

Pochuck Quagmire Bridge

- 94
  - If possible, keep the cable saddles simple and uniform.
  - Two-inch by six-inch decking was used on the Pochuck Quagmire Bridge. A suitable alternative is 1 1/4-inch by 6-inch decking. Using 2-inch by 4-inch dimensional lumber with a healthy gap would improve the aerodynamics of the walkway deck. For very long bridges or bridges in a windy location, open grating should be considered for the walkway.

The primary project goal of providing a safe, practical, durable, cost-effective bridge over the Pochuck Creek in order to relocate the Appalachian Trail from a dangerous 2.1 mile roadwalk into the protected trail corridor was achieved.

## Conclusion

A cost-effective and practical design meeting all the project goals, as well as the limited resources of the project partners, was prepared. The Pochuck Creek was spanned by using common construction material in a creative and innovative manner. The construction was implemented by a unique public-private partnership. The primary project goal of providing a safe, practical, durable, cost-effective bridge over the Pochuck Creek in order to relocate the Appalachian Trail from a dangerous 2.1 mile roadwalk into the protected trail corridor was achieved. Other benefits or technical items demonstrated by this project are as follows:

- The bridge is a very visible and effective demonstration of modern timber bridge technology on a National Scenic Trail.
- Design standards for timber pedestrian suspension bridges were investigated. This project and case study publication has initiated a nationwide dialogue among engineers with an expertise in small scale suspension bridges. This technology transfer will benefit the public.
- This project documents that utilization of CCA treated lumber for bridges is not limited to short-span stringer bridges or truss bridges. This project clearly shows long-span lumber walkway suspension bridges are practical. This shall add to the recognition of CCA lumber as a proven construction material.
- The project introduced Chance® Helical Anchors and geogrid to the Appalachian Trail as alternatives or enhancements to traditional foundations. These are especially useful in environmentally sensitive areas or projects with poor access.
- The project shows that the Americans With Disabilities Act design standards can be attained in a cost-effective, practical manner, even in a remote, difficult location.
- A major project can be constructed with minimal environmental impact.
- The project initiated a meaningful dialogue and partnership between the USDA Forest Service, NJDEP, the Appalachian Trail Partners, and the local community.
- The rustic bridge complements and blends with the primitive Appalachian Trail experience.
- The design and construction followed a "conservation ethic" by utilizing donated and previously purchased material as well as the in-house talents of the project partners.



- The project complied with the NJDEP Wetlands and Flood Hazard Area Rules and Regulations.
- The bridge provides a fabulous elevated observation platform for environmental and floodplain education, wildlife and bird observation, and a wood turtle Geographic Positioning System tracking station. All this is achieved while protecting the fragile quagmire ecosystem.
- The Pochuck Quagmire Bridge has been called a remarkable achievement that underscores the success of public-private partnerships along the Appalachian Trail. The project is a good example of organizations and individuals working together to tackle a project beyond any one organization's resources.