

# Norridgewock Covered Bridge Replacement

Kleinfelder provided the preliminary and final design and construction management for the Covered Bridge in Norridgewock, Maine. The bridge, named for a previous wooden structure at the site, was the only multi-span, concrete-tied arch bridge in the state, and thus a historic structure. Consequently, the government mandated the investigation of multiple alternatives for its replacement.

## PROJECT RESULTS

*As the client's trusted advisor, Kleinfelder listened closely and responded with innovative solutions to design an impressive landmark structure, one of only two modern concrete-tied arch bridges in the U.S., to replace the previous historical bridge. Throughout the project, Kleinfelder involved all stakeholders, including the community, to ensure buy-in and satisfaction with the final design.*



## ALTERNATIVES REQUIRED

Kleinfelder helped design various alternatives while looking at different crossing locations. The team explored multiple options to determine whether the existing structure was feasible and prudent. As a result, MaineDOT decided to replace the structure with a signature bridge, and establish a group of stakeholders to decide on the bridge type. Kleinfelder led this group, which ultimately chose a single, concrete-tied arch bridge, as well as bridge rail, lighting, and other decorative features.

## PRESERVING A HISTORIC STRUCTURE

The final design resulted in a three-span, 570-foot bridge, with a 300-foot concrete-tied arch center span featuring an elegant parabolic shape. The hangers are steel cable and support transverse precast concrete box floor beams, while the piers are pile-supported round concrete columns. Through innovation and attention to detail, Kleinfelder preserved the ambience of the historic bridge and ensured the community feels the same sense of place, which was critical to the project.

### Location:

Norridgewock, ME

### Owner:

Maine Department of Transportation (MaineDOT)



Previous 1928 bridge structure



300-foot concrete-bridge center span

