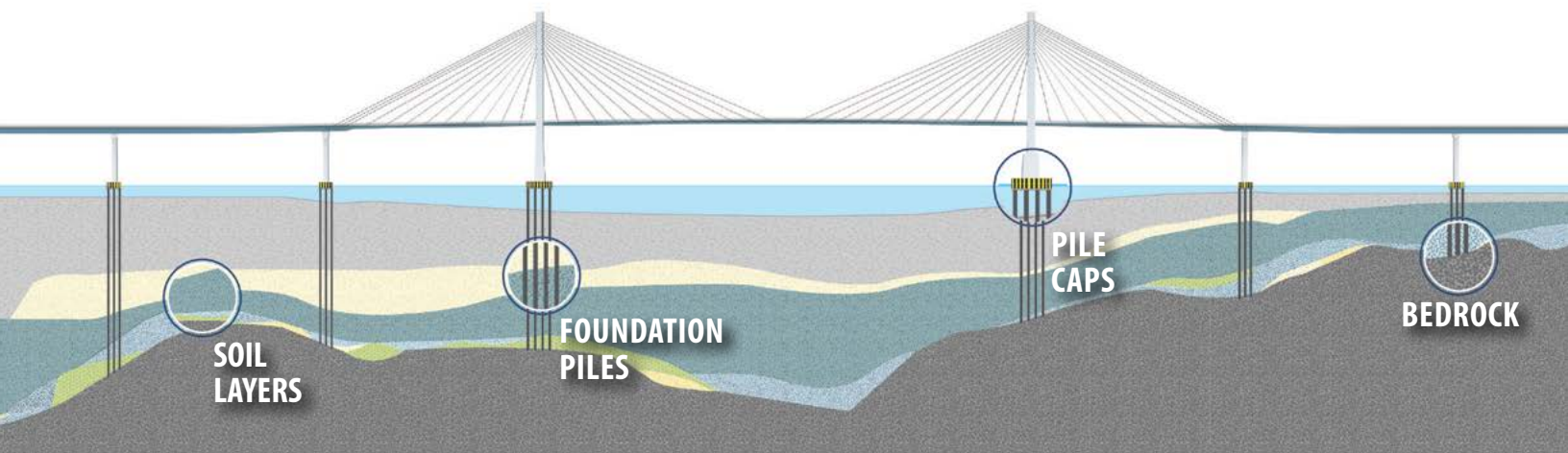


FOUNDATION Series

Foundation Basics

Steel Foundations Extend Hundreds of Feet into the Riverbed



⤵ The placement and length of each pile is carefully calculated based on the project team's pile load tests and geotechnical investigations, which detailed characteristics of the layers of sediment and bedrock.



SOIL LAYERS

Designers developed the new bridge's foundation based on a series of geotechnical investigations and laboratory testing. These studies included more than 150 soil borings and probes, some up to 440 feet beneath the riverbed. The investigations revealed the characteristics of varying layers of clay, silt, sand and glacial till covering the bedrock beneath the Hudson River.



FOUNDATION PILES

After analyzing the project's subsurface conditions, engineers selected a foundation system featuring steel pipe piles up to six feet in diameter, to support the New NY Bridge. Engineers determined the size, length and number of piles for each support location to design a stable framework for the project.



PILE CAPS

The weight of the new bridge is distributed down to these pile caps, which act as platforms for the bridge's piers and towers. These foundation elements combine the strength of groups of piles into base-like structures. Pile caps have as many as 64 piles and are filled with steel-reinforced concrete.



BEDROCK

The New NY Bridge's foundations are supported in two different ways. Many rest on the hard bedrock found below the layers of clay and silt. Other piles, in areas where bedrock is hundreds of feet farther down, are longer and supported by the friction between the piling walls and the soil.

FOUNDATION PILES: BY THE NUMBERS

The New NY Bridge's foundations include over

1,000 piles

Piles have been tested to support loads as heavy as

7 million lbs

If laid end to end, the bridge's piles would extend

50 miles



NewNYBridge.com



info@NewNYBridge.com



1-855-TZBRIDGE (892-7434)



@NewNYBridge