

GREAT SMOKY MOUNTAINS NATIONAL PARK ROADS & BRIDGES,
LUTEN BRIDGES
Gatlinburg Vicinity
Sevier County
Tennessee

HAER NO. TN-35-T

HAER
TENN
78-GAT.V
6T-

PHOTOGRAPHS

MEASURED AND INTERPRETIVE DRAWINGS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
P.O. Box 37127
Washington, D.C. 20013-7127

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Location: Various locations in Great Smoky
Mountains National Park, Tennessee

Date of Construction: 1921

Type of Structure: vehicular bridge

Engineer: U.S. Bureau of Public Roads and National
Park Service

Designer: Daniel Luten

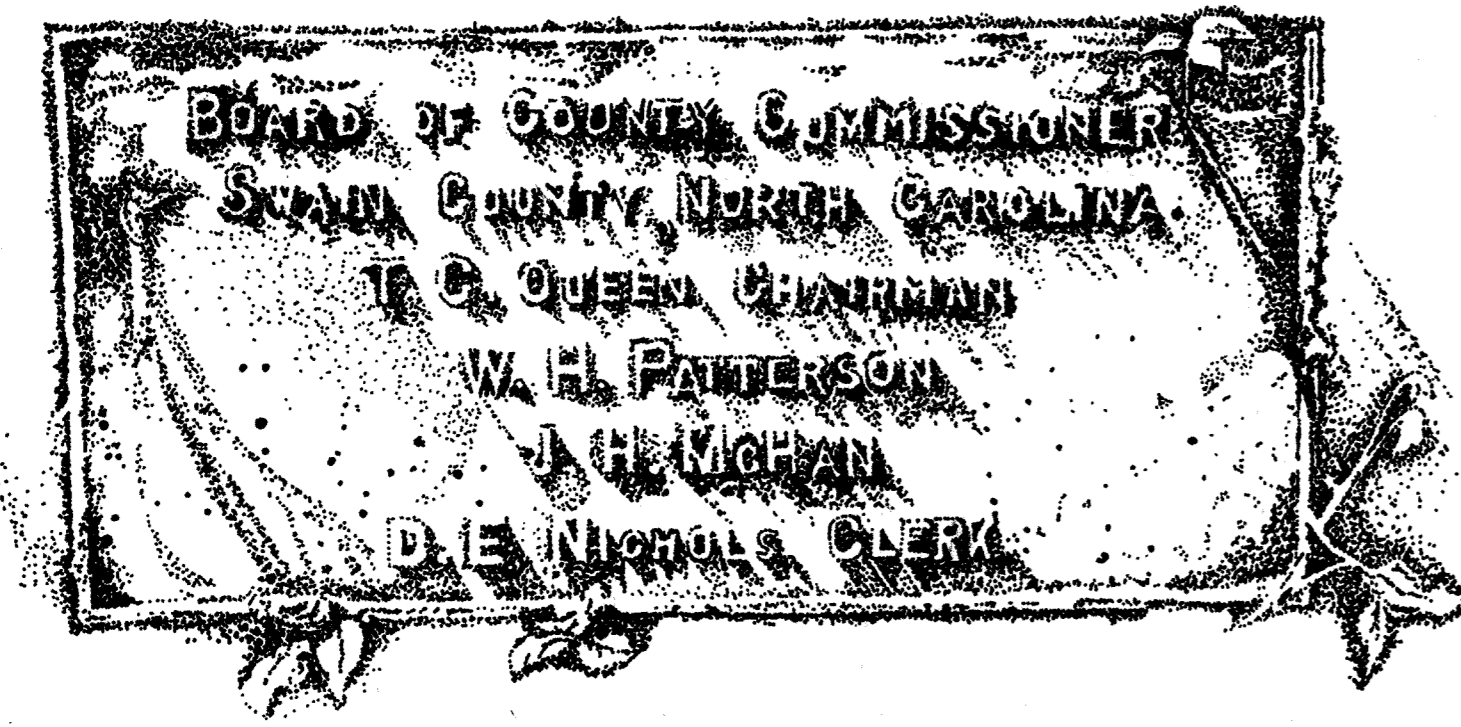
Fabricator/Builder: Luten Bridge Company

Owner: U.S. Department of the Interior,
National Park Service, Great Smoky
Mountains National Park

Significance: The Luten bridges are a significant
component of the transportation system
in Great Smoky Mountains National Park.
Providing access to the first national
park in the southern portion of the
United States, this network of roads and
bridges is representative of NPS park
road design throughout the country.
The Luten Bridges were built for
developed areas and not originally
intended for a national park; thus, they
contrast greatly with the rustic style
of bridges constructed under the
authority of the Park Service. For
additional information on the Luten
Bridges, see HAER No. TN-35, historical
overview pages 118-121.

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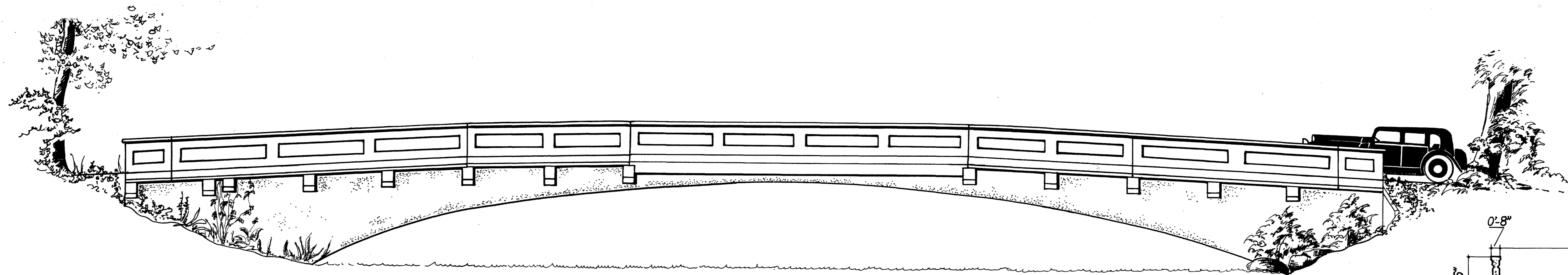
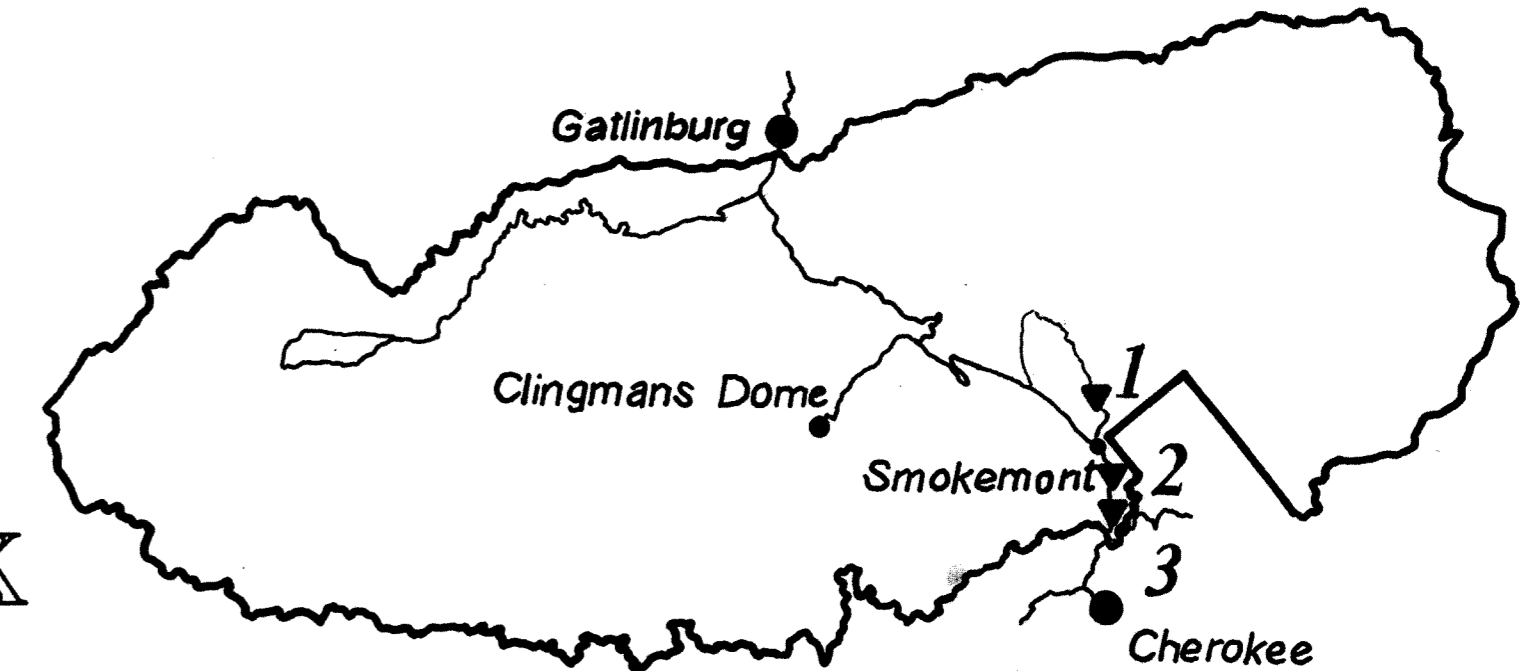
Project Information: Documentation was conducted during the summer of 1996 under the co-sponsorship of HABS/HAER, Great Smoky Mountains National Park, the National Park Service through the Federal Lands Highway Program. Measured drawings were produced by Edward Lupyak, field supervisor, Matthew Regnier, Karen Young and Dorota Sikora (ICOMOS, Poland). The historical reports were prepared by Cornelius Maher and Michael Kelleher. See also drawings and histories on related structures: Newfound Gap Road, TN-35-A; Clingmans Dome Road, TN-35-B; Little River Road, TN-35-C; Cades Cove and Laurel Creek Roads, TN-35-D; Foothills Parkway, TN-35-E; Cataloochee Valley Road, TN-35-F; Roaring Fork Motor Nature Trail, TN-35-G; Big Creek Road, TN-35-K; Greenbrier Road, TN-35-L; Heintooga Ridge and Balsam Mountain Road, TN-35-O; Elkmont Road, TN-35-P; Loop Over Bridge, TN-35-Q; Smokemont Bridge, TN-35-R; and Elkmont Vehicle Bridge, TN-25-S.



LUTEN BRIDGES

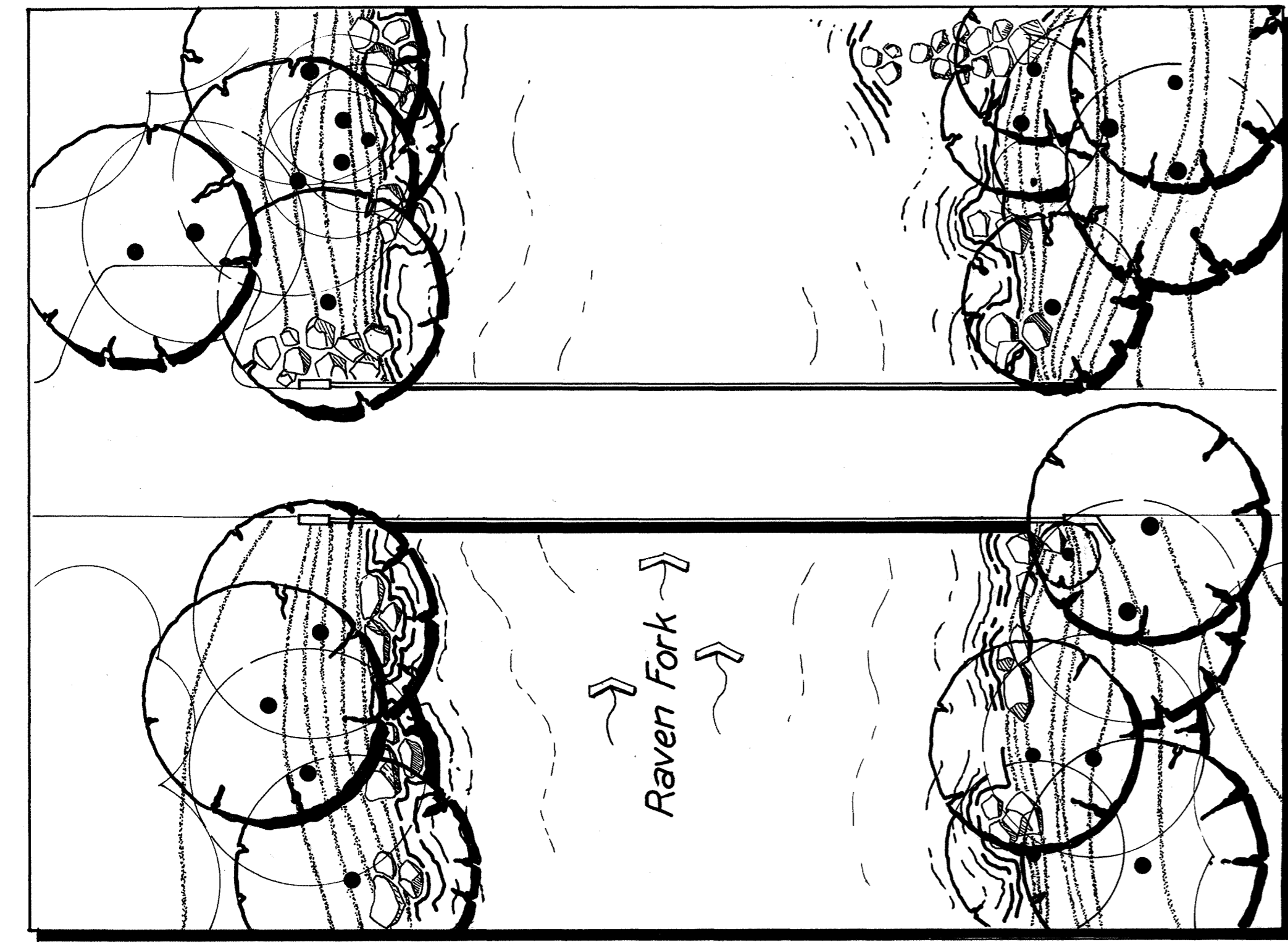
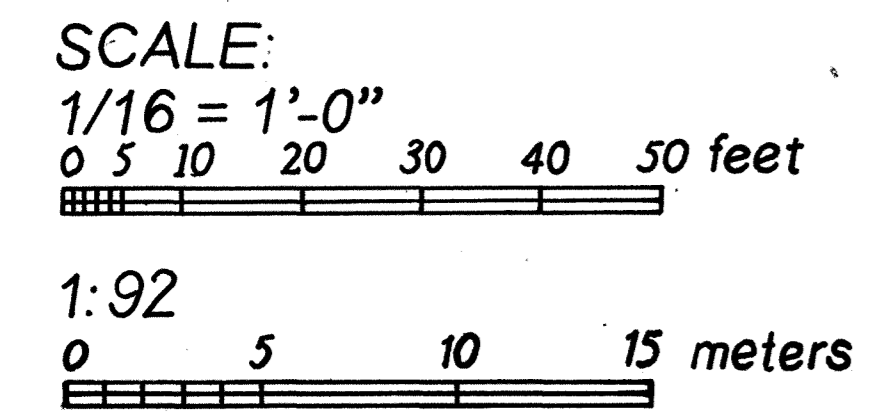
in

Great Smoky Mountains National Park



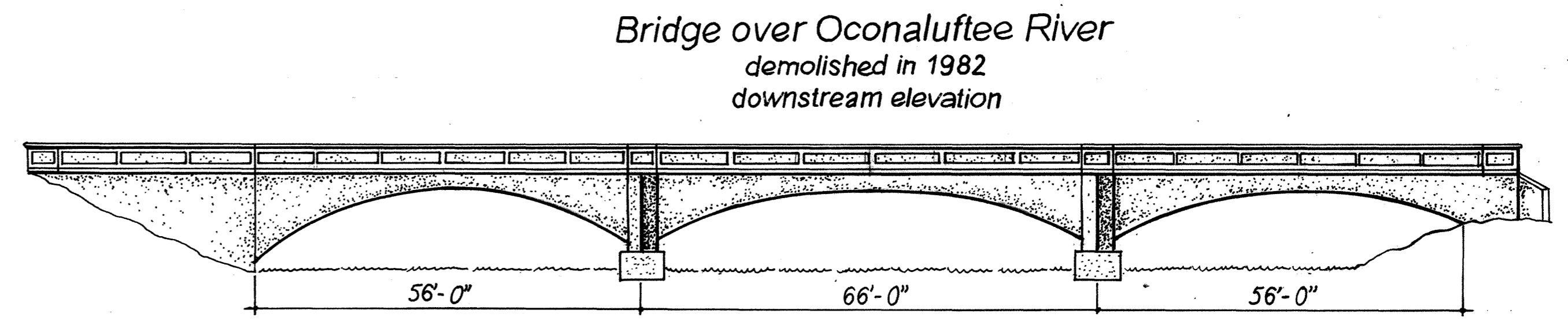
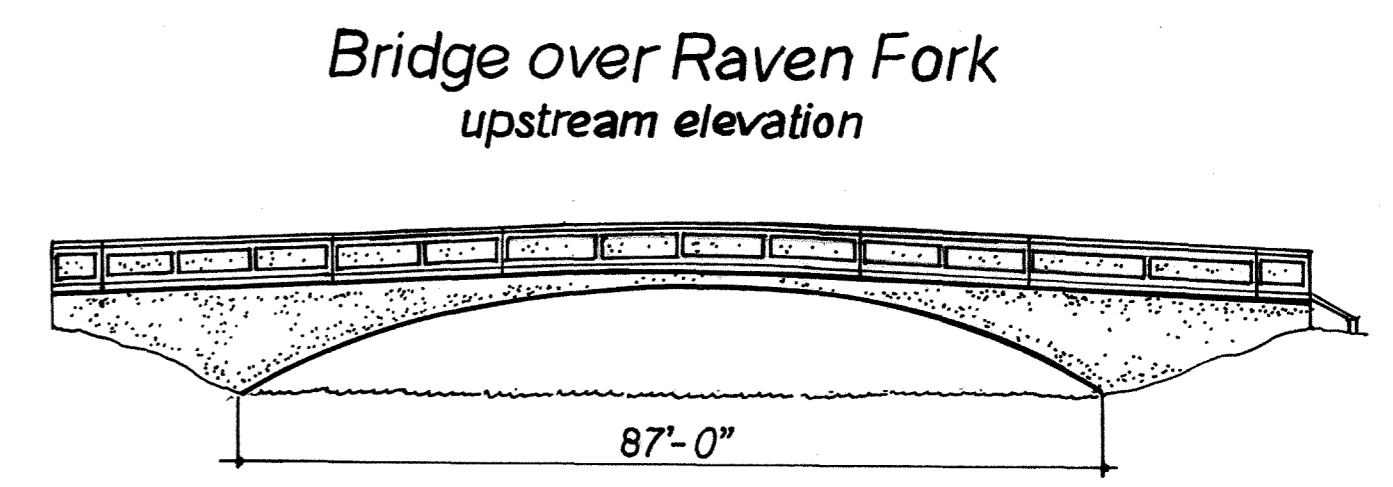
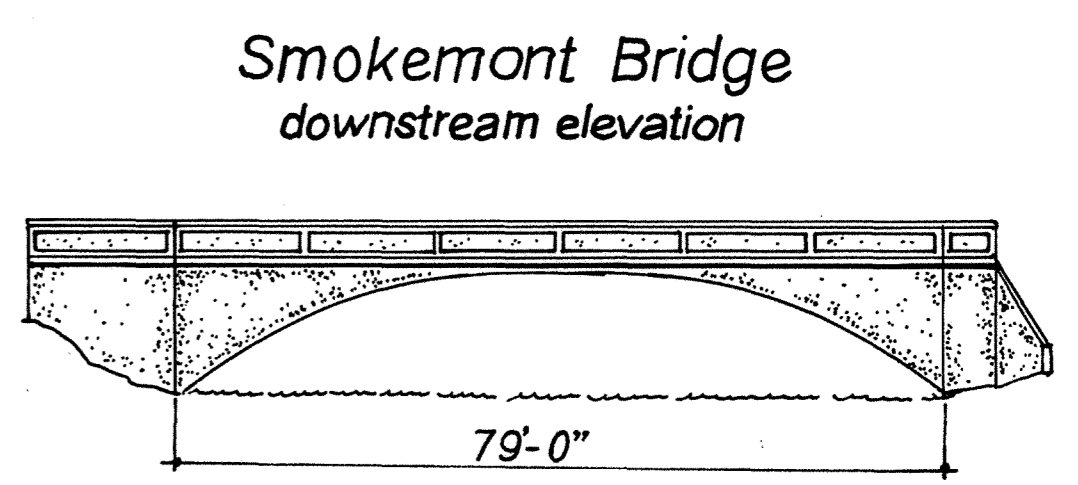
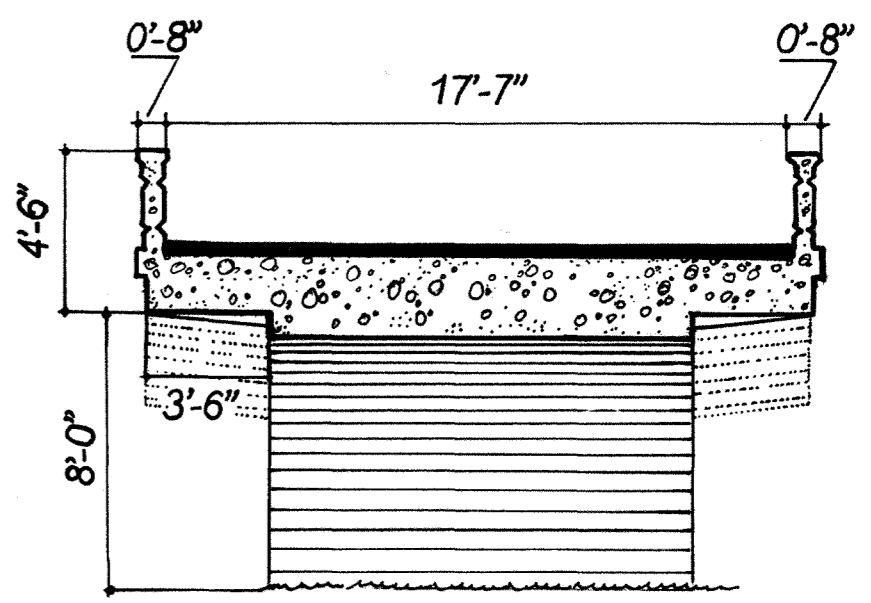
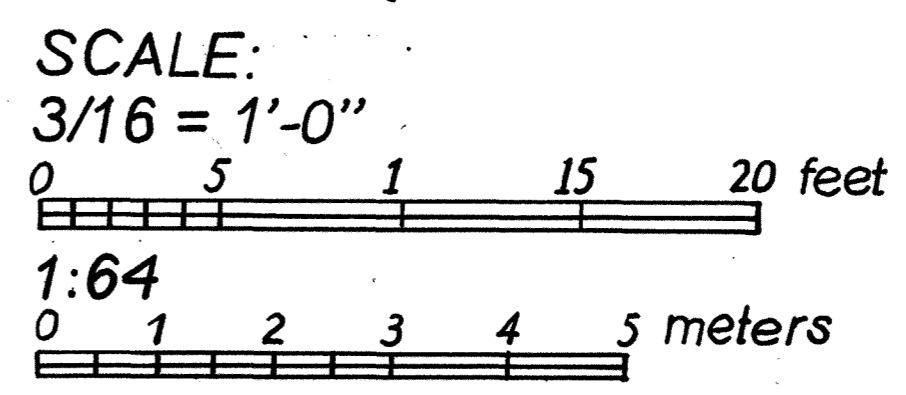
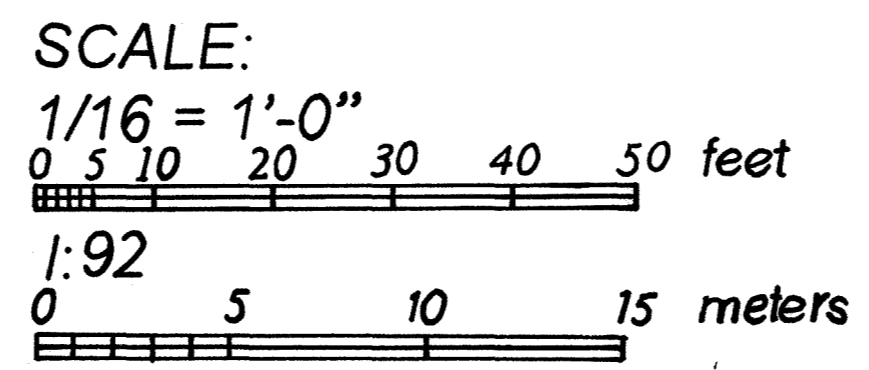
SITE PLAN

Bridge over Raven Fork



Daniel Luten, a former professor of engineering, founded the National Bridge Company of Indianapolis, Indiana in 1901. Developing several new and innovative ideas for the preexisting concept of using steel rods to strengthen arched concrete bridges, he held forty-nine patents for improvements in bridge construction and began to construct reinforced concrete bridges in the Midwest. Luten's company offered several alternative methods for the construction of one of his bridges to contractors: direct supervision of the work by a Luten company foreman; it supplied the steel, working drawings, engineering advice and a license to utilize the patents to erect a Luten Bridge for a flat fee; or it would supply working drawings and a license for a royalty of 10 percent of the contract. These business methods proved lucrative for the company in Indianapolis and its nine franchises, and by the mid-1930s, approximately 15,000 Luten bridges had been built.

Two single-span Luten bridges are currently located in Great Smoky Mountains National Park, and one triple-span bridge was demolished in 1982. All three bridges were erected by the Luten Bridge Company of Knoxville, Tennessee for Swain County, North Carolina in 1921. The demolished bridge crossed the Oconaluftee River 0.5 mile north of the present Oconaluftee Visitor Center, and carried a spur road from the Newfound Gap Road to an administrative area. One of the existing bridges carries the same spur road over Ravens Fork to an intersection with Big Cove Road near the park boundary with the Cherokee Reservation. The other existing bridge is in the vicinity of the Smokemont Campground. Today, it no longer carries a road, but rather the Smokemont Loop hiking trail out of the campground. All three bridges were built to carry roads in communities which were located at Smokemont and Oconaluftee prior to the establishment of the park in 1934.



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UNITED STATES DEPARTMENT OF THE INTERIOR
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David Haas, Photographer, 1996

TN-35-T-1	LUTEN BRIDGE AT SMOKEMONT CAMPGROUND.
TN-35-T-2	ELEVATION VIEW OF LUTEN BRIDGE AT OCONALUFTEE RESIDENCE AREA.
TN-35-T-3	DECK VIEW OF LUTEN BRIDGE AT OCONALUFTEE RESIDENCE AREA.



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