

BURLINGTON NORTHERN SANTA FE RAILROAD,
CAJON SUBDIVISION , STRUCTURE NO. 67.9
Between Cajon Summit and Keenbrook
Devore vicinity
San Bernardino County
California

HAER CA-2259-T
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
PACIFIC WEST REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
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HISTORIC AMERICAN ENGINEERING RECORD

Burlington Northern Santa Fe Railroad, Cajon Subdivision,
Structure No. 67.9

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Location: BNSF Railway Company (BNSF) Railroad Structure No. 67.9, a T-rail-slab-on-concrete bridge, is located at Milepost 67.9 on Main Tracks 1 and 2, Devore vicinity, San Bernardino County, California. The bridge crosses a drainage tributary of Cajon Creek and is bounded by the Union Pacific Railroad to the east and Cajon Boulevard (historic U.S. Highway 66) to the south.

The bridge lies within the SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 19, Township 2 North, Range 5 West, on the 1966 Devore, California, 7.5-minute U.S. Geological Survey quadrangle (photorevised 1988). Universal Transverse Mercator Coordinates: Zone 11, NAD83, Geodetic Reference System 1980 ellipsoid, 3789007 mN, 459119 mE (southeast approach); 3789010 mN, 459117 mE (northwest approach).

Date of Construction: 1909, 1913, modified 1938

Architect/Engineer: unknown

Builder: Atchison, Topeka and Santa Fe Railway (AT&SF)

Present Owner: BNSF

Present Use: Bridge on Main Tracks 1 and 2.

Significance: The section of railroad through Cajon Pass provided a vital link between the greater Los Angeles area and distant markets. In 1998, the California State Historic Preservation Office determined the historic route of the AT&SF (now BNSF) railroad alignment through Cajon Pass to be eligible for listing in the National Register of Historic Places under Criteria a and c. By connecting Los Angeles and San Bernardino to markets throughout the United States, the railroad dramatically affected demographic, commercial, and cultural trends in Southern California. Furthermore, construction of the long, winding alignment through rugged and often steep terrain represents a significant engineering feat for its time. Structure No. 67.9 contributes to the function and significance of the railroad line by carrying rail traffic across a drainage channel.

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Architectural and Engineering Information

Structure No. 67.9 is a T-rail-slab-on-concrete bridge that carries Main Tracks 1 and 2 over a relatively large drainage originating on Lower Lytle Creek Ridge to the west (Figure 1). This bridge was originally constructed in 1909; it was widened in 1913 to accommodate the second track and modified in 1938 following major flooding along Cajon Creek and its tributaries. The widening and modification episodes are evident in the attributes of the abutment interiors, as discussed below. The bridge consists of a 10'-0"-long reinforced-concrete slab (span), two reinforced-concrete abutments, a reinforced-concrete pier at the center of the span for additional support, a poured-concrete floor with apron, and a timber ballast deck that supports the ballast, ties, and rails. Running rails were used to reinforce the concrete slab that forms the span, hence the term "T-rail slab" (Bridge List, First District, Los Angeles Division, p. 50, Structures Department, BNSF Railway Company, Kansas City, Kansas; Howard Perry, personal communication 2007).

This bridge has an overall length of 12'-0" and a width of 51'-0"; the distance from the top of the abutments to the floor is approximately 8'. On the abutment faces, beginning at the upstream side of the bridge, are form-board impressions that continue for a distance of approximately 35'. The abutment faces are finished with no form-board impressions for the final 16' toward the downstream side of the structure. These finished portions of the abutments represent the 1909 building episode, whereas the portions with form-board impressions represent the bridge's widening in 1913 and subsequent repairs following the 1938 flood. Flared and downward-sloping wing walls extend from the bridge abutments on the upstream side. The wing walls have a maximum height of 6'-2", a minimum height of 2'-0", a width of 1'-10", and edges with a 2" bevel. The center pier is 5'-2" high and wedge-shaped on the upstream side to facilitate water flow. On either side of the pier, the concrete floor is slightly concave. The pier and abutments support the concrete-slab span. A date of 1938 is stamped in the center of the span. The apron is obscured by sand and debris, but it probably extends to the end of the wing walls. Two timber beams, positioned horizontally on top of the span, retain ballast.

The downstream side of the bridge is considerably different from the upstream side. The angled wing walls begin at the top of the concrete-slab span, and the upper portions of the wings have a gradual sloping curve. The wing walls have a width of 2'-0" and extend for a distance of about 8' before they are obscured by fill from the roadbed embankment. On this side of the bridge the pier end is flat, with a height of 5'-8" and a width of 2'-0".

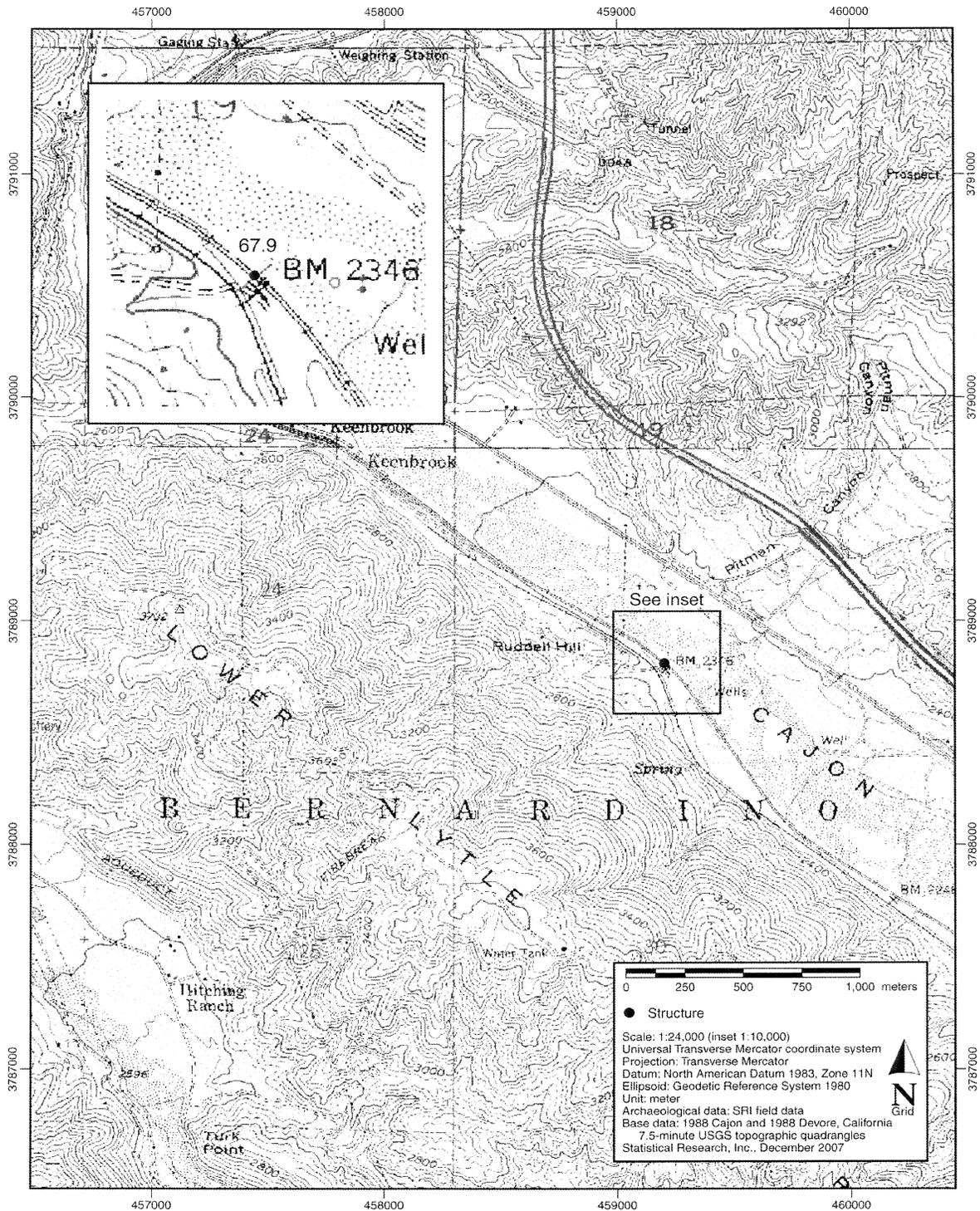


Figure 1. Project location (1966 Devore, California, 7.5-minute U.S. Geological Survey quadrangle [photorevised 1988]).