GZA GeoEnvironmental, Inc. received an Honor Award for its work as the geotechnical consultant for foundation design and rock stabilization for the State Route 125 Bridge Reconstruction project. The two-span structure that crosses the Androscoggin River had eroded the site down to bedrock with steep exposed ledges, undermined bedrock, and pinnacles. The primary design challenges were to stabilize the undermined rock to prevent additional rockfall that could jeopardize support of the new abutment, and to reinforce the bedrock pinnacle to prevent a sliding failure in the bedrock beneath the new foundation. After conducting test borings with geophysical logging and surface bedrock mapping, geologic field mapping of bedrock outcrops, and field investigation and analyses, GZA determined that the combination of adverse geology and prior river modifications made foundation support for this project unusual and more complex. GZA developed a unique concrete buttress which would fill the cavity and protect the abutment foundation from undermining, as well as vertical shear dowels to reinforce the rock mass.