and complexity of circulation patterns, in comparison with the simplicity of historic patterns, also signals the large degree to which the landscape has been altered.

Features that have remained the same, or in the same location, over time are few in number and tend to be grouped together; these features include those associated with the Caretaker's Residence/ SAR Cache site and the Pump House node. These two locales remain the least changed, as the surrounding landscape has been

rehabilitated and redeveloped around them. Remnants of the Cameron-era sub-period of significance are few; including not much more than building remnants and ruins and traces of his tent camp location amid the faint rows of hundred-year-old cottonwood trees.

In sum, the comparative analysis of landscape characteristics will show that the Indian Garden landscape of today is not that of the period of significance. Although several pieces of historic landscape fabric remain, when viewed as a whole, the historic character of Indian Garden has changed to a great degree. However, the Indian Garden area does retain sufficient integrity to be considered a contributing landscape area of the Bright Angel Trail Corridor.

INTEGRITY EVALUATION

To determine if the Bright Angel Trail Corridor retains the level of integrity required for the NRHP, its physical characteristics and their ability to convey their significance must be evaluated. The Corridor's physical features must convey their significance through a combination of seven aspects or qualities of integrity defined by the NRHP. These aspects include—location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, the Bright Angel Trail Corridor must possess a preponderance of these aspects. The following narrative provides an evaluation of these aspects as they relate to the Bright Angel Trail Landscape Area and the Indian Garden Landscape Area; further discussion examines whether the modifications to landscape elements which occurred after the period of significance have preserved or altered their integrity.

Overall Integrity Assessment for Bright Angel Trail Landscape Area

While much of the actual trail has been rerouted to lessen gradients and avoid drainages with the objective of making it more sustainable, some segments of “Cameron’s Trail” (1890-1927) are still visible from the South Rim and through aerial photography. In addition, the CCC-era buildings and structures still retain their original locations, settings, design, materials, workmanship, feeling, and association. Structures and modifications made subsequent to the period of significance do not detract from the overall integrity of the Bright Angel Trail Landscape Area. The restroom buildings and additional native stone walls/retaining walls and steps that have been built since 1942 are consistent with the scale and design of the CCC buildings and employ similar materials, construction methods, and visible workmanship. The Bright Angel Trail Landscape Area with its associated landscape, cultural traditions, land use, and views retains sufficient integrity for listing in the NRHP.

LOCATION—Retains integrity

Overall, the Bright Angel Trail landscape does retain integrity of location. From prehistoric to modern use, the general trail alignment has followed the Bright Angel Fault and Garden Creek drainage. Cameron initially developed his trail between 1890 and 1891 by widening and lessening the gradient of this general alignment to accommodate pack animals with mining supplies. Further improvements to sustain the trail’s alignment occurred during the 1930s when the NPS and the CCC added permanent structures such as the rest houses and native stone retaining walls and steps. The Bright Angel Trail landscape, spatial relationships, buildings and structures, circulation, land use, creeks, dry washes, seeps, and geologic formations remain in the same locations as during the period of significance.

DESIGN—Retains integrity

The Bright Angel Trail Landscape Area does retain integrity of design from the second period of significance that includes the trans-canyon telephone line and the CCC-era construction. The alignment and construction of the telephone line still convey the conscious design decisions of where the poles needed to be located to negotiate the steep slopes and clear ridgelines, its inter-relationship with the general trail alignment and existing drainages, as well as the types of materials and construction that were prevalent at that time.

While it is difficult to determine whether the trail (i.e., the tread, cross section, or alignment) and the CCC-era buildings and structures were formally designed, traditional construction methods of these types of features have not changed significantly since the CCC-era. Conscious design decisions made on paper or in the field are made visible by the relationship of the trail and building/structure construction to the physical landscape constraints it addresses. The vernacular characteristics of these features, their locations, materials, workmanship, and natural landscape setting retain their integrity of design. On-going modifications and repairs surrounding these features to address erosion or user impacts have not affected the integrity of design.

SETTING—Retains integrity

The Bright Angel Trail Landscape Area retains its integrity of setting as its physical landscape features have maintained their relationship to the Canyon's overall surroundings. Both the trail and the canyon itself remain relatively unchanged since the period of significance (1890-1942) except for the natural processes of weathering and erosion. The natural systems, geological features, topography, vegetation, spatial organization, and views preserve an overall wilderness setting. The trail has been modified and improved over time, but modifications have preserved its integration with the canyon's landscape. Likewise, the CCC buildings and structures remain integral to their original setting and reflect their surrounding environment through the incorporation of native materials.

MATERIALS—Retains integrity

While it appears there are no materials present from the first period of significance (1903-1927), integrity of materials for the second period of significance is intact. The majority of original construction that was completed by the CCC remains in place at the rest houses and associated native stone retaining walls and steps. In addition, a few stone retaining walls along the trail corridor also appear to be from that era. The trail's tread has historically been earthen tread held in place with wooden logs or native stone. Non-durable materials such as wood have not retained their integrity and it is assumed that any wooden materials existing today post-date the period of significance. Characteristic of construction in limited-access areas, trail-builders utilize whatever materials are readily available. A couple of earthen treads are held in place with old railroad ties which may date to the Santa Fe Railroad construction projects of the 1930s. In addition, the vegetation appears to have remained native to the area with the exception of Bermuda grass that was most likely brought in by the pack animals' feed or waste and has only survived where there is a perennial source of water.

Although many native stone walls/retaining walls, steps, and trail edging post-date the period of significance, the materials and construction methods used reflect the CCC-era materials and do not adversely affect the Bright Angel Trail landscape's integrity of materials.

WORKMANSHIP—Retains integrity

The 1.5-mile, 3-mile, and Pipe Creek Rest houses and associated native stone retaining walls and steps are all typical examples of the CCC stone masons' craftsmanship. The character-defining attributes of the CCC craftsmanship involves the sensitive, frugal use of site-specific materials—many times in creative ways—to compensate for the availability and costs of materials during the Great Depression. The principle of expedient use of available materials incorporated into innovative engineering solutions is also represented in the construction of the trans-canyon telephone line, constructed from galvanized pipes, a material that was commonly used for water conveyance during that time.

FEELING—Retains integrity

"Cameron's Trail" (Bright Angel Trail) was originally developed between the 1880s and the 1920s to transport prospective sources of ore and minerals in support of a burgeoning canyon mining industry. It is assumed that the feeling of the inner canyon during this time was one of exploratory excitement for gaining wealth, "settling of the west", and a utilitarian supply line. The integrity of feeling during this first period of significance does not exist today.

As the personal gain from mining resources waned, Cameron began to focus on the scenic resources of the Canyon and the growing tourism industry. The integrity of feeling for the period reflecting the early Park Service influence (1927-1942) has remained relatively unchanged, and NPS rehabilitation and maintenance of CCC-era trail improvements have contributed to the hiker's sense of place. While feeling is of a subjective nature, the experience at the Rim of the Canyon is related to the overall magnitude and scale of the natural force that created it—it is a "sense of wonderment". Many visitors describe it as awe-inspiring, contemplative, or exciting. The feeling of the trail landscape is much different as it drops below the level of the Canyon's rim. Descending into the Canyon presents a multitude of feelings dependent on the land forms, topography, views, vegetation, climate, and personal frame-of-mind. Visitors travelling the full length of the trail sense excitement, anticipation, and many times—trepidation of the "journey" ahead of them.

While the number of visitors has greatly increased in recent years, the vastness of the Canyon and the setting of the trail's landscape still provides a sense of isolation and humbleness that allows today's visitor to experience the same feelings mentioned above, contributing to the Bright Angel Trail Landscape's retention of integrity of feeling.

ASSOCIATION—Retains integrity

The Bright Angel Trail's existing buildings and structures are directly associated with the CCC federal relief program (New Deal-era context) and the implementation of the NPS Rustic-style park architecture principles of the 1930s. These features convey a direct link to the historic events which shaped both the parent and component landscape between 1927 and 1942; and the development of tourism and recreation on publicly-owned lands.

Overall Integrity Assessment for Indian Garden Landscape Area

As a whole, Indian Garden does not retain historic integrity to its period of significance: 1903-1942. The following section discusses the integrity of Indian Garden with respect to its two sub-periods of significance: 1903-1927 and 1927-1942.

INTEGRITY ASSESSMENT FOR THE RALPH CAMERON SUB-PERIOD OF SIGNIFICANCE (1903-1927)

The comparative analysis and significance evaluation concluded that too few features remained from Ralph Cameron's tenure in Indian Garden to fully portray the importance of his effect upon the landscape. Extant features included tree rows and archeological features, such as stone tent platforms, and possibly buried artifacts. It has been determined that the landscape does not convey its significance for the Ralph Cameron sub-period of significance (1903-1927), and therefore does not retain integrity from this sub-period. This sub-period, however, is an important part of Indian Garden's evolution. Without the events occurring during these years, Indian Garden would not appear as it does today, and may not have existed at all. For this reason, despite lack of integrity and numerous missing features, it is recommended that the period of significance remain from 1903 until 1942 to ensure that any Cameron-era remnants are considered contributing and are properly preserved and maintained.

INTEGRITY ASSESSMENT FOR THE NPS SUB-PERIOD OF SIGNIFICANCE (1927-1942)

The analysis and evaluation of the Indian Garden landscape shows that, as a whole, Indian Garden does not retain integrity to the sub-period of significance from 1927 until 1942. Although some of the seven aspects of integrity were shown to exist, the most important aspect of the site, integrity of design, is not retained. The physical characteristics of the landscape have changed to such a degree that little historic character remains that would present a holistic understanding of how the landscape appeared between 1927 and 1942. Additionally, the alterations made in 1989 are not easily reversed, again reinforcing the landscape's lack of integrity. In this landscape, the lack of most of the tangible aspects of integrity—design, materials, and workmanship—outweigh the retention of other intangible aspects of feeling and association. For these reasons, the overall Indian Garden landscape does not retain an adequate level of integrity to be eligible for the National Register of Historic Places as an individual district, but is eligible as part of the Bright Angel Trail Corridor. Certain extant buildings and structures, however, may be eligible for listing due to their ability to convey their significance. Additionally, although the landscape does not retain integrity to this sub-period of significance, it is still important to preserve and maintain all contributing features.

LOCATION (1903-1927) —Retains integrity

As a whole, for the Ralph Cameron sub-period of significance, the Indian Garden landscape does retain integrity of location. The physical location of Cameron's former tent camp remains intact. The location of the natural systems and features—such as the general course of Garden Creek, geologic formations, and likely the dry washes, springs, and seeps—also remain in the same location as during the Cameron sub-period of significance. Many of the cottonwood trees extant from this sub-period also retain integrity of location, particularly the tree rows found north of the Caretaker's Residence. Although most circulation patterns from the sub-period are missing, the Bright Angel Trail and Plateau Point Trail retain similar alignments to those that existed historically. No buildings and structures, only remnant features, retain any integrity of location for this sub-period; small-scale features do not retain integrity of location from this sub-period either.

LOCATION (1927-1942) —Retains integrity

For this sub-period of significance, the Indian Garden site retains integrity of location because the remainder of Indian Garden development that occurred between 1927 and 1942 has not been relocated. Elements that detract from integrity of location are due to the fact that much of the historic spatial organization was altered since the period of significance, particularly during the 1989 rehabilitation effort. Yet, many individual landscape characteristics built or developed during this sub-period remain in their historic locations. As with the earlier sub-

period, natural systems and features—such as Garden Creek, springs, seeps, floodplains, and dry washes—have maintained much the same location. Flooding and geologic events, such as rock slides, have altered the locations of some features, yet these events have not been considerable enough to affect integrity. Circulation features retain a fair degree of integrity, although those circulation patterns once associated with relocated or demolished historic spaces are missing. The primary circulation features, however, of Bright Angel Trail and Plateau Point Trail retain their same location—although their alignments have been altered over time—as do the steps to the Trailside Shelter and the path leading from Bright Angel Trail to the Caretaker's Residence. All the extant buildings and structures constructed between 1927 and 1942 remain in their historic locations. It is likely that any vegetation remaining from the latter sub-period of significance retains integrity of location.

DESIGN (1903-1927) —Does not retain integrity

The Indian Garden landscape does not retain integrity of design from this sub-period of significance. The overall landscape no longer conveys the conscious decisions made during Cameron's and his colleagues' original conception and planning of the Indian Garden landscape. Their design decisions, such as how and where to locate buildings, how they organized space in the tent camp, how and where they laid out the vegetable garden, and what type of ornamental details to use, are no longer visible in the landscape to a sufficient extent. The only landscape characteristics that retain any integrity of design are circulation and vegetation; the current design and placement of Bright Angel Trail and Plateau Point were likely affected by Cameron and his contemporaries, while cottonwood trees were deliberately sited in rows are discernable at present.

DESIGN (1927-1942) —Does not retain integrity

As a complete entity, the Indian Garden landscape does not retain integrity of design due to the numerous changes the site has undergone since 1942. Alterations undertaken in the 1950s and 1960s, and in particular the 1989 rehabilitation, relocated or demolished much of the original layout and design of Indian Garden. While certain individual features, such as buildings and vegetation, retain some level of integrity unto themselves, the entire landscape does not retain its historic spatial relationships. These relationships include the picnic area, the spatial patterns north of the Caretaker's Residence, and the former mule barn and corral site; the numerous features associated with these spaces are also lost. When comparing historic documents and images of vegetation to existing vegetative conditions, the landscape characteristic of vegetation does retain integrity of design. The use of native plants and the apparent placement of vegetation to harmonize with the surrounding natural character of the site are still apparent today. The historic buildings and structures of Indian Garden retain integrity of design, as the majority of their massing, materials, ornamentation, and location are intact. These buildings and structures are the Rock House, Caretaker's Residence, Trailside Shelter, Reservoir, South Pump House, and Rehandling Pump House. Too little information about the physical and ornamental design of circulation exists to accurately assess integrity.

SETTING (1903-1927) —Retains integrity

The overall Indian Garden landscape retains integrity of setting, due to the typically unchanging nature of the surrounding canyon walls that provide a similar backdrop at present as they did between 1903 and 1927. Within the project area, however, few landscape features are considered to retain integrity of setting, due to the numerous changes made since 1927. In particular, the amount of vegetation has increased to such an extent that Indian Garden is no longer set in a primarily arid desertscrub environment with only a few imported trees and little shade. Rather, the current setting is one of a lush, riparian environment.

SETTING (1927-1942) —Does not retain integrity

The Indian Garden landscape does not retain integrity of setting for this sub-period of significance. At a larger scale, Indian Garden appears to retain integrity because the physical setting and surroundings of Indian Garden are similar today to its character present between 1927 and 1942. During this time, Indian Garden was a site of shade-giving vegetation running along a creek, set amongst a desertscrub environment and between three walls of the Grand Canyon. Internally, however, the alteration of spatial organization, the addition of the Campground and Administrative Areas to the south, the new Mule Barn and Corral, and the increase in vegetative density—particularly in the Day Use Area—result in a lack of integrity of setting.

MATERIALS (1903-1927) —Does not retain integrity

Indian Garden does not retain integrity of materials from the Cameron sub-period of significance. Although remnants of Cameron-era remain, such as the stone platform of the former Trailkeeper's Tent, there are too few features to provide insight into the material preferences of Cameron and his colleagues. For example, due to the

temporary nature of some of the historic features, no wood or canvas remains from their tents and auxiliary structures. Additionally, the exact materials chosen for fence types and stone walls and exact species of plant materials installed are unknown. Indian Garden also lacks integrity of materials because substantial amounts of new materials have been incorporated that have obliterated those that once existed between 1903 and 1927. It is impossible to assess materials integrity for intangible features, such as spatial organization, land use, and views and vistas; and for features that were not designed, such as natural systems. Although it is likely that circulation features retain integrity of materials, due to the possible retention of earthen treads over time, it is not known if materials such as stone edging and water bars remain, or were used between 1903 and 1927. Vegetation retains a minimal degree of integrity of materials, due to the mature cottonwoods that are known to remain from the Cameron sub-period of significance. No integrity of materials remains for building and structural features, due to the fact that no intact or reasonably representative features from this category are still extant in the Indian Garden landscape.

MATERIALS (1927-1942) —Does not retain integrity

The Indian Garden landscape does not retain integrity of materials for the 1927-1942 period of significance. As a whole, most of the physical materials located in Indian Garden at present—stone, wood, and metal—post-date the period of significance. Although similar materials may have been used during the period of significance, enough of the physical fabric has been recently introduced, and introduced in new ways, that integrity of materials is not retained. National Register Bulletin #15 provides guidance on this issue by stating that “...if the property has been rehabilitated, the historic materials must have been preserved. The property must also be an actual historic resource, not a re-creation; a recent structure fabricated to look historic is not eligible” (NPS, National Register Bulletin #15, 1997, 45). For example, the stone drinking fountains appear to be historic and utilize native stone, but construction details from the 1989 rehabilitation drawings show that these fountains are actually recent additions to the landscape. The 1989 construction drawings also show that other features using materials that were available during the period of significance, such as stone edging, wood risers, stone waterbars, and wood and metal water troughs, were built in 1989. Additionally, major floods during the 1960s likely washed away many historic material examples and were replaced during reconstruction efforts. Individual buildings, however, retain integrity of materials and include the Caretaker’s Residence/SAR Cache, Trailside Shelter, South Pump House, Reservoir, and Rehandling Pump House. Much of the vegetation may also retain integrity of materials because it appears that few plants have been removed since the period of significance, although natural decline has resulted in the loss of a few cottonwoods.

WORKMANSHIP (1903-1927) —Does not retain integrity

For many of the same reasons that the Indian Garden lacked integrity of materials from the 1903-1927 sub-period of significance, it also lacks integrity of workmanship. Because there are so few extant or intact features from this period of significance, there is no evidence of Cameron’s worker’s skill or methodology of construction—the landscape does not convey what type of detailing, finishes, technologies, or aesthetics were used, however simplistic or complicated. Although one can judge the level and type of workmanship in historic photographs, these concepts are not available to Indian Garden visitors in the landscape as a whole or through any particular landscape characteristic.

WORKMANSHIP (1927-1942) —Does not retain integrity

For this sub-period of significance, the overall Indian Garden does not retain integrity of workmanship due to the general lack of extant historic features and the intrusion of new features that post-date the period of significance. What is predominantly visible in Indian Garden at present is the evidence of NPS crews’ construction labor and skill from the late 1980s. Despite this general lack of integrity, extant historic buildings retain integrity of workmanship. The Rustic-style buildings, such as the South Pump House and Trailside Shelter, continue to display the skill of NPS and CCC designers and laborers; particularly of their skill at carpentry, masonry, and fitting architecture into existing natural surroundings. The telephone line that exists to the east of Indian Garden is another example of NPS and its contractor’s workmanship.

FEELING (1903-1927) —Does not retain integrity

Indian Garden does not retain integrity of feeling from the 1903-1927 sub-period of significance. Because so much has changed since 1927 in Indian Garden—including the site’s internal setting; the amount, type, and location of buildings and structures; the amount of vegetation; and spatial organization—the landscape no longer conveys the character that existed during Ralph Cameron’s tenure. As mentioned in the section on integrity of setting, during Cameron’s time in Indian Garden the landscape was an arid, desertscrub environment softened only by a few transplanted trees and the waters of Garden Creek. At present, Indian Garden is a lush

oasis of dense and mature vegetation, shady rest areas, and far more development than Cameron likely ever imagined. Therefore, the landscape does not convey any historic feeling from between 1903 and 1927.

FEELING (1927-1942) —Retains integrity

Indian Garden retains integrity of feeling for this period because it continues to represent a shady, vegetatively lush respite from the heat and aridity of hiking or mule-riding in the inner canyon. During the period of significance, NPS personnel sought to make Indian Garden a welcome rest stop on the way through the canyon. They did this through encouraging vegetation growth for its shade and cooling abilities, offering seating and picnicking opportunities, and generally creating an oasis-like atmosphere. This atmosphere and feeling continues to exist at present.

ASSOCIATION (1903-1927) —Does not retain integrity

Indian Garden does not retain integrity of association because, although it is the location where Cameron set up his concession operations between 1903 and 1927, the landscape is not sufficiently intact to convey the relationship between Ralph Cameron, his tourism business, and the landscape.

ASSOCIATION (1927-1942) —Retains integrity

The overall Indian Garden landscape retains integrity of association because it conveys a direct link between the historic events that occurred there between 1927 and 1942, as well as a direct link to the important architecture styles that were employed in the site. Although the association is not strong due to the numerous alterations made between the 1960s and 1989, the landscape conveys its link to the development of tourism and recreation in the Grand Canyon due to its continued presence along the Bright Angel Trail and the fact that the site has remained in its same location since 1927, and because its tourism-related land uses have remained the same since 1927. This link is conveyed through the South Pump House, Reservoir, and Rock House which are evidence of the cooperative efforts made between the NPS and its concessionaires to develop tourism and recreation in the Grand Canyon. Indian Garden also conveys its linkage to political and governmental events through its retention of CCC-constructed features, such as the Caretaker's Residence, Trailside Shelter, and telephone poles. These features are evidence that the CCC was involved in the development of Indian Garden and of the architectural craftsmanship they exhibited. The landscape's link to architecture-related activities between 1927 and 1942 is exhibited in the extant historic buildings built by the NPS, CCC, and Santa Fe Railroad that employed rustic-style architectural principles common during that time.

**Landscape Characteristic:
Buildings and Structures**

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The buildings and structures located within the Bright Angel Trail Landscape Area include the native stone and wood rest houses built at the 1.5- and 3-mile mark, at Indian Garden, and at the mouth of Pipe Creek near the Colorado River (Photographs 1 and 2). These rest houses were built between 1929 and 1939 by the CCC and still retain the NPS architectural vernacular of that period. Each of the rest houses includes entry steps and built-in seating ledges constructed with the same native stone and mortar materials as their respective rest house. The color and type of stone used for each rest house varies according to the geological stratum it is located in, thereby reflecting the effective use of site-specific materials and a piece of the formational timeline of the Grand Canyon (Canyon).

In addition to the rest houses, each rest area location mentioned above includes modern waterless restroom facilities built with rustic wood siding, wooden or log chain handrails, and native stone steps where needed (Photograph 3). These facilities and utilities were built during or after the 1980s and provide a convenience for many visitors that are ill-prepared for the arid environment of the Canyon.

Other Bright Angel Trail Corridor structures include retaining walls, a power line, the trans-canyon telephone line, a water line that provides water from Roaring Springs to the South Rim, and two bridges. Many retaining walls that shore-up steep slopes adjacent to the trail were also built by the CCC during the 1930s and remain intact today. They are constructed of site-specific stone that was dry-stacked or mortared in place. Additional retaining walls have been constructed since the 1930s with similar methods and are reflective of the rustic park architecture that blends in with the natural landscape. The trans-canyon telephone line and poles were initially installed in 1935 and upgraded to

add a second arm in 1938-39 (Photograph 4). Several poles are in close proximity to the trail alignment and consist of rusted tubular steel and blue or clear glass insulators indicative of materials used during that period. The water line was initially a 6" pipe constructed in 1931-32 as part of the trans-canyon water system and was upgraded to an 8" steel pipe in 1985. The water line is exposed at several trail locations and creek crossings. The water line is supported on native stone and mortar piers at creek crossings and attached to the Silver Bridge crossing the Colorado River (Photograph 5). In addition, vertical remnants of rusted iron I-beams located adjacent to the trail may be linked to the cable tramway that was built in 1931 to transport labor and materials to construct the trans-canyon water line (Photograph 6). Two I-beams are visible from the trail and located on the eastern side of the trail. The vertical orientation of these beams suggests that they may have been associated with the supports for the tramway's cable.

The Silver Bridge provides the river crossing for the Bright Angel Trail. The Silver Bridge was built as a part of the trans-canyon water system that was completed in 1970. It is a cable-span bridge constructed of galvanized steel and concrete abutments that provides a crossing for hikers but is not wide enough for pack animals (Photograph 7). Pack animals and mule trains must use the Kaibab Suspension Bridge located further upstream. A second, smaller bridge crosses Bright Angel Creek north of the Silver Bridge and is constructed of a combination of wooden planks, native stone piers/abutments, and galvanized steel posts and rails (Photograph 8). The use of modern galvanized steel beams and cables is not consistent with the rustic-style architecture of the Canyon that blends in with the natural landscape. They provide a contrasting feature in the overall landscape that is discordant to the natural Colorado River setting.

No buildings or structures from the early period of significance (1903-1927) remain within the Bright Angel Trail Landscape Area.

CONTRIBUTING FEATURES:

1. Bright Angel Trail (LCS#TBA020)
2. Mile-and-a-Half Rest House (LCS#BCB0141)
3. Three Mile Rest House (LCS#BCB0142)
4. River Rest House (LCS#BCB0179)
5. Stone steps to rest houses
6. Retaining walls at rest houses
7. Trans-canyon telephone line (55623 (PHONE))
8. Cable tramway remnants

NON-CONTRIBUTING FEATURES:

Structure Name

1. Silver Bridge at Colorado River
2. Pedestrian Bridge at Bright Angel Creek
3. Power line

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name

1. Restroom buildings at Mile-and-a-Half, Three Mile, and River Rest Houses
4. Stone steps (constructed post 1942)
5. Retaining walls (constructed post 1942)
6. Water line

INDIAN GARDEN LANDSCAPE AREA

No buildings and structures, and only a few ruins, remain from the early period of significance—during Ralph Cameron's tenure between 1903 and 1927. This is due to the thorough job undertaken by the NPS in 1927 of removing all Cameron-related buildings and structures. At one time Cameron's Indian Garden camp included a mule corral and shed, incinerator, tents, a tool shed, a laundry tent, toilets, a root cellar, Cameron's stone house, a kitchen, and several lengths of stone wall. The only building-related remnants are stone platform foundations of a trailkeeper's tent, a compilation of rocks that served either as a toilet or food cooler, and an area once used as the Kolb Brother's studio. Certain piles of stone and debris throughout the area may also be remnants of this

time, but are not yet identifiable as such.

In contrast, many of the major buildings and structures from the NPS-era period of significance, from 1927 until 1942, remain intact. These features, built by either the NPS, Santa Fe Railroad or the CCC on behalf of the NPS, include the 1932 Caretaker's Residence (now known as the SAR Cache) and terrace; the 1932 South Pump House; the 1932 Reservoir (or sedimentation tank); the 1932 Rehandling Pump House; the 1937 Trailside Shelter and steps; the trans-canyon telephone line; portions of the Garden Creek riprap channelization; and the concrete intake and valve box above the Reservoir. The Rock House, which burned in 1942, was re-built in 1943.

It is likely, although difficult to ascertain without earth-disturbing excavations, that many of the underground utility lines from the period of significance remain in place, although in an unused state. These utilities likely include underground sewage treatment facilities, such as sludge trenches and drain fields, underground electric lines, and underground water pipelines.

Buildings and structures missing from the period of significance of 1927 until 1942 include the stone-lined ditches that were part either of the 1930s erosion control or sewage-handling system, latrines once located north of the Caretaker's Residence, stone walls around the former Picnic Area, and a mule barn and corral.

Many new features were built after the period of significance ended in 1942. A bunkhouse was built in 1965, north of the Rock House, but demolished in 1989. A second bunkhouse was built west of the Rock House in 1986 and subsequently moved to the new Administration Area in 1989. All the remaining buildings and structures in the Administration Area and Campground Area post-date the period of significance and were built in the mid-to-late 1980s. The helispots, sand filter beds, and drain field were built as part of the 1989 rehabilitation. The gabion walls south of the Caretaker's Residence were built after 1943—likely in the 1960s. The 1970s mule barn and corral, which replaced the 1930s mule barn and corral, was replaced in a different location in 1989.

CONTRIBUTING FEATURES:

DAY USE AREA

1. Caretaker's Residence (SAR Cache) (LCS #IGB0193)
2. Channelized Garden Creek
3. Stone retaining wall at terrace
4. Stone steps to terrace

PUMP STATION AND CORRAL AREA

1. South Pump House (LCS #IGB0031)
2. Watertank (Pump House Reservoir) (LCS #IGB0032)
3. Concrete cistern
4. Rest House (Trail Shelter 143) (LCS#BCB0143)

NORTH INDIAN GARDEN AREA

1. Rehandling Pump House (1932) (LCS #IGB0020)

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Trash Compactor Shed (Bldg. #1501)
2. Sand filter bed
3. Horseshoes court
4. Hose House
5. Drainfield

CAMPGROUND AREA

1. Comfort station—south (Bldg. #1413)
2. Comfort station—north (Bldg. #1440)

3. Shade structures (Bldg. #s 1463-1480)

DAY USE AREA

1. Air Quality Monitoring Station
2. Gabion Walls
3. Footbridge abutment

PUMP STATION AND CORRAL AREA

1. Comfort Station (Bldg. #1439)
2. Electrical substation

NON-CONTRIBUTING, COMPATIBLE FEATURES:

ADMINISTRATION AREA

1. NPS Ranger Residence (Bldg. #1460)
2. Pump Operator's Residence (Bldg. #1459)
3. Storage/Laundry/First Aid Building (Bldg. #1429)
4. Helispot
5. Wooden stairs
6. Stone walls and retaining walls

CAMPGROUND AREA

1. Information kiosk
2. Stone walls
3. Stone camp site retaining walls

DAY USE AREA

1. Pump Caretaker's Residence/Rock House (LCS #IGB0018)

PUMP STATION AND CORRAL AREA

1. North Pump House (Bldg. #484)
2. Mule Barn and Corral (Bldg. #1461)
3. Information kiosk
4. Stone retaining wall
5. Stone-edged steps

NORTH INDIAN GARDEN AREA

1. Flood walls

UNDETERMINED FEATURES:

DAY USE AREA

1. Concrete foundation
2. Utility pole

PUMP STATION AND CORRAL AREA

1. Leveled terraces

Character-defining Features:

Feature Name: Bright Angel Trail

CLI Feature ID: 143376

Feature Contribution: Contributing

CRIS-HS Resource ID: 9455

CRIS-HS Resource Name: Bright Angel Trail

CRIS-HS Resource Number: TBA020

FMSS Record Type: Location

FMSS Record Number: 41300

Feature Name: Cable tramway remnants

CLI Feature ID: 143398

Feature Contribution: Contributing

Feature Name: Bright Angel Trail

CLI Feature ID: 189149

Feature Contribution: Contributing

Feature Name: Mile-and-a-Half Rest House

CLI Feature ID: 143378

Feature Contribution: Contributing

CRIS-HS Resource ID: 9446

CRIS-HS Resource Name: Mile-and-a-Half Rest House

CRIS-HS Resource Number: BCB0141

FMSS Record Type: Location

FMSS Record Number: 33809

Feature Name: Three Mile Rest House

CLI Feature ID: 143380

Feature Contribution: Contributing

CRIS-HS Resource ID: 9447

CRIS-HS Resource Name: Three Mile Rest House

CRIS-HS Resource Number: BCB0142

FMSS Record Type: Location

FMSS Record Number: 33813

Feature Name: River Rest House

CLI Feature ID: 143382

Feature Contribution: Contributing

CRIS-HS Resource ID: 55443

CRIS-HS Resource Name: River Rest House

CRIS-HS Resource Number: BCB0179

FMSS Record Type: Location

FMSS Record Number: 33907

Feature Name: River Rest House

CLI Feature ID: 143384

Feature Contribution: Contributing

CRIS-HS Resource ID: 55443

CRIS-HS Resource Name: River Rest House

CRIS-HS Resource Number: BCB0179

FMSS Record Type: Location

FMSS Record Number: 33907

Feature Name: Stone steps to rest houses
CLI Feature ID: 143386
Feature Contribution: Contributing

Feature Name: Retaining walls at rest houses
CLI Feature ID: 143394
Feature Contribution: Contributing

Feature Name: Trans-canyon telephone line
CLI Feature ID: 115118
Feature Contribution: Contributing
CRIS-HS Resource ID: 55623
CRIS-HS Resource Name: Trans-Canyon Telephone Line
CRIS-HS Resource Number: PHONE

Feature Name: Trailside Shelter - BATC
CLI Feature ID: 115120
Feature Contribution: Contributing

Feature Name: Stone steps to Trailside Shelter - BATC
CLI Feature ID: 115122
Feature Contribution: Contributing

Feature Name: SAR Cache/Caretaker's Residence - DAY
CLI Feature ID: 115124
Feature Contribution: Contributing

Feature Name: Channelized Garden Creek - DAY
CLI Feature ID: 115126
Feature Contribution: Contributing

Feature Name: Stone retaining wall at terrace - DAY
CLI Feature ID: 115128
Feature Contribution: Contributing

Feature Name: Stone steps to terrace - DAY
CLI Feature ID: 115130
Feature Contribution: Contributing

Feature Name: South Pump House - PS/CA
CLI Feature ID: 115132
Feature Contribution: Contributing

Feature Name: Pump House Reservoir - PS/CA
CLI Feature ID: 115134
Feature Contribution: Contributing

Feature Name: Concrete cistern - PS/CA
CLI Feature ID: 115136
Feature Contribution: Contributing

Feature Name: Rehandling Pump House (1932) - NIGA
CLI Feature ID: 115138
Feature Contribution: Contributing

Landscape Characteristic Graphics:



Photograph 1. Rest house at Pipe Creek near the Colorado River, looking northwest, 2009. Source: Logan Simpson Design (LSD).



Photograph 2. 3-Mile Resthouse, looking north, 2009. Source: Logan Simpson Design (LSD).



Photograph 3. Restroom at 1.5-Mile rest area, looking north, 2009. Source: Logan Simpson Design (LSD).



Photograph 4. Trans-canyon telephone line constructed by the CCC, ca. 1935, looking west, 2009. Source: Logan Simpson Design (LSD).



Photograph 5. Steel water line and stone support pier of the trans-canyon water system, looking northeast, 2009. Source: Logan Simpson Design (LSD).



Photograph 6. Vertical remnant of a rusted iron I-beam that may be linked to the cable tramway used to construct the trans-canyon water system, looking northeast, 2009. Source: Logan Simpson Design (LSD).



Photograph 7. Silver Bridge, showing cables and steel decking, built as part of the trans-canyon water system, looking northeast, 2009. Source: Logan Simpson Design (LSD).



Photograph 8. Bridge crossing at Bright Angel Creek, showing steel rails and wood plank decking, looking northwest, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Circulation**

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The Bright Angel Trail Corridor has been used by Native American cultures since they started migrating into the Canyon around 6000 B.C. It provides the only cross-canyon connection from the Arizona Strip and North Rim to the South Rim. From the late 19th century to the 1920s, this corridor was used to transport residents who lived on the north side of the Canyon to the south side and the regional destinations of Flagstaff and Kingman. Today it continues to be an important trans-canyon link for visitors and park staff. The “rim-to-rim” or “rim-to-rim-to-rim” experience culminates in folkloric traditions that visitors, recreationists, and athletes pass down to subsequent generations. For many visitors, it is a rite of passage, a milestone that only the Canyon can offer.

As the main north-south trail within the Canyon trail system, the Bright Angel Trail is a limited-access trail that serves as a single collector spine for the east-west trails and provides connectivity between the major destination points that offer a dependable water source and also serve to anchor the Bright Angel Trail (i.e., the South Rim, North Rim, Phantom Ranch, Indian Gardens, and Cottonwood). The two main east-west trails that connect to the South Bright Angel Trail are the Tonto Trail and the Plateau Point Trail (Photograph 9). These trail connections occur near the mule corral at Indian Garden and approximately 1,400 feet north of Indian Garden.

While the actual alignment of the Bright Angel Trail has shifted over time due to flooding and rock slide mitigations, as well as NPS efforts to lessen the grade for ease of travel and accommodate the addition of trail features and improvements, these adaptations did little to alter the overall course of the trail. The greatest changes to the trail alignment occurred between 1929 and 1939 when the NPS rerouted several areas originally constructed by Niles Cameron. These adjustments and reconstructions included the Jacob’s Ladder section and the upper tunnel, the slopes along the Bright Angel Fault, Indian Garden to the Devil’s Corkscrew, the Devil’s Corkscrew, and from the base of Devil’s Corkscrew to the mouth of Pipe Creek.

The Colorado River Trail connects Bright Angel Trail, near the mouth of Pipe Creek, to the South Kaibab Trail. The Colorado River Trail is built through sheer granitic cliffs and a sand dune area approximately 100 feet about the Colorado River. Due to the extreme physical constraints, no other routes are possible between these two endpoints and the original alignment remains as it was initially constructed by Louis Purvis and his CCC crew between 1933 and 1936. The outer edge of the trail is supported by stacked stone walls in many areas which have assisted in retaining the trail’s physical and locational integrity. It is the Colorado River Trail that provides access to the Silver Bridge and Phantom Ranch from the South Bright Angel Trail.

The tread of the Bright Angel Trail is generally constructed of dirt, sand, or loose gravel depending on the geological strata it traverses. Erosion control devices consist of wooden pine logs (staked in place) or stone steps placed perpendicular to the route of travel to hold soil in place or to direct surface flows across the tread to the outslope area. In areas where the trail’s tread receives extreme wear, usually on sloped areas that also receive hard turning impacts; a cobblestone pavement approach has been installed to protect the trail’s tread. In addition, some of the adjoining legs of switchbacks have been infilled with dry-stacked native stone to prevent user cross-cutting which leads to erosion (Photograph 10). At various locations adjacent to the trail, loose rock material from slope failures or rock-face spalling has been stockpiled in the form of large cairns for future trail repairs. For visitors, these informal stockpile-cairns serve as reminders to the ever-changing forces that have taken millions of years to create the Canyon.

The width of the trail varies from 4 feet to 10 feet in some places depending on the adjacent constraints (i.e., slopes, drainages, rocky outcrops/ledges, trees and plants). Significant among the Bright Angel Trail’s character-defining qualities, are the level vertices of the switchbacks and wider protrusions of the trail’s tread that allow users to stop and rest and to enjoy the many views of the Canyon—while allowing the trail traffic and mule trains to pass by safely (Photograph 11).

In addition to the main arterial trail, the Bright Angel Trail circulation system also includes secondary spurs to rest houses, restroom buildings, and scenic viewpoints. These spurs are typically constructed with the same materials and in the same manner as the main trail; however they are usually narrower than the main trail, possibly because there is no mule traffic on them.

CONTRIBUTING FEATURES:

1. Bright Angel Trail
2. Colorado River Trail
3. East Tonto Trail
4. Plateau Point Trail
5. Stone retaining walls
6. Stone walls (constructed prior to 1943)
7. Stone steps (constructed prior to 1943)
8. Upper tunnel (constructed prior to 1939)

NON-CONTRIBUTING FEATURES

1. Bridges

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Contemporary trail materials (stone steps, stone walls, wooden pine logs, stone retaining walls, stone trail edging, stone drainage crossings, cobblestone pavement)
2. Secondary access trails to restroom buildings and scenic viewpoints

UNDETERMINED FEATURES:

1. Lower Tunnel (unknown construction date)

INDIAN GARDEN LANDSCAPE AREA

The Bright Angel Trail was the primary circulation corridor through Indian Garden during the period of significance and it remains so at present. The greatest change to this primary circulation corridor in the Indian Garden area came in the late 1920s when the NPS re-routed the Cameron-era Bright Angel Trail farther east of its original position. The Plateau Point Trail, unlike the Bright Angel Trail, has apparently undergone few alignment modifications; the greatest change to the trail since was its renaming from "Trail to Hermit Basin" to "Plateau Point Trail" at an unknown date. Only vestiges of the "Trail to Turtle Head," once located between the Plateau Point and Bright Angel Trails, remain.

As with spatial organization, the circulation patterns in Indian Garden have become increasingly complex since 1903, due to new development during and after the period of significance. Between 1903 and 1927, Ralph Cameron's Indian Garden circulation was fairly simple in organization, being aligned around and along the Bright Angel Trail. Separate circulation systems likely consisted of earthen trails leading to the mule corral and sheds, within the row of tents, around the grouping of maintenance and operations facilities, and possibly to the old alfalfa field.

When the NPS took control of the site in 1927, and until the period of significance ended in 1942, their revitalization efforts simultaneously removed most of Cameron's circulation and created new patterns of their own. Although the new NPS circulation patterns were slightly more complex and structured, they were relatively uncomplicated compared to existing patterns of circulation. The paths and trails during the latter part of the period of significance were also earthen in composition, included stone steps, and possibly stone edging.

The most significant difference between the current and historic circulation patterns in Indian Garden is the ratio of internal versus external circulation features. During the period of significance, circulation systems were relatively open and interconnected, almost forming a singular network. At present, Indian Garden has several circulation systems that are independent, yet linked together at certain points within the site. These internal systems are evident in the Administration Area, Campground Area, and Day Use Area whose circulation patterns are very internally focused, yet can be reached by connector trails. The circulation patterns within the Pump Station and Corral Area are more comparable to historic circulation systems.

CONTRIBUTING FEATURES:

BRIGHT ANGEL TRAIL CORRIDOR

1. Bright Angel Trail

DAY USE AREA

1. Spur Trail—Bright Angel Trail to SAR Cache

NORTH INDIAN GARDEN AREA

1. Spur Trail—Bright Angel Trail to SAR Cache
2. Tonto East Trail
3. Plateau Point Trail

NON-CONTRIBUTING FEATURES:

BRIGHT ANGEL TRAIL CORRIDOR

1. Spur trail—comfort station

ADMINISTRATION AREA

1. Concrete sidewalk

DAY USE AREA

1. Trail network

NON-CONTRIBUTING, COMPATIBLE FEATURES:

BRIGHT ANGEL TRAIL CORRIDOR

1. Spur trails—formal
2. Spur trails—informal

ADMINISTRATION AREA

1. Stone-edged trail to Ranger Residence
2. Secondary trail
3. Spur trail—Bright Angel Trail to helispot
4. Spur trail—Bright Angel Trail to Bunkhouse

CAMPGROUND AREA

1. Central trail
2. Spur trails—to comfort stations and camping areas

PUMP STATION AND CORRAL AREA

1. Stone-edged trail to heliport
2. Ramp-like trail to comfort station
3. Stone-edged trail to south of Mule Barn
4. Spur trail—informal

UNDETERMINED FEATURES:

DAY USE AREA

1. Concrete sidewalks

PUMP STATION AND CORRAL AREA

1. Concrete sidewalks

Character-defining Features:

Feature Name: Bright Angel Trail; Bright Angel Trail Corridor

CLI Feature ID: 189150

Feature Contribution: Contributing

Feature Name: Spur trail--Bright Angel Trail to SAR Cached; Day use area

CLI Feature ID: 189154

Feature Contribution: Contributing

Feature Name: Tonto East Trail; Indian Garden Area

CLI Feature ID: 189155

Feature Contribution: Contributing

Feature Name: Plateau Point Trail; Indian Garden Area

CLI Feature ID: 189156

Feature Contribution: Contributing

Feature Name: Spur trail--comfort station; Bright Angel Trail Corridor

CLI Feature ID: 189158

Feature Contribution: Non contributing

Feature Name: Concrete sidewalk; Administration area

CLI Feature ID: 189160

Feature Contribution: Non contributing

Feature Name: Trail network; Day use area

CLI Feature ID: 189162

Feature Contribution: Non contributing

Feature Name: Spur trail--formal; Bright Angel Trail Corridor

CLI Feature ID: 189164

Feature Contribution: Non contributing

Feature Name: Spur trails--informal; Bright Angel Trail Corridor

CLI Feature ID: 189173

Feature Contribution: Non contributing

Feature Name: Stone-edged trail to Ranger Residence; Administration Area

CLI Feature ID: 189175

Feature Contribution: Non contributing

Feature Name: Secondary trail; Administration Area

CLI Feature ID: 189176

Feature Contribution: Non contributing

Feature Name: Spur trail--Bright Angel Trail to helispot; Administration Area

CLI Feature ID: 189177

Feature Contribution: Non contributing

Feature Name: Spur trail--Bright Angel Trail to Bunkhouse; Administration Area

CLI Feature ID: 189178

Feature Contribution: Non contributing

Feature Name: Central Trail; Campground area

CLI Feature ID: 189179

Feature Contribution: Non contributing

Feature Name: Spur trails--to comfort stations and camping areas; Campground Area

CLI Feature ID: 189180

Feature Contribution: Non contributing

Feature Name: Stone-edged trail to helispot; Pump station and corral area

CLI Feature ID: 189181

Feature Contribution: Non contributing

Feature Name: Ramp-like trail to comfort station; Pump station and corral area

CLI Feature ID: 189182

Feature Contribution: Non contributing

Feature Name: Stone-edged trail to sought of Mule Barn; Pump station and corral area

CLI Feature ID: 189183

Feature Contribution: Non contributing

Feature Name: Spur trail--informal; Pump station and corral area

CLI Feature ID: 189184

Feature Contribution: Non contributing

Feature Name: Concrete sidewalks; Day use area

CLI Feature ID: 189185

Feature Contribution: Non contributing

Feature Name: Concrete sidewalks; Pump station and corral area

CLI Feature ID: 189186

Feature Contribution: Undetermined

Landscape Characteristic Graphics:



Photograph 9. Junction of the Bright Angel Trail, Plateau Point, and the Tonto East and West Trails near the mule corral at Indian Garden, looking north, 2009. Source: Logan Simpson Design (LSD).



Photograph 10. Switchback with dry-stacked stone infill, looking north, 2009. Source: Logan Simpson Design (LSD).



Photograph 11. Switchbacks at the Devil's Corkscrew, northeast of Indian Garden, facing southwest, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Natural Systems and Features**

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The Bright Angel Trail traverses one of the most renowned natural systems in the world; in fact, the Grand Canyon itself is listed as “One of the Seven Natural Wonders of the World.” As one of the largest canyon systems in the world, the Grand Canyon consists of a large web of canyons with a main gorge that has been cut by the Colorado River over millions of years. The Bright Angel Trail travels over and along a grand scale of escarpments, pediments, buttes, plateaus, and ridges, as well as a number of subordinate features such as dry washes, perennial streams, seeps, and springs that were created by the Colorado River, Garden Creek, and Pipe Creek. (Photograph 15). Garden Creek represents the remnant of the drainage system that carved the area known as the Bright Angel Fault (also referred to as the Inner Canyon.) Garden Creek and Pipe Creek slice through the expansive Tonto Plateau that is sometimes referred to as the secondary “shelf” of the Canyon located approximately 3,000 feet (in elevation) down from the South Rim. The types of natural systems currently existing within the Bright Angel Trail Corridor are directly related to these five dominant geological features.

In the arid west, elevation changes and landforms play a large role in shaping the natural systems around them through erosional processes. Furthermore, microclimate extremes created by steep cliffs’ and landforms’ deep shade and long shadow lines, as well as their hot, exposed slopes further shape the natural system of the Trail. On a smaller scale, a slight depression or drainage that presents an opportunity for the smallest amount of moisture to collect, can greatly influence the natural system of flora and fauna within the trail corridor. The Bright Angel Trail Corridor’s natural systems include those derived from Garden Creek, Pipe Creek, Bright Angel Creek, the Colorado River, and the Tonto and Kaibab plateaus.

CONTRIBUTING FEATURES:

1. Garden Creek
2. Pipe Creek
3. Bright Angel Creek
4. Bright Angel Fault (Inner Canyon)
5. Colorado River
6. Sand dunes
7. Flood plains
8. Dry washes
9. Tonto Plateau
10. Kaibab Plateau
11. Native flora and fauna

INDIAN GARDEN LANDSCAPE AREA

Humans were first drawn to Indian Garden for its water resources—including springs, seeps, and Garden Creek. The water provided irrigation for Native American crops, power for mining operations, and cooling refreshment for tourists. In the early part of the period of significance—during Ralph Cameron's tenure in Indian Garden—water from Garden Creek was mainly used to irrigate vegetable gardens, as an aid for developing photographs at the Kolb Brothers' studio, and likely for food preparation activities. Although a dam was placed across the flow of Garden Creek to create a pond, there was little physical manipulation to water resources, in contrast to later years.

In the middle to later portion of the period of significance—during NPS control of Indian Garden—NPS and CCC crews, along with Santa Fe Railroad civil engineers, created ways to harness these water resources. The NPS and Santa Fe Railroad collaborated to install pipeline and water handling facilities to carry water from Garden Creek up to the South Rim. The Garden Creek bed was channelized with riprap and mortar to prevent washouts from frequent flooding. Over time, people involved with managing Indian Garden turned from viewing water as an entirely welcome resource to attempting to control the flood events and natural creek flow.

Overall, however, Garden Creek retains much of the same course at present as it did during the period of significance. It is highly likely that the creek bed margins and floodplain have shifted over time, due to flooding and naturally-occurring erosion of the creek banks. It is not known if the amount of water flowing through the creek has increased or decreased since the period of significance. Similarly, the current versus historic condition of the springs, seeps, and dry washes is unknown. The 1995 General Management Plan (GMP), however, states that water resource management studies will be undertaken, such as the impact of water diversion or groundwater withdrawal on seeps and springs and an in-stream flow study for Garden Creek; the NPS's requirement of these studies suggests that water flow and management has changed over time (GMP, 24).

The surrounding cliffs of the South Rim and desertscrub-covered slopes appear to have changed very little. Erosion and flooding have, however, impacted some of the rocky slopes closer to the creek by undercutting the slope toe and exposing loose soil and rock.

The wildlife component of Indian Garden is not well-documented from a historical point-of-view. It is likely that any native wildlife species present in Indian Garden during the period of significance still continues to reside on the site in 2002, due to lack of climactic changes. No antelope remain, however, from a herd introduced in the 1930s as part of an artificial feeding program meant to grow the herd as a tourist attraction and vegetation restoration instigator.

CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Intermittent streams

DAY USE AREA

1. Garden Creek
2. Floodplain

PUMP STATION AND CORRAL AREA

- 1. Perennial streams
- 2. Garden Creek
- 3. Dry washes

NORTH INDIAN GARDEN AREA

- 1. Floodplain
- 2. Garden Creek
- 3. Dry washes

NON-CONTRIBUTING FEATURES:

DAY USE AREA

- 1. Wet area

Character-defining Features:

Feature Name: Garden Creek; Bright Angel Trail Corridor

CLI Feature ID: 189187

Feature Contribution: Contributing

Feature Name: Intermittent streams; Administration Area

CLI Feature ID: 189188

Feature Contribution: Contributing

Feature Name: Garden Creek; Day use area

CLI Feature ID: 189189

Feature Contribution: Contributing

Feature Name: Floodplain; Day use area

CLI Feature ID: 189190

Feature Contribution: Contributing

Feature Name: Perennial Streams; Pump station and corral area

CLI Feature ID: 189191

Feature Contribution: Contributing

Feature Name: Garden Creek; Pump station and corral area

CLI Feature ID: 189192

Feature Contribution: Contributing

Feature Name: Dry washes--Pump station and corral area

CLI Feature ID: 189193

Feature Contribution: Contributing

Feature Name: Floodplain; North Indian Garden Area

CLI Feature ID: 189194

Feature Contribution: Contributing

Feature Name: Garden Creek--North Indian Garden Area

CLI Feature ID: 189195

Feature Contribution: Contributing

Feature Name: Dry washes; North Indian Garden Area

CLI Feature ID: 189196

Feature Contribution: Non contributing

Feature Name: Wet area; Day use area

CLI Feature ID: 189197

Feature Contribution: Non contributing

Landscape Characteristic Graphics:



Photograph 15. The Bright Angel Trail corridor, entering the “narrows” north of Indian Garden, facing north, 2009. Source: Logan Simpson Design (LSD).

Landscape Characteristic:
Land Use

The original land use of the Bright Angel Trail Corridor was one of a utilitarian transportation corridor. This is still the underlying land use today as it still provides a means to get from one destination to another for tourists, recreationists, park personnel, and utilities. It began as, and remains still today, a transportation corridor for pedestrian and pack animal movement, as well as a utility corridor. However, the overlay land use of tourism and recreation remains intact from the second sub-period of significance (1928-1942). Throughout and after this period of significance, the conjoined land uses of transportation, utility, and recreation/tourism have been expanded to accommodate increased numbers of visitors, provide for visitor comfort and safety, and efficiently pump water to the South Rim.

Land uses that were added or expanded at Indian Garden postdating the period of significance include safety facilities, such as the first aid clinic and helicopter landing spots; administrative facilities such as the formal ranger residence and laundry room; and maintenance facilities such as the repair shop, trail and maintenance crew bunkhouses, and second pump house.

Land uses that are no longer extant from the period of significance are the retail opportunities once provided by Ralph Cameron's concessions.

CONTRIBUTING FEATURES:

1. Transportation corridor
2. Utility corridor
3. Recreation/tourism use

NON-CONTRIBUTING FEATURES:

1. Emergency facilities at rest houses
2. Emergency facilities at Indian Garden
3. Administrative facilities at Indian Garden
4. Maintenance facilities at Indian Garden

MISSING FEATURES:

1. Retail/concessionaire facilities

Landscape Characteristic:
Small Scale Features

BRIGHT ANGEL TRAIL LANDSCAPE AREA

No visible, intact small-scale features were documented from the Cameron-era sub-period of significance (1890-1927) or from the second period of significance between 1927 and 1942. Due to the nature (i.e. durability and longevity of materials) likely used for small scale features, it is possible that they were removed as they became degraded or were no longer needed. It is also possible that former small-scale features may remain underground.

Recurring small-scale features located along the length of the trail include wooden pine log and native stone water bars, as well as native stone edging (Photograph 16). Small-scale features generally located at the rest areas, Indian Garden, and Phantom Ranch includes wood rail fencing, signage, and benches (Photograph 17). Resthouses also include small-scale non-contributing features such as potable water spigots, emergency phones, and informational sign boards. Additionally, some rest areas provide interpretative signage for the Canyon's geological, landscape, or wildlife attributes.

CONTRIBUTING FEATURES:

None.

NON-CONTRIBUTING FEATURES:

1. Informational/interpretative signs
2. Modern wood benches
3. Hitching bars

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Intermittent streams
2. Stone edging
3. Wood pine logs and stone water bars
4. "Rustic" wood benches
5. Wood rail fencing

INDIAN GARDEN LANDSCAPE AREA

No visible, intact small-scale features remain from the Cameron-era sub-period of significance, although some features may be underground. While no known features remain, existing small-scale features perform many of the same functions; missing features such as hitch racks, signage, rain gauges, and wood fencing have been replaced over time with more contemporary materials. Features that were not updated and replaced, such as the oil float box, Kolb Studio items, and small-scale features related to Cameron's retail enterprises, were likely no longer needed.

The type and extent of small-scale features present in Indian Garden between 1927 and 1942 are difficult to assess due to lack of graphic and photographic documentation. It is likely, as with the Cameron-era sub-period of significance, that many features have been upgraded over time using contemporary materials. These features may include hitch racks, water troughs, fences, signage, and seating. Many photographs taken between 1927 and 1942 also show temporary construction-related items—including wheelbarrows, sawhorses, and pulleys.

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Picnic table
2. Windsock and post
3. Flagpole
4. Tree cages
5. Utility meters and irrigation boxes
6. Wire mesh fence

CAMPGROUND AREA

1. Picnic tables
2. Camp site markers
3. Ammunition box
4. Backpack bar
5. "Contemporary" benches
6. Utility and irrigation boxes

DAY USE AREA

1. "Contemporary" bench
2. Continuous bench seating
3. Electrical distribution box
4. Picnic tables
5. Wood and wire mesh fence
6. PVC pipe

PUMP STATION AND CORRAL AREA

1. Boulder and log edging
2. Wooden cabinet
3. Electric hook-up
4. "No hiking" sign

- 5. Metal pipe rail fencing
- 6. Chain-link fencing
- 7. “Contemporary” benches
- 8. Interpretative wayside
- 9. Utility structures

NON-CONTRIBUTING, COMPATIBLE FEATURES:

ADMINISTRATION AREA

- 1. Typical signage
- 2. Stone edging

CAMPGROUND AREA

- 1. “Rustic” benches
- 2. Stone edging
- 3. Drinking fountains
- 4. Typical signage

DAY USE AREA

- 1. Stone edging
- 2. Typical signage
- 3. “Rustic” bench
- 4. Drinking fountains

PUMP STATION AND CORRAL AREA

- 1. Stone edging
- 2. Wooden gate
- 3. Wooden troughs with metal edging
- 4. Large metal troughs
- 5. “Rustic” benches
- 6. Drinking fountain
- 7. Typical signage

UNDETERMINED FEATURES:

ADMINISTRATION AREA

- 1. Hitching bar

DAY USE AREA

- 1. Stepping stones

PUMP STATION AND CORRAL AREA

- 1. Hitching bars

Character-defining Features:

Feature Name:	Wood fencing; Bright Angel Trail Corridor
CLI Feature ID:	189198
Feature Contribution:	Non contributing

Feature Name: Contemporary illustrative sign; Bright Angel Trail Corridor

CLI Feature ID: 189199

Feature Contribution: Non contributing

Feature Name: Cottonwood stumps; Bright Angel Trail Corridor

CLI Feature ID: 189200

Feature Contribution: Non contributing

Feature Name: Picnic Table; Administrative area

CLI Feature ID: 189201

Feature Contribution: Non contributing

Feature Name: Windsock and post; Administrative area

CLI Feature ID: 189202

Feature Contribution: Non contributing

Feature Name: Flagpole; Administrative area

CLI Feature ID: 189203

Feature Contribution: Non contributing

Feature Name: Tree; Administrative area

CLI Feature ID: 189204

Feature Contribution: Non contributing

Feature Name: Tree cages; Administrative area

CLI Feature ID: 189205

Feature Contribution: Non contributing

Feature Name: Utility meters and irrigation boxes; Administrative area

CLI Feature ID: 189206

Feature Contribution: Non contributing

Feature Name: Wire mesh fence; administrative area

CLI Feature ID: 189207

Feature Contribution: Non contributing

Feature Name: Picnic Tables; Campground area

CLI Feature ID: 189208

Feature Contribution: Non contributing

Feature Name: Camp site markers; Campground area

CLI Feature ID: 189209

Feature Contribution: Non contributing

Feature Name: Ammunition box; Campground area

CLI Feature ID: 189210

Feature Contribution: Non contributing

Feature Name: Backpack bar; Campground area

CLI Feature ID: 189211

Feature Contribution: Non contributing

Feature Name: "Contemporary" benches; Campground area

CLI Feature ID: 189212

Feature Contribution: Non contributing

Feature Name: Utility and irrigation boxes; Campground area

CLI Feature ID: 189213

Feature Contribution: Non contributing

Feature Name: "Contemporary" benches; Day use area

CLI Feature ID: 189214

Feature Contribution: Non contributing

Feature Name: Continuous bench seating; Day use area

CLI Feature ID: 189215

Feature Contribution: Non contributing

Feature Name: Electrical distribution box; Day use area

CLI Feature ID: 189216

Feature Contribution: Non contributing

Feature Name: Picnic tables; Day use area

CLI Feature ID: 189217

Feature Contribution: Non contributing

Feature Name: Wood and wire mesh fence; Day use area

CLI Feature ID: 189218

Feature Contribution: Non contributing

Feature Name: PVC Pipe; Day use use area

CLI Feature ID: 189219

Feature Contribution: Non contributing

Feature Name: Boulder and log edging; Pump station and corral area

CLI Feature ID: 189220

Feature Contribution: Non contributing

Feature Name: Wooden cabinet; Pump station and corral area

CLI Feature ID: 189221

Feature Contribution: Non contributing

Feature Name: Electrical hook-up; Pump station and corral area

CLI Feature ID: 189222

Feature Contribution: Non contributing

Feature Name: "No Hiking" sign; Pump station and corral area

CLI Feature ID: 189223

Feature Contribution: Non contributing

Feature Name: Metal pipe rail fencing; Pump station and corral area

CLI Feature ID: 189224

Feature Contribution: Non contributing

Feature Name: Chain-link fencing; Pump station and corral area

CLI Feature ID: 189225

Feature Contribution: Non contributing

Feature Name: "Contemporary" benches; Pump station and corral area

CLI Feature ID: 189226

Feature Contribution: Non contributing

Feature Name: Interpretive wayside; Pump station and corral area

CLI Feature ID: 189227

Feature Contribution: Non contributing

Feature Name: Utility structures; Pump station and corral area

CLI Feature ID: 189228

Feature Contribution: Non contributing

Feature Name: Stone edging; Bright Angel Trail Corridor

CLI Feature ID: 189229

Feature Contribution: Non contributing – compatible

Feature Name: Log risers and stone water bars; Bright Angel Trail Corridor

CLI Feature ID: 189230

Feature Contribution: Non contributing – compatible

Feature Name: "Rustic" benches; Bright Angel Trail Corridor

CLI Feature ID: 189231

Feature Contribution: Non contributing – compatible

Feature Name: Typical signage; Administrative area

CLI Feature ID: 189232

Feature Contribution: Non contributing – compatible

Feature Name: Stone edging; Administrative area

CLI Feature ID: 189233

Feature Contribution: Non contributing – compatible

Feature Name: "Rustic" benches; Campground area
CLI Feature ID: 189234
Feature Contribution: Non contributing – compatible

Feature Name: Stone edging; Campground area
CLI Feature ID: 189235
Feature Contribution: Non contributing – compatible

Feature Name: Drinking fountains; Campground area
CLI Feature ID: 189236
Feature Contribution: Non contributing – compatible

Feature Name: Typical signage; Campground area
CLI Feature ID: 189237
Feature Contribution: Non contributing – compatible

Feature Name: Rock edging; Day use area
CLI Feature ID: 189238
Feature Contribution: Non contributing – compatible

Feature Name: Typical signage; Day use area
CLI Feature ID: 189239
Feature Contribution: Non contributing – compatible

Feature Name: "Rustic" bench; Day use area
CLI Feature ID: 189240
Feature Contribution: Non contributing – compatible

Feature Name: Drinking fountains; Day use area
CLI Feature ID: 189241
Feature Contribution: Non contributing – compatible

Feature Name: Stone edging; Pump station and corral area
CLI Feature ID: 189242
Feature Contribution: Non contributing – compatible

Feature Name: Wooden gate; Pump station and corral area
CLI Feature ID: 189243
Feature Contribution: Non contributing – compatible

Feature Name: Wooden troughs with metal edging; Pump station and corral area
CLI Feature ID: 189244
Feature Contribution: Non contributing – compatible

Feature Name: Large metal troughs; Pump station and corral area
CLI Feature ID: 189245
Feature Contribution: Non contributing – compatible

Feature Name: "Rustic benches; Pump station and corral area
CLI Feature ID: 189247
Feature Contribution: Non contributing – compatible

Feature Name: Drinking fountain; Pump station and corral area
CLI Feature ID: 189248
Feature Contribution: Non contributing – compatible

Feature Name: Typical signage; Pump station and corral area
CLI Feature ID: 189249
Feature Contribution: Non contributing – compatible

Feature Name: Hitching bar; Bright Angel Trail Corridor
CLI Feature ID: 189250
Feature Contribution: Undetermined

Feature Name: Hitching bar; Administration area
CLI Feature ID: 189251
Feature Contribution: Undetermined

Feature Name: Stepping stones; Day use area
CLI Feature ID: 189252
Feature Contribution: Undetermined

Feature Name: Hitching bars; Pump station and corral area
CLI Feature ID: 189253
Feature Contribution: Undetermined

Landscape Characteristic Graphics:



Photograph 16. Wood pine log water bars along the Bright Angel Trail, facing north, 2009. Source: Logan Simpson Design (LSD).



Photograph 17. Wooden bench in the vicinity of Phantom Ranch, facing north, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Spatial Organization**

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The natural spatial pattern of the Bright Angel Trail Corridor is one that is derived from three dominant geological features—the Bright Angel Fault, Tonto Plateau, and Pipe Creek. In the same manner in which the Colorado River carved the main gorge of the Canyon, Garden Creek represents the remnant of the drainage system that carved the area known as the Bright Angel Fault (also referred to as the Inner Canyon.) Tributary drainages—dry washes and intermittent streams—intersect Garden Creek and interrupt its linear pattern. These interruptions provide small vista reliefs at a more intimate scale than the grand view of the main gorge that is ever-present. The natural characterization of an inner canyon (i.e., sense of enclosure, narrow, internally-focused) is briefly interrupted by the open expanse of the Tonto Plateau. It is reestablished as the corridor enters into the Pipe Creek tributary.

Overall, the spatial organization of the Bright Angel Trail Landscape Area has changed very little since the two sub-periods of significance. The Bright Angel Trail serves as the main spine for which tributary trails and a hierarchy of developed use areas are organized. The three main use areas include the South Rim, Indian Garden, and Phantom Ranch. While the scale of these main areas vary, they are organized and focused internally as an independent use area that provides visitors with a variety of activities and services related to its location and destination usage. The organization of these three areas is similar in that they each consist of an arrangement of smaller areas related to different uses. The historical organization of the South Rim and Phantom Ranch being the termini, and Indian Garden being a midway respite point, for the Bright Angel Trail remains intact today.

Three subordinate areas of developed spatial organization are dispersed between the main areas discussed above. They are the 1.5-mile, 3-mile, and Pipe Creek Resthouses. Unlike the main areas, these areas are spatially organized to face onto the Bright Angel Trail to provide a welcoming respite for exhausted trail users (Photograph 18). The spatial pattern of each rest house area reflects the constrained topography they are located within (i.e., rock outcroppings, minor ridge lines, creek beds). At each location the rest house provides the traditional nucleus of visitor comfort by providing shade, views of the Canyon, places to sit, rest, off-load backpacks, and get a drink of water. Informational and/or interpretive signage is also provided. The restroom buildings are typically located on the perimeter of the rest house areas to avoid any detracting from the rest house experience.

CONTRIBUTING FEATURES:

1. Bright Angel Trail
2. South Rim
3. Phantom Ranch
4. Indian Garden
5. Rest houses
6. Garden Creek
7. Pipe Creek
8. Tonto Plateau

INDIAN GARDEN LANDSCAPE AREA

Spatial organization at present differs greatly from that during the period of significance—particularly from the Cameron-era years. Spatial patterns have changed both in complexity and number, due to the development of the site over time.

During the Cameron years of the period of significance, from 1903 until 1927, space was organized in a fairly central location along the Bright Angel Trail. Cameron's stone house, the tent frame grouping, the vegetable garden, and other miscellaneous buildings and structures formed a corridor of space along the trail, upon which all these features were focused. Other subordinate spaces included the corral to the south and the alfalfa field to the north.

When the NPS gained control over the site in 1927, their work crews demolished Cameron's

buildings and structures and replaced them with their own development. The new NPS-era construction began in a similar location as Cameron's former camp, south and west of the Bright Angel Trail/Plateau Point Trail split. However, while these NPS-era spaces were also aligned along the Bright Angel Trail, they focused more inwardly upon themselves, creating separate spaces, rather than reinforcing the trail as both gathering space and passage corridor.

Between 1927 and 1942, NPS-constructed spaces included a picnic area, a stone wall-enclosed gathering space which is no longer extant; a space north of the Caretaker's Residence which once contained dry-laid stone erosion-control or sewage-handling channels and Cameron's remnant cottonwood tree rows; and the Pump House space, which is still extant, yet has expanded in square footage since the period of significance. Patterns of spatial organization missing from the latter period of significance are the mule barn and corral space—now located approximately where a picnic area once stood, and the former sludge trenches—once located west of the current Day Use Area. The only spatial pattern that can be said to remain from the early part of the period of significance, 1903 until 1927, are the faintly distinguishable rows of trees that once helped define the rows of tent frames used by early tourists.

The spatial organization of Indian Garden remained fairly similar to its NPS-era period of significance incarnation until 1989, when the NPS again performed a massive rehabilitation of the site. The result was a reorganization of spaces that already existed and the addition of new patterns to the south, making the site even less centrally-focused than during the latter portion of the period of significance. Although smaller spaces, such as the terrace between the Caretaker's Residence and Rock House, the Trailside Shelter space, and the Pump House space remain from the period of significance, overall historic spatial patterns are no longer intact.

CONTRIBUTING FEATURES:

DAY USE AREA

1. SAR Cache/Rock House terrace

PUMP STATION AND CORRAL AREA

1. Pump Station node

NORTH INDIAN GARDEN AREA

1. Cleared space—cleared floodplain
2. Steep hillside

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Gathering space—Pump Operator's Residence
2. Corridor of space
3. Courtyard
4. Backyard space—Ranger Residence
5. Public space—Ranger Residence
6. Sand filter bed
7. Helispot

CAMPGROUND AREA

1. Camping areas
2. Central public space
3. Secondary public space
4. Comfort station spaces

DAY USE AREA

1. Picnic grounds

PUMP STATION AND CORRAL AREA

1. Visitor rest area
2. Mule Barn facility
3. Helispot

UNDETERMINED FEATURES:

DAY USE AREA

1. Trailside Shelter cleared area

NORTH INDIAN GARDEN AREA

1. Cleared space at Rehandling Pump House

Character-defining Features:

Feature Name: Linear path through corridor; Bright Angel Trail Corridor

CLI Feature ID: 189254

Feature Contribution: Contributing

Feature Name: Node created by trailside shelter; Bright Angel Trail Corridor

CLI Feature ID: 189255

Feature Contribution: Contributing

Feature Name: SAR Cache/Rock House Terrace; Day use area

CLI Feature ID: 189256

Feature Contribution: Contributing

Feature Name: Pump station node; Pump station and Corral area

CLI Feature ID: 189257

Feature Contribution: Contributing

Feature Name: Central space--cleared floodplain; North Indian Garden area

CLI Feature ID: 189258

Feature Contribution: Contributing

Feature Name: Steep hillside; North Indian Garden Area

CLI Feature ID: 189260

Feature Contribution: Contributing

Feature Name: Gather space; Pump Operator's Residence; Administration area

CLI Feature ID: 189261

Feature Contribution: Non contributing

Feature Name: Corridor of space-; Administration Area

CLI Feature ID: 189263

Feature Contribution: Non contributing

Feature Name: Courtyard; Administration area

CLI Feature ID: 189265

Feature Contribution: Non contributing

Feature Name: Backyard space--Ranger Residence; Administration Area

CLI Feature ID: 189266

Feature Contribution: Non contributing

Feature Name: Public space--Ranger Residence; Administration Area

CLI Feature ID: 189267

Feature Contribution: Non contributing

Feature Name: Sand filter bed; Administration Area

CLI Feature ID: 189270

Feature Contribution: Non contributing

Feature Name: Helispot; Administration area

CLI Feature ID: 189271

Feature Contribution: Non contributing

Feature Name: Camping areas; Campground area

CLI Feature ID: 189273

Feature Contribution: Non contributing – compatible

Feature Name: Central Public Space; Campground area

CLI Feature ID: 189274

Feature Contribution: Non contributing

Feature Name: Secondary public space; Campground area

CLI Feature ID: 189275

Feature Contribution: Non contributing

Feature Name: Comfort station spaces; Campground area

CLI Feature ID: 189277

Feature Contribution: Non contributing

Feature Name: Picnic grounds; Day use area

CLI Feature ID: 189278

Feature Contribution: Non contributing

Feature Name: Visitor rest area; Pump station and corral area

CLI Feature ID: 189279

Feature Contribution: Non contributing

Feature Name: Mule Barn facility; Pump station and corral area

CLI Feature ID: 189280

Feature Contribution: Non contributing

Feature Name: Helispot; Pump station and corral area

CLI Feature ID: 189281

Feature Contribution: Non contributing

Feature Name: Junction of Bright Angel Trail and Garden Creek; Bright Angel Trail Corridor

CLI Feature ID: 189283

Feature Contribution: Undetermined

Feature Name: Trailside shelter cleared area; Day use area

CLI Feature ID: 189285

Feature Contribution: Undetermined

Feature Name: Clear space at Rehandling Pump House; North Indian Garden Area

CLI Feature ID: 189287

Feature Contribution: Undetermined

Landscape Characteristic Graphics:



Photograph 18. Approaching 3-Mile rest area from the South Rim along the Bright Angel Trail, looking north, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Vegetation**

BRIGHT ANGEL TRAIL LANDSCAPE AREA

In the arid west, elevation changes, landforms, and water greatly affect the types of biotic communities that are created. The primary biotic communities present within the Bright Angel Trail Corridor are the Juniper-Pinyon Woodland and the Sonoran Desertscrub biomes. The Juniper-Pinyon biome occurs on plateaus and mesas within an elevation range of 5500-7500 feet, which characterizes the Bright Angel Trail Corridor from the South Rim to approximately the 3-Mile Rest House area (Photograph 19). While the dominant tree species are pinyon pine and juniper, this section of the corridor also includes mountain mahogany, barberry, saltbush, rabbitbrush, prickly pear, grasses, and penstemon.

Near 3-Mile Rest House, the biotic communities begin to merge and transition from Juniper-Pinyon Woodland to Sonoran Desertscrub. The majority of the vegetation within the trail corridor is indicative of the Arizona Upland subdivision of the Sonoran Desertscrub biome that includes mesquite, catclaw, creosote, bursage, prickly pear, and ocotillo (Photograph 20). The Arizona Upland desert occurs on rock outcroppings or rocky, coarse soils of desert mountains, buttes, and bajadas found between 500 and 4000 feet elevation. In both biomes, natural plant densities increase near Garden Creek and Pipe Creek, as well as within some of the dry washes.

Along the length of Garden Creek starting at Indian Garden and continuing to the edge of the Tonto Plateau, a unique biotic community of woodland riparian plants dominated by cottonwood trees provides a microclimate that tempers the extreme temperatures of the Sonoran Desertscrub lands (Photograph 21).

With the exceptions of Indian Garden and Phantom Ranch, the Bright Angel Trail Landscape Area generally remains in its native vegetative condition. Exceptions to the native vegetative conditions include exotic plants such as Bermuda grass, which was more than likely brought in by pack animals via seeds in their food or waste. Changes in plant densities occur where concentrated drainage from trail construction has created an increase in moisture (i.e., swales, dip crossings, low points).

Introduced plant material includes cottonwood, redbud, and fig trees that were first planted by the Native Americans in the early 18th century and then again during the Cameron-era in the Indian Garden vicinity. These same types of trees also exist at Phantom Ranch.

CONTRIBUTING FEATURES:

1. Juniper-Pinyon Woodland biotic community
2. Sonoran Desertscrub; Arizona Upland Subdivision biotic community
3. Woodland Riparian biotic community
4. Cottonwood trees
5. Willows
6. Redbud trees
7. Fig trees
8. Grape vines

NON-CONTRIBUTING FEATURES:

1. Bermuda grass

INDIAN GARDEN LANDSCAPE AREA

During the period of significance, three types of vegetation existed: native brush and riparian vegetation, vegetation that was cultivated for food and vegetation that was introduced into the site to provide shade and stabilize slopes.

Cultivated vegetation occurred during the Cameron years in the form of vegetable plots, fruit trees, and alfalfa for mule feed. The NPS revitalization efforts removed the vegetable and alfalfa plots, although it is not known if any fruit trees existed during the latter period of significance. At present, no cultivated vegetation exists at Indian Garden.

Throughout the period of significance, historic photographs show that the coverage of native riparian vegetation increased. The NPS may have intentionally fostered the growth of native vegetation, in order to provide visitors with cooling shade. Although it has determined that the density and coverage of native vegetation increased between Cameron's tenure in Indian Garden and the NPS years of the period of significance, it is not known to what extent native vegetation trends have altered since the period of significance. It is likely, however, that vegetation density continued to increase, particularly in the current Day Use Area and North Indian Garden Area landscape character areas. These areas were once more open and not as densely vegetated than at present, and possibly irrigated with canals. When the Niobrara ambersnail, an endangered snail species, was thought to have been discovered in the Day Use Area in the 1990s, all use and alterations of the space were forbidden. (Once thought to be Kanab ambersnails, biologists now consider the snails to be *Oxyloma haydeni* [Niobrara ambersnail]. The Niobrara ambersnail, while considered a "sensitive" species, is not a federally listed endangered species). Rangers and maintenance personnel were not permitted to maintain the area, vegetation was allowed to grow unchecked, and this landscape character area now has qualities similar to those of a wetland.

Prior to the prohibition of exotic species in the park, certain non-native plants were installed in Indian Garden. Himalaya blackberry (*Rubus procerus* syn. *R. discolor*) and raspberry (*Rubus* sp.) were listed on a 1935 planting list for Indian Garden. At present, only the Himalaya blackberry plants were observed on-site. Native plants were also transplanted into Indian Garden to increase shade and provide erosion control along Garden Creek banks. In the same 1935 plant list mentioned above, redbuds (*Cercis occidentalis*), burro bush (*Ambrosia dumosa*), grapes, and willows were designated. The latter two plants may be the Arizona grape (*Vitis arizonica*) and seep willow (*Baccharis salicifolia*) that are native to the region. Many of the plants on the list, except the burro bush, were observed during fieldwork, but it is not known if they were installed as part of the 1935 planting effort.

Additionally, Ralph Cameron planted native cottonwood trees (*Populus fremontii*) at Indian Garden to create shade for his customers. His tree rows, once located between tent frames in the early part of the period of significance, are discernible at present—one of the few remnants of the Cameron era in Indian Garden.

Due to the lack of formal, geometric planting designs, the use of native plants, and the loosely-placed vegetation shown in a 1935 planting plan, it is likely that the NPS designers followed rustic-style design principles of the time. The vegetation in the planting plan appears to have been sited to both prevent erosion and to blend into the landscape. It appears that these planting design principles are still visible at present. Mature vegetation appears to be located “naturalistically,” rather than as part of a formal design, while new plant installations from 1989 follow similar principles.

After the end-date of the period of significance, the NPS continued to transplant native vegetation into Indian Garden, particularly during the 1989 rehabilitation work.

CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Desertscrub community

CAMPGROUND AREA

1. Riparian community vegetation

DAY USE AREA

1. Cottonwood trees

PUMP STATION AND CORRAL AREA

1. Riparian community vegetation
2. Desertscrub community vegetation
3. Cottonwood trees
4. Redbud tree

NORTH INDIAN GARDEN AREA

1. Riparian community vegetation
2. Cottonwood trees
3. Himalaya blackberry—cleared

NON-CONTRIBUTING FEATURES:

DAY USE AREA

1. Riparian community vegetation

NON-CONTRIBUTING, COMPATIBLE FEATURES:

ADMINISTRATION AREA

1. Transplanted native vegetation
2. Re-vegetation area

CAMPGROUND AREA

1. Transplanted native vegetation

UNDETERMINED FEATURES:

DAY USE AREA

1. Peach tree

Character-defining Features:

Feature Name: Riparian community vegetation; Overview

CLI Feature ID: 189288

Feature Contribution: Contributing

Feature Name: Desertscrub community vegetation; Overview

CLI Feature ID: 189289

Feature Contribution: Contributing

Feature Name: Cottonwood trees; Bright Angel Trail Corridor

CLI Feature ID: 189290

Feature Contribution: Contributing

Feature Name: Redbud Tree; Bright Angel Trail Corridor

CLI Feature ID: 189291

Feature Contribution: Contributing

Feature Name: Desertscrub community; Administration area

CLI Feature ID: 189292

Feature Contribution: Contributing

Feature Name: Riparian community vegetation; Campground area

CLI Feature ID: 189293

Feature Contribution: Contributing

Feature Name: Cottonwood trees; Day use area

CLI Feature ID: 189294

Feature Contribution: Contributing

Feature Name: Riparian community vegetation; Pump station and corral area

CLI Feature ID: 189295

Feature Contribution: Contributing

Feature Name: Desertscrub community vegetation; Pump station and corral area

CLI Feature ID: 189296

Feature Contribution: Contributing

Feature Name: Cottonwood trees; Pump station and corral area

CLI Feature ID: 189297

Feature Contribution: Contributing

Feature Name: Redbud tree; Pump station and corral area

CLI Feature ID: 189298

Feature Contribution: Contributing

Feature Name: Riparian community vegetation; North Indian Garden Area

CLI Feature ID: 189299

Feature Contribution: Contributing

Feature Name: Cottonwood trees; North Indian Garden area

CLI Feature ID: 189300

Feature Contribution: Contributing

Feature Name: Himalaya blackberry--cleared; North Indian Garden area

CLI Feature ID: 189301

Feature Contribution: Contributing

Feature Name: Riparian community vegetation; Day use area

CLI Feature ID: 189302

Feature Contribution: Non contributing

Feature Name: Transplanted native vegetation; Administration area

CLI Feature ID: 189303

Feature Contribution: Non contributing

Feature Name: Re-vegetation area; Administration area

CLI Feature ID: 189304

Feature Contribution: Non contributing

Feature Name: Transplanted native vegetation; Campground area

CLI Feature ID: 189305

Feature Contribution: Non contributing

Feature Name: Edge-defining vegetation; Bright Angel Trail Corridor

CLI Feature ID: 189306

Feature Contribution: Undetermined

Feature Name: Peach tree; Day use area

CLI Feature ID: 189307

Feature Contribution: Undetermined

Landscape Characteristic Graphics:



Photograph 19. Juniper-Pinyon Woodland vegetation along the Bright Angel Trail near the South Rim, looking north, 2009. Source: Logan Simpson Design (LSD).



Photograph 20. Sonoran Desert scrub vegetation along the Bright Angel Trail near Phantom Ranch, looking west, 2009. Source: Logan Simpson Design (LSD).



Photograph 21. Sonoran Desertscrub and Woodland Riparian vegetation along the Bright Angel Trail near Indian Garden, looking north, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Views and Vistas**

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The views and vistas of the Bright Angel Trail Landscape Area remain the same as the views and vistas inhabitants and visitors experienced during both periods of significance (Photographs 19, 20, and 21). It is the grand scale of the Canyon's escarpments, pediments, buttes, plateaus, and ridges that create and frame the views and vistas along the Bright Angel Trail. The most expansive views are experienced at the top of the trail's descent, traversing the Tonto Plateau (the secondary shelf of the Grand Canyon), and travelling along the Colorado River corridor.

As one descends over the rim's edge, the views begin to change from expansive cross-canyon views to inner canyon vistas. This visual transition is further enhanced by the quietness of the inner canyon sounds versus the rim's broader range of sounds. At the termini of the Bright Angel Trail, there are two dimensions of views—either across and down, or across and up. The views and vistas along the trail vary greatly depending on the surrounding landform. The steep switchbacks generally provide views in all cardinal directions in addition to up and down. Characteristic of switchbacks, which reorient the pedestrian as elevation changes new perspectives of the same scenery are presented at every turn. In the same manner, the same views looking down are experienced much differently than when looking up. Views that look down provide an inclusive perspective of the trail and the landscape types it is situated in, the trail's tread and overall alignment, complexity of switchbacks, number and location of people (and mules) on the trail, and destination points (i.e., 1.5-mile and 3-mile rest houses, Indian Garden, Phantom Ranch)—there is a broader understanding of the journey ahead. Views that look up to the rim are less inclusive as one generally cannot see the trail's tread and at times cannot see the trail or people and mules on it. The majority of the views are only of one destination point—the South Rim.

Views of the rest houses as one descends or ascends the inner canyon, provide visual milestones for trail users to gauge their progress to their next destination or resting point. Views from within the rest houses are framed by the openings in the stone walls. These openings frame both cross-canyon

vistas, as well as intimate inner canyon views depending on where each rest house is located and oriented.

Bright Angel Trail above Indian Garden also provides intermittent cross-canyon views of the North Rim. This section of trail provides the broadest views across-canyon as it is the farthest distant from the North Rim. As one descends from the Tonto Plateau, these views become less broad due to the narrowing of the main gorge on approach to the Colorado River.

The Colorado River Trail between Pipe Creek and the Silver Bridge provides “hide-n-seek” views of the Colorado River from approximately 100 feet above the river. In addition, as the trail alignment is forced out into the river corridor by the natural rock outcroppings, longitudinal views up and down river provide a clear cross-section of the river’s erosive history.

Views of the Bright Angel Trail Corridor are often framed by natural landforms—rock outcroppings, escarpments, buttes, and ridges. At nighttime, it is the South Rim and the Canyon walls that frame the night sky. Views are also framed by the openings of each rest house. Whether the rest houses were sited with intention to capture certain views or focal points is unknown.

CONTRIBUTING FEATURES:

1. Views of Bright Angel Trail
2. Views of Garden Creek
3. Views of Indian Garden
4. Views of the Tonto Plateau
5. Views of and from the South Rim
6. Views of the North Rim
7. Views of and from within the Rest houses
8. Views of the inner canyon
9. Views across the Grand Canyon
10. Views of the Colorado River

INDIAN GARDEN LANDSCAPE AREA

During the earlier sub-period of significance, when Indian Garden was under Ralph Cameron’s control and guidance, the Indian Garden landscape was much more open and exposed. Fewer mature trees and less riparian vegetation during this time allowed a full range of views through the site—the entire complex could be viewed from any one particular location in Indian Garden.

As more features were added to the Indian Garden landscape between 1927 and 1942, and the vegetation grew taller and denser, views through the site to other spaces became more foreshortened. The vegetation and buildings created visual barriers between spaces, preventing all-encompassing views of Indian Garden.

Since the period of significance, views within the area have become increasingly foreshortened and fractured. Vegetation continues to grow, both in height and density, resulting in limited view sheds. It is now possible for a person to stand in one area and have no visual access to surrounding spaces. The spaces created during the 1989 rehabilitation, however, afford new and different view opportunities. The southern helispot, in particular, provides sweeping overhead views of the entire site due to its elevated position above Indian Garden. The only views common to both the period of significance and existing conditions are the views available to the surrounding canyon walls. These views have changed little over time, altered only by the increasing height of trees.

CONTRIBUTING FEATURES:

PUMP STATION AND CORRAL AREA

1. Views to surrounding canyon

NORTH INDIAN GARDEN AREA

1. Views to surrounding canyon

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Views to surrounding canyon
2. Views from helispot

CAMPGROUND AREA

1. Views to surrounding canyon

Character-defining Features:

Feature Name: Views to surrounding canyon; Bright Angel Trail Corridor
CLI Feature ID: 189308
Feature Contribution: Contributing

Feature Name: Views to surround canyon; Pump station and corral area
CLI Feature ID: 189309
Feature Contribution: Contributing

Feature Name: Views to surrounding canyon; North Indian Garden area
CLI Feature ID: 189310
Feature Contribution: Contributing

Feature Name: Views to surrounding canyon; Administration area
CLI Feature ID: 189311
Feature Contribution: Non contributing

Feature Name: Views from helispot; Administration area
CLI Feature ID: 189312
Feature Contribution: Non contributing

Feature Name: Views to surrounding canyon; Campground area
CLI Feature ID: 189313
Feature Contribution: Non contributing

Landscape Characteristic Graphics:



Photograph 22. A view of how pediments and ridges within the inner canyon frame cross-canyon views to the North Rim, along the Bright Angel Trail, facing north, 2009. Source: Logan Simpson Design (LSD).



Photograph 23. View looking across-canyon to North Rim with Indian Garden and Plateau Point in middle ground, facing northwest, 2009. Source: Logan Simpson Design (LSD).



Photograph 24. View of upper tunnel and South Rim, facing southwest, 2009. Source: Logan Simpson Design (LSD).



Photograph 25. View from inner canyon "narrows" area, facing northeast, 2009. Source: Logan Simpson Design (LSD).



Photograph 26. View of Pipe Creek inner canyon near River Rest House, facing northwest, 2009. Source: Logan Simpson Design (LSD).



Photograph 27. View from Colorado River Trail looking up river, facing northeast, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Archeological Sites**

Archaeological surveys conducted by the NPS have resulted in the identification of several prehistoric and historic archeological sites within the Bright Angel Trail Corridor. Prehistoric sites and parts of the Bright Angel Trail's general alignment are remnants of the Archaic Period, the Ancestral Puebloan and Cohonian occupation, and/or the Havasupai, Pai, and Paiute habitation. The occupation and habitation is believed to have been predominantly seasonal; however, archaeological evidence also suggests that occupation may have been non-seasonal, particularly for the Havasupai during the late 1800s and early 1900s. Native Americans who occupied the canyon seasonally migrated from the South Rim to Indian Garden to access water and a more temperate climate for growing agricultural crops during the summer. In addition, they mined mineral resources (i.e., pigments and salts) from the inner canyon and followed the Bright Angel Fault as they travelled.

Historic archaeological sites include the remnants of mining activities and tourist ventures within the Canyon, particularly in the vicinity of Indian Garden. The majority of the archaeological sites date to the late 19th and early 20th centuries when prospectors searched the area around Indian Garden and the Bright Angel Trail for valuable minerals and Cameron recognized the trail's potential for tourism.

The majority of archeological sites near or adjacent to the Bright Angel Trail are not marked or noticeable from the trail, with the exception of pictographs located along a grotto of the Bright Angel Trail below the South Rim, known as Mallery's Grotto, and near the two-mile mark of the Bright Angel Trail, south of Indian Garden. The pictograph panels, which depict successful hunting activities, have been attributed to the Havasupai; however, a recent reexamination of Mallery's Grotto suggests that several images may also date to the Archaic Period.

CONTRIBUTING FEATURES:

BRIGHT ANGEL TRAIL CORRIDOR

Site Number

- 1. AZ B:16:140 (Mining remnants)
- 2. AZ B:16:152 (possible Cameron building)
- 3. AZ B:16:164 (Puebloan ruins)
- 4. AZ B:16:165 (Tent platform and cooler/latrine)
- 5. AZ B:16:252 (Cameron artifacts)

NORTH INDIAN GARDEN AREA

- 1. Stone edging
- 2. Debris piles
- 3. Site of former Kolb studio

Character-defining Features:

Feature Name:	Arizona B:16:140 (Mining remnants)
CLI Feature ID:	115090
Feature Contribution:	Contributing
Feature Name:	Arizona B:16:152 (possible Cameron bldg)
CLI Feature ID:	115092
Feature Contribution:	Contributing

Feature Name: Arizona B:16:164 (Puebloan ruins)
CLI Feature ID: 115094
Feature Contribution: Contributing

Feature Name: Arizona B:16:165 (Tnt pltfm; coolr/lat)
CLI Feature ID: 115096
Feature Contribution: Contributing

Feature Name: Arizona B:16:252 (Cameron artifacts)
CLI Feature ID: 115098
Feature Contribution: Contributing

Feature Name: Stone edging - NIGA
CLI Feature ID: 115100
Feature Contribution: Contributing

Feature Name: Debris piles - NIGA
CLI Feature ID: 115102
Feature Contribution: Contributing

Feature Name: Former Kolb studio - NIGA
CLI Feature ID: 115104
Feature Contribution: Contributing

Landscape Characteristic:
Cluster Arrangement

BRIGHT ANGEL TRAIL CORRIDOR

The most visible pattern of clustering within the Bright Angel Trail Corridor is largely a response to the natural, geological environment of the Canyon. Built features are clustered at extreme transverse elevational changes (i.e., switchbacks, cliff/ledge faces), major or minor plateaus (i.e., the Tonto Plateau, ridge lines), and riparian areas or floodplains. The use of native stone features—walls, retaining walls, steps, trail edging, and pavement—at switchbacks and cliff/ledge faces is needed for trail stabilization, reinforcement, protection, and safety, and reinforces the linear form of the trail alignment (Photograph 12). Building areas—Indian Garden, 1.5-mile, 3-mile, and Pipe Creek Rest houses, and Phantom Ranch—which by their massing, require a larger footprint—are located on plateaus or riparian floodplains to minimize impact to the natural terrain (Photograph 13).

As expected, there is a direct correlation between the construction of a built environment and the natural “clustering of people” these features create. Within the Bright Angel Trail Corridor, clustered buildings and structures provide gathering areas of respite and/or Canyon viewing of which users have traditionally availed themselves.

CONTRIBUTING FEATURES:

1. 1.5-mile Rest House
2. 3-mile Rest House
3. Indian Garden
4. Pipe Creek Rest house
5. Phantom Ranch
6. Clusters of retaining walls, walls, and steps dating to the period of significance along the Bright Angel Trail

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Clusters of stone steps, stone walls, wooden pine logs, stone retaining walls, stone trail edging, stone drainage crossings, cobblestone pavement, restroom buildings, and signage along the Bright Angel Trail constructed post period of significance

INDIAN GARDEN LANDSCAPE AREA

Landscape features and systems for Indian Garden are also arranged within distinct cluster patterns. Six different areas within Indian Garden exhibit a distinct coherent identity and land use. Clusters within Indian Garden include the Administration Area, Campground Area, Day Use Area, Pump Station and Corral Area, North Indian Garden Area, and Bright Angel Trail Corridor. The Administration Area, consisting of the ranger residence and maintenance facilities, is located in the southernmost portion of Indian Garden. The Campground Area is located north of the Administration Area and consists of camp sites and comfort stations. North of this area is the Day Use Area consisting of the SAR Cache, Rock House, and groups of picnic tables. Visitor use and park maintenance of this area has been limited due to excessively wet conditions and potential endangerment of the Niobrara ambersnail habitat. The Pump Station and Corral Area contain mule facilities and pump station buildings and is located north of the Day Use Area. The North Indian Garden Area occupies the northern half of Indian Garden and contains dense vegetation, the Kolb Studio ruin, the Rehandling Pump House, and other Cameron-era resources. The Bright Angel Trail Corridor and Garden Creek edge the Administration Area and campground to the east.

CONTRIBUTING FEATURES:

1. Bright Angel Trail Corridor
2. North Indian Garden Area

NON-CONTRIBUTING FEATURES:

1. Administration Area
2. Campground Area
3. Day Use Area
4. Pump Station and Corral Area

Landscape Characteristic Graphics:



Photograph 12. Stacked stone wall adjacent to the Bright Angel Trail, looking northwest, 2009. Source: Logan Simpson Design (LSD).



Photograph 13. Pipe Creek restroom with Colorado River in the background. The Colorado River Trail is visible to the right of the restroom, looking northwest, 2009. Source: Logan Simpson Design (LSD).

Landscape Characteristic:
Constructed Water Features

The only constructed water feature located within the Bright Angel Trail corridor is the water line that was initially constructed in 1931-32 as part of the trans-canyon water system. It was upgraded from a 6" pipe to an 8" steel pipe in 1985. While the water line was designed to transport water from the north side of the Canyon to the South Rim, it has become a feature of the landscape due to its exposure as it transverses slopes and drainages along its alignment.

The water line also provides potable water to the three rest houses where trail users can refill water containers from water spigots or hose bibs. At numerous locations within the trail corridor as well as the trail's tread itself, the water line and standpipes are exposed as a direct result of the Canyon's physical constraints and to provide convenient maintenance access. The water line is supported on native stone and mortar piers at creek crossings and attached to the Silver Bridge crossing the Colorado River. The rusticated water line and standpipes, and native stone piers blend in well with the Canyon's natural aesthetic and the NPS's rustic park architecture.

CONTRIBUTING FEATURES:

1. Trans-canyon Water System

NON-CONTRIBUTING FEATURES

1. Hose bib (1 ½-mile Rest House)
2. Water spigots (3-mile and River Rest Houses)

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Steel Pipe (1985)

UNDETERMINED FEATURES:

1. Native stone support piers

Landscape Characteristic:
Cultural Traditions

The Bright Angel Trail Corridor is rich in cultural traditions that began with the Archaic and Ancestral Puebloan and Cohonina occupations of the Canyon and continued with the Pai Native American traditions of seasonal migration from 300 AD to the 1600s. The Puebloan and Cohonina lifeways utilized all areas of the Grand Canyon and exploited a wide variety of canyon resources. They hunted many species and mined mineral resources such as pigments and salt from the inner canyon. Unlike the Puebloan peoples, who exploited seasonal resources but led a predominantly sedentary existence, the Cohonina lifeway was characterized by seasonal movement among different locales. Both groups also practiced agriculture and cultivated numerous crops including beans, maize, cotton, and squash (Wright 2009).

The Pai peoples occupied the North and South Rims of the Canyon and the inner Canyon where springs and agriculturally suitable lands were located. They depended on agricultural fields located on the canyon bottoms and adopted some cultivars and agricultural practices of their Puebloan and Cohonina predecessors. Similarly, the Havasupai practiced semi-sedentism, wintering at more permanent sites on or adjacent to the rim and spending planting and harvesting seasons within the Grand Canyon and tributary bottomlands.

Reflective of the settlement of—and the evolving culture of—the Southwestern United States, Native American culture was influenced by the introduction of Spanish trade with the Native tribes in the Canyon area. By the 18th century, the Havasupai had planted peach, apricot, and fig trees within the inner canyon area that were obtained from the Spanish supply line. These types of trees were also

planted by Euro-Americans at Indian Garden and Phantom Ranch during the Cameron period, of which many still survive or have naturalized.

The tradition of Native American seasonal migration and cultivation of the Indian Garden area continued until the late 19th century when early prospectors and miners began searching for valuable minerals in the Indian Garden and Tonto Plateau vicinity. In the 1880s, President Hayes established the Havasupai Indian Reservation which consisted of 580 acres of land within the Canyon. For 93 years, the Havasupai were confined to staying inside the canyon which led to an increased reliance on agriculture and tourism. During this time, the Havasupai practiced agriculture in the summer within the canyon and hunting and gathering on the plateau during the winter. In 1975, the U.S. Government re-allotted 188,000 acres to the Havasupai in Havasu Canyon which shares a boundary with the Grand Canyon. In present times, the tribe raises horses and provides tourist services into Cataract Canyon (Schwartz 1983). The Havasupai continue to maintain an allocation of 95,000 acres of land within the boundaries of the park for their permanent use (Hirst 2006; Schwartz 1983).

A second phase of cultural traditions represented in the Bright Angel Trail Corridor includes activities and events related to the mining movement prevalent in the Western United States during the late 19th century. Niles and Ralph Cameron are credited with the development of the “Bright Angel Toll Road” that was built to accommodate pack animals with mining supplies and tools. The Bright Angel Trail Corridor fast became the traditional route for prospectors, miners, and cattlemen. By 1892, the culture of mining and industry at the South Rim and at Indian Gardens began to transition to a culture of tourism, which was proving to be more successful than the Canyon’s mining activities. Cameron continued developing tourist camps and prospecting and mining activities until the early 20th century when the Grand Canyon National Park was established. Cameron deeded the land to the federal government in 1928. Many of the plants—including those established by the Native Americans mentioned above— including cottonwoods, willow, redbud, grapes, and vegetables- were used to support camp-life for tourists at Indian Gardens and still exist today.

A third phase of cultural tradition correlates with the second period of significance recognized for the component landscape, which spans from 1927 to 1942. This period characterizes the development of NPS’s vernacular approach to park architecture and the CCC’s craftsmanship of frugal use of local building materials during the Great Depression. CCC-era rest houses, stone retaining walls, and steps still remain in place today and evoke this important era of Park infrastructural development.

One cultural tradition transcending all phases mentioned above, that has become a quintessential Canyon experience—is the use of pack animals. Once used for practical transport of prospecting and mining supplies and tools, pack animals now transport tourists, luggage, food, beverages, and other supplies to and from Phantom Ranch and Indian Garden (Photograph 14). “Cameron’s Trail” was originally widened to accommodate pack animals between 1890 and 1891.

CONTRIBUTING FEATURES:

1. Use of the Bright Angel Trail by Native American cultures
2. Use of the Bright Angel Trail associated with mining claims and operations
3. Continued use of the Bright Angel Trail for tourism
4. Tradition of CCC workmanship and NPS Rustic Architecture
5. Continued repair and maintenance of Bright Angel Trail
6. Establishing trees and plant materials for visitor comfort

Landscape Characteristic Graphics:



Photograph 14. Mule train traversing the “Dunes” section of the Colorado River Trail, looking north, 2009. Source: Logan Simpson Design (LSD).

**Landscape Characteristic:
Topography**

The Canyon is approximately one mile deep and ten miles wide. The Bright Angel Trail traverses approximately 4,400 feet of elevation in 9.6 miles from the South Rim to the Colorado River. Within this distance, the Bright Angel Trail travels over and along a grand scale of escarpments, pediments, buttes, plateaus, ridges, and the Colorado River; as well as a number of subordinate features such as dry washes, perennial streams, seeps, and springs. While these geological and hydrological features are the physical attributes that provided the impetus for the initial uses of the corridor, they have also been the main obstacles in developing the corridor. The greatest challenge in developing this transportation corridor as a user-friendly experience has involved the means by which extreme slopes and drainage can be accommodated in the most sustainable manner.

Almost one-half of the trail's total elevation change (approximately 2,100 feet) occurs between the South Rim and the 3-Mile Rest House. The second steepest section of the trail is the Devil's Corkscrew at the edge of the Tonto Plateau. These sections of trail continue to present a maintenance challenge, requiring ongoing tread and edge repairs from rock slides and erosion. Beginning in 1898 and occurring throughout the second period of significance (1927-1942) until now, reroutes in this section have been undertaken to reduce the gradient to be more user-friendly and sustainable.

Changes to the existing topography have been at a small scale related to the trail's gradient and cross drainage. The trail's tread has been benched into the corridor's slopes where required. The typical cross section includes a shallow drainage swale on the upslope side of the tread until it crosses the tread at a reinforced dip or waterway that drains to the trail's outslope area. In a few areas, rock outcroppings have constrained the opportunity to bench the trail into the slope. At these locations, the rock face has been excavated to allow the trail to pass under a rock ledge. In two locations an actual "tunnel" has been excavated to allow the trail to pass through at a more sustainable gradient.

The trail corridor is also characterized by relatively level areas in the section traversing the Tonto Plateau near Indian Garden, and again at the bottom of the Devil's Corkscrew on the approach to Pipe Creek. There is a slight rise along the Colorado River from Pipe Creek to the east, and then a slight decline to Phantom Ranch.

The corridor's varied topography provides microclimatic advantages depending on the time of day and time of year. The various Native American tribes took advantage of the elevational change at Indian Garden to grow summer crops. Today trail users take advantage of the steep sections of the trail shaded by the canyon walls during the summer or heat of the day. During the colder parts of the day or year, the open plateau areas provide welcome access to the sun's warmth.

CONTRIBUTING FEATURES:

1. Kaibab Plateau
2. Tonto Plateau
3. Colorado River
4. Steep section of trail between South Rim and 3-Mile Rest House
5. Steep section of trail at Devil's Corkscrew
6. Relatively flat topography near Indian Garden
7. Relatively flat topography between Devil's Corkscrew and Pipe Creek
8. Slight incline from Pipe Creek east along Colorado River
9. Slight decline from Colorado River to Phantom Ranch
10. Varied topography along entire trail length

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, walls, retaining walls, edging, drainage crossings.)

Condition

Assessment Interval (Years): 6

Next Assessment Due Date: 10/23/2026

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 06/20/2005

Condition Assessment Explanatory Narrative:

As a whole, the 2005 CLR for Indian Garden found that the portions of Indian Garden rehabilitated or developed in 1989, including the Administration Area and the Pump Station and Corral Area, were in good condition at that time. The segment of the Bright Angel Trail Corridor within Indian Garden was found to be in fair condition, while the remaining landscape, comprising the Day Use Area and North Indian Gardens Area, was in poor condition. These two character areas exhibit clear evidence of major disturbances and rapid deterioration.

Condition Assessment: Fair

Assessment Date: 01/26/2010

Condition Assessment Explanatory Narrative:

In 2010, as part of CLI completion efforts, the condition of the entire Bright Angel Trail corridor was assessed and found to be in fair condition. Ongoing erosion from visitor use and rockslides from natural forces create the need for continual maintenance.

Condition Assessment: Good

Assessment Date: 10/23/2020

Condition Assessment Explanatory Narrative:

Annual routine maintenance on the Bright Angel and River trails has been implemented. Graffiti removal and painting has taken place at the rest houses over the last five years. Stabilization has taken place on the pumphouses at Indian Garden between 2017 and 2018. The "Rock House" at Indian Garden was completed in 2017. Tree replanting to replace dead or removed hazardous Cottonwood trees took place in Indian Garden in about 2015. Invasive plant removal (Himalayan Blackberry) continues from the Indian Garden area.

The primary impacts to the landscape currently are erosion, deferred maintenance, and visitation. However, tree death has necessitated the removal of several large Cottonwoods in the Indian Garden Day Use area. Use of temporary shade structures to replace tree shade in the heavily used area has had to be implemented. The Pump Rehandling House, north of Indian Garden was inundated by flood waters sometime before 2003. The building still stands but requires stabilization and cleaning out in order to restore its condition to good.

Overall, the condition of the Bright Angel and River trails is good. Due to the loss of trees in the Indian Garden area, the use of temporary shade structures, and the inundation of the Pump Rehandling House, the condition of the Indian Garden site is considered fair.

Stabilization Measures:

Impacts

Type of Impact:	Erosion
Other Impact:	
External or Internal:	Internal
Impact Description:	In numerous character areas, the banks of Garden Creek are eroded. In places, the Bright Angel Trail, Tonto East Trail, and other trails are heavily eroded due to the frequent flooding of Garden Creek or other drainages. Erosion along trails creates hazards. Throughout the inventory unit, displaced soil covers up sections of stone edging along trails. Edging has rolled away in places.
Type of Impact:	Vegetation/Invasive Plants
Other Impact:	
External or Internal:	Internal
Impact Description:	Numerous cottonwood trees are over-mature and exhibit signs of die-back. Exotic Himalaya blackberry planted during the historic period have become invasive. Control of these invasive plants creates unsightly piles of dead vegetation. Vegetation encroaches on edging of many trails throughout inventory unit, obscuring edging from view.
Type of Impact:	Structural Deterioration
Other Impact:	
External or Internal:	Internal
Impact Description:	Deterioration was noted in stone steps to trailside shelter, abandoned Rehandling Pump House, and in flood walls/retaining walls.
Type of Impact:	Exposure to Elements
Other Impact:	
External or Internal:	Internal
Impact Description:	Exposure to elements causes weathering in small-scale features (including wood members of picnic tables and structural deterioration in certain buildings).
Type of Impact:	Inappropriate Maintenance
Other Impact:	
External or Internal:	Internal
Impact Description:	Inappropriate preservation and rehabilitation techniques have diminished historic character of Caretaker's Residence.
Type of Impact:	Soil Compaction
Other Impact:	
External or Internal:	Internal
Impact Description:	Use of unauthorized trails causes damage to surrounding vegetation and creates compacted soils.

Type of Impact: Vandalism/Theft/Arson

Other Impact:

External or Internal: Internal

Impact Description: Vandalism to vegetation was noted.

Stabilization Costs

Treatment

Treatment

Approved Treatment: Rehabilitation

Approved Treatment Document: Cultural Landscape Report

Document Date: 2005-06-30

Approved Treatment Document Explanatory Narrative:

A Cultural Landscape Report for Indian Garden only was issued June 2005.

Approved Treatment Completed: No

Approved Treatment Costs

Landscape Approved Treatment Cost Explanatory Description:

A Cultural Landscape Report for Indian Garden only was issued June 2005.

Bibliography and Supplemental Information

Bibliography

Citation Author:	Anderson et al.
Citation Title:	Bright Angel Trail nomination
Year of Publication:	2002
Citation Publisher:	NPS
Citation Type:	Both Graphic And Narrative
Citation Author:	John Milner Associates
Citation Title:	Indian Garden Cultural Landscape Report
Year of Publication:	2005
Citation Publisher:	NPS
Citation Type:	Both Graphic And Narrative