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GRAND CANYON NATIONAL PARK ROADS,
VILLAGE LOOP DRIVE HEADWALL No. 1
Grand Canyon National Park
Grand Canyon Village
Coconino County
Arizona

HAER No. AZ-35-B

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Western Region
Department of the Interior
San Francisco, California 94107

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HISTORIC AMERICAN ENGINEERING RECORD

GRAND CANYON NATIONAL PARK ROADS,
VILLAGE LOOP DRIVE HEADWALL NO. 1
HAER No. AZ-35-B

Location: Village Loop Drive is the east-west loop road on both sides of the railroad tracks, running from the Fred Harvey operations building west to just beyond the Bright Angel Lodge. Village Loop Drive Headwall No. 1 is located at the southeast corner of the intersection with Center Road, directly north of the Ranger Ops building.

UTM: 12/397620/3990280
USGS Quad: Grand Canyon, AZ 1988 1:24,000

Date of Construction: 1934

Type of Structure: Culvert headwall

Use: Culvert headwall

Designer/Engineer: National Park Service

Builder: Civilian Conservation Corps

Owner: National Park Service

Significance: This headwall is representative of rustic style road structures constructed by the Civilian Conservation Corps and other depression-era public works agencies within the western national parks during the period 1933-1942. It is purposely constructed of undressed native sandstone and limestone and rough-mortared to blend with surrounding natural ground features.

Project Information: Documentation of Village Loop Drive Headwall No.1 is the result of a mitigation study in anticipation of imminent Grand Canyon road work which may bury the structure or require that it be rebuilt. This report was prepared as an NPS Denver Service Center contract assignment in September and December 1993, by Michael F. Anderson, 985 N. Granite Reef #150, Scottsdale, AZ 85257 (602) 423-1602.

INTRODUCTION

Many of the minor roads and associated structures within Grand Canyon National Park's residential and commercial areas were designed in the 1920s/1930s by NPS and Bureau of Public Roads engineers. These men designed roads to federal highway standards of the time, which considered far fewer and smaller vehicles than travel these routes today. Changing traffic patterns have required new alignments, grades, and roadway widening since the 1930s. Such modifications are now being considered which may result in the burial or dismantling and reconstruction of Village Loop Drive Headwall No. 1 and several other masonry walls along Center Road, Apache Street, Boulder Street, and Village Loop Drive within Grand Canyon Village. This report describes the headwall and documents its construction, subsequent modifications, and the historic context within which it is significant.

HISTORY OF THE STRUCTURE

Village Loop Drive Headwall No. 1 was completed by enrollees of the Civilian Conservation Corps in August 1934. Men constructed the corrugated metal pipe culvert and masonry headwall as a task of "Park Project No. 19--ECW-7 Job No. 46(b)--Erosion Control." This project entailed the building of drainage ditches, installation of drain lines beneath footpaths, and general landscaping over approximately eight acres in the general vicinity between the railroad tracks and today's Ranger Ops and Fred Harvey Ops buildings.¹

Park Engineer C.M. Carrel prepared a sketch map in 1935 for a minor roads project which was completed in late 1936. This map identifies the path of the underground drainage lines and culverts in the vicinity of today's Ranger Ops building along Center Road and Village Loop Drive. Village Loop Drive Headwall No. 1 culvert is shown as a "Storm Water M.H. [manhole?]" which directed water running west along Village Loop to a drainage pipe running north along the Ranger Ops building and under Village Loop to the drainage ditch north of the road.²

Written and photographic evidence is lacking for and modifications to the structure since construction. It does not appear that the culvert and headwall have been modified, since aging of the rock facing and deterioration of the mortar seem uniform. At the time this study was completed, the headwall was nearly buried by silt and gravel.

DESCRIPTION

The headwall is located at the southeast corner of the intersection of Village Loop Drive and Center Street, at the point where Village Loop begins its curved sweep to the south to become Center Road. It is 9'6" long, 3'2" high at the center of the culvert pipe, and approximately 2' thick. It is of roughly-cut sandstone and limestone blocks collected or quarried locally and crudely mortared. The wall purposely obscures the 30" diameter corrugated metal pipe culvert which carries runoff east to west along the south side of Village Loop Drive. As noted above, drawings indicate that the culvert pipe forms a "T" with the drainage pipe running north along the east side of Center Road, which carries water under Village Loop to the drainage astride the railroad tracks. The headwall was nearly buried by gravel, silt, and pine needles before clearance for photographs, but is now visible to westbound Village Loop traffic and pedestrians along the footpath to the south.

The natural landscape surrounding the headwall is much as it was in 1934. Old photographs indicate the same grass ground cover and the same preponderance of ponderosa pines. Some of today's trees near the structure are recognized in old photographs, and their position helped to positively identify this wall as that built in 1934. The nearby built landscape has changed considerably. Prominent structures such as the Fred Harvey mule stable, Babbitts store building, and 1929 administration building, and 1930 hospital building (today's Grand Canyon Natural History Association building) appear today much as they did in the 1930s, but other features are radically different. The north side of Village Loop Drive was widened in 1936, and the area north of Babbitts store has changed several times, such that it would be unrecognizable to a 1930s visitor. Principally, the area north of the store once had more parking space and did not contain the road leading to today's shuttle stop.

CONCLUSIONS/SIGNIFICANCE

Village Loop Drive Headwall No. 1 is significant for its association with the work of the Civilian Conservation Corps within the western national parks. Built during the peak years of CCC activities, it represents a conscious attempt to conform to the tenets of rustic architecture popular at the parks from the 1920s through the 1940s. Built of native sandstone and limestone from local quarries and purposely rough-mortared, the headwall attracts no attention to itself; rather, it complements the landscape while concealing the corrugated metal pipe culvert within.

ENDNOTES

1. J.W. Haines, Project Superintendent, "Narrative Report for the Period April 1 to September 30, 1934, E.C.W. Camp N.P. 2-A Powell, South Rim Grand Canyon National Park, Arizona," CCC report with photographs, 30 October 1934, Accession #157.04, GCNP Study Collection, GCNP; Harry Langley, Landscape Architect, "Report to the Chief Architect Through Superintendent of Grand Canyon National Park, Field Trip: August 22 to 30, 1934," E.C.W. (C.C.C.) Documents file, Box #5, Folder #1, GCNP Study Collection, GCNP.
2. C.M. Carrel, "Department of the Interior, National Park Service, Grand Canyon National Park, Minor Roads Headquarters Area," engineer's sketch map, 12 September 1935, Microfiche #113/5066, Grand Canyon drawings cabinets, top floor of the Grand Canyon Railway Depot, GCNP.