Rare Concrete Bridge In
Gallia County

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Bob Evans Farm and neighboring
Adamsville Village of log buildings near Rio Grande has, in recent years,
become an important tourist attraction
for southeastern Ohio. Generally
overlooked is a very unique concrete
cantilever bridge on old State Route
35 over Raccoon Creek that is im-
mEDIATELY adjacent to the farm. It
is believed to be the only existing bridge
of a distinctive form of concrete
construction created by the state highway
department in the early 1920's.

Not unlike the extensive experimen-
tation that occurred with metal
truss bridges in American during the
second half of the 19th century, early
20th-century bridge builders search-
ed out the possibilities and potential
of concrete structures. The efforts of
the Bridge Bureau in the Ohio De-
partment of Highways, who devel-
oped an unusual concrete cantilever
through girder design in the early
1920's, were typical. The cantilever
principle in concrete construction
dated back to the floor systems devised
for some of the first all-concrete build-
ings in the early years of the century.
A cantilever design that allowed for
minimal or even nonexistent abut-
ments had been used for some
concrete-deck arch bridges in Cincin-
нати in the 1910s. But the use of the
concept for a through girder of con-
crete, where the reinforcing pattern
resembled a steel cantilever truss,
seems to have been original with the
state engineers. The adaptation of
older technology to new materials
is typical of periods of experimentation,
so a steel truss may have, in fact,
inspired this concrete structure.

Designed to carry a 15-ton truck,
the Raccoon Creek bridge was built in
1922 on the Gallipolis-Jackson Road
and consists of a 60-foot main span
flanked by two 32-foot anchor spans
that are all supported on a pair of

Continued on Next Page
solid concrete piers. In this case, the cantilever principle allowed the construction of a longer span than could be done with a simple girder and permitted the reuse of the old stone abutments from the previous bridge. Built in the wake of the 1913 flood, the through girder design also gave the largest possible clearance for future floods.

At least two other concrete cantilever bridges, although slightly shorter than the Gallia County example, were built in Licking County by the Highway Department. Cantilevers continued to be used for deck structures of concrete in state bridges, but apparently concern over the inability to widen the through girder design prevented its widespread use. Presently this bridge in Gallia County is the only known example of this unusual design still standing in Ohio, and perhaps the nation.

Looking from the side like a concrete suspension bridge, the bridge over Raccoon Creek on old SR 35, adjacent to the Bob Evans Farm in Gallia County, is actually a rare type of concrete cantilever through girder. A construction drawing of a sister bridge in Licking County reveals that the pattern of the reinforcing bars in the girders resembles a steel truss, radiating out from the tops of the tower-like profiles.

The monolithic nature of the Raccoon Creek bridge, built in 1922, with its floor beams, floor and girders poured as a single unit, enhanced its rigidity and resulted in a continuous jointless construction. This latter characteristic anticipated developments in bridge design initiated by state engineers in the following decade.