



User Education

Although the bridge is constructed to code requirements and exceeds normal and customary standards for trail suspension bridges, good risk management dictated some public education concerning the use of the bridge. Public education consists of a series of notices and signs on both sides of the bridge advising the user public as follows:

- The bridge is limited to foot traffic.
- Although the bridge is designed for a live load of 30,000 pounds (110 people in a snowstorm), it was decided to post the occupancy of the bridge at 20 people. This was done for common sense reasons.

Case law in New Jersey indicates that when one has a bridge over a body of water and the body of water is known to be used for recreational purposes, it is prudent for the owner to post warning signs advising the public as to the inherent risk of jumping off the bridge. Either end of the Pochuck Quagmire Bridge is posted with a sign that reads “Shallow Water - Hidden Hazards.”

Project Safety Plan — Worker Safety

The 5,239 people hours on the bridge construction was completed with no accidents or injuries. This track record is especially good in that 53 percent of the people hours were performed by NY-NJ Trail Conference layperson volunteers performing a large variety of unfamiliar tasks in sometimes less than ideal conditions. This success on project safety was in large part due to the positive management style of Mr. Powers that created an awareness among all participants.

Prior to each day’s work, a “tailgate” meeting at the jobsite was held. The meeting would include the following:

- The work tasks to be undertaken that day. What-Who-Where-How.
- The possible hazards and safety measures to be employed.
- It was stressed to all the volunteers that if they were uncomfortable with a given task, either ask questions or ask for another job — there was plenty of work to go around.

The position the project engineer took is that although the project was volunteer driven, it should be treated no differently than any other major construction project. If the Pochuck Quagmire Bridge was being built by a professional contractor, the work force would be subject to Occupational Safety and Health Act (OSHA) regulations. Since NJ Parks and Forestry employees were involved, and indeed in charge of the job site, Public Employees Occupational Safety and Health Act (PEOSHA) applied to the project. In addition to the moral responsibility, a legal responsibility existed to implement a project health and safety plan, which was based on the following:

- Health and safety policy and program of the NJDEP, 5/20/91.
- N.J.S.A. 34:6A-25 PEOSHA.
- Condition 6 of the NJDEP stream encroachment permit specified that “no work shall be undertaken until such time as all other required approvals and permits have been obtained.”



Worker safety, legal requirements, and common sense risk management dictated that the Pochuck Quagmire Bridge have a written safety plan for the project manager to implement.

Ms. Mary Z. Rudakewych, the Program Manager of the NJDEP Office of Occupational Health and Safety, prepared a project specific-site specific Health and Safety Plan for the Pochuck Quagmire Bridge. The entire plan is included in Appendix A. It is not a standard or specification, but is offered as a planning guide for parties considering a similar project. It is an essential part of work safety and risk management to have a planned, written safety plan.

A court case, which was winding its way through the legal system while the Pochuck Quagmire Bridge was under construction, highlights the responsibility of project professionals to worker safety. In May 1996, the Supreme Court of New Jersey held in *Carvalho v. Toll Brothers and Developers, et al.* 143 N.J. 565, 675 A.2d 209 (S. Ct. N.J., 1996) that an engineer with authority to stop work on the project but no contractual obligation to ensure worker safety at the job site, nevertheless has a duty to stop work when he (or she) becomes aware of on-site conditions posing a foreseeable risk of serious injury to workers of a contractor or subcontractor. In *Carvalho, supra*, a worker was killed when a deep sewer trench collapsed. The trench was not shored, nor was a trench box being utilized. The Court also inferred in its decision that exculpatory or indemnification provisions in an engineer's agreement with the owner or contractor will not exonerate the engineer from potential third-party negligence claims arising out of worker injuries from unsafe site conditions.

The *Carvalho, supra*, court case involved facts that are comparable to the Pochuck Quagmire Bridge project as well as procedures common to many construction projects. The project engineer in *Carvalho, supra*, was retained by West Windsor Township to prepare plans for the construction of sewer service in Assunpink Basin. Upon receiving project approvals and permits, the engineer entered into a separate agreement with the Township to oversee the progress of the work and to conduct periodic site inspections to confirm that the work was being performed in conformance with the plans (similar to the Pochuck Quagmire Bridge project). The engineer was neither contractually responsible for the contractor's "means and methods" on the job, nor was the engineer obligated to ensure the contractor's compliance with worker safety programs and guidelines (similar to the Pochuck Quagmire Bridge project). The engineer was not in "control" of the job site. Historically, only the party who controls the site and has the authority to stop work can be responsible for safety. The Engineer-Township agreement also contained a clause exculpating the engineer from third-party tort claims arising out of his supervision of the work on the project. In addition, the contract between the Township and the contractor contained a clause requiring the contractor to name the Township and the engineer as additional insureds on its general liability policy.

As in most construction projects, the engineer in *Carvalho, supra*, had the right to stop work if something was not being performed in accordance with the plans and specifications. This responsibility was inferred in the NJDEP Permits issued on the Pochuck Quagmire Bridge project as well as the Department of Treasury Division of Building and Construction (DBC) contract. The *Carvalho, supra*, engineer had a full time on-site inspector to ensure compliance with the project specifications.

The *Carvalho, supra*, decision held that the engineer's duty was not defined and limited solely by the contractor. The court relied on the ruling in the case of *Balagna v. Shawnee County*, 233 Kan. 1068, 668 P.2d 157 (1983). In that case, the engineer, who had prepared the contract provisions covering safety, knew that an unshored trench was dangerous and violated government standards. As in the *Carvalho, supra*, case, the engineer had the authority to stop the work, or at least to say something to the contractor, and could not deny that he had knowledge of the importance of safety precautions during the excavation of the trench.

Despite his knowledge, the engineer claimed that he would have exceeded his authority had he made efforts to warn the workers in the trench of its dangerous condition. The court held that it was up to a jury to decide if



the engineer had acted reasonably. The New Jersey court decided that fairness and public policy require the imposition of a duty upon the engineer having actual knowledge of unsafe practices on the job site to do something to prevent injury to the workers imperiled.

The *Carvalho, supra*, court determined that the engineer had sufficient control to halt work until adequate safety measures were taken. The court also determined that the engineer, through its on-site inspector, had actual knowledge of a dangerous condition at the jobsite. In failing to avert harm, the court decided that the engineer breached a legal duty to the worker who was killed as a result of an unsafe site condition. The *Carvalho, supra*, court further ruled that an exculpatory clause in the engineer's contract regarding liability for third-party tort claims is unenforceable as to a direct claim for negligence by the injured plaintiff. Thus, although the engineer in *Carvalho, supra*, may have had contractual remedies against the Township and/or contractor for indemnification, the engineer was left "holding the bag" because the contractor's insurer was insolvent and the tort claim asserted against the Township was dismissed as untimely.

While each case will obviously turn on its own unique set of facts and circumstances, the *Carvalho, supra*, decision places engineers, project directors, managers, coordinators, and other professionals on notice that they can be exposed to tort claims and potential liability arising from on-site injuries to workers, regardless of what contractual protection they obtain from owners or contractors against such claims. A contract obligation to inspect work for conformance with the contract or permit documents coupled with the general authority to halt work on a job site appears now to have given rise to a duty to stop work on a job, or at least say something to the contractor, where any known, apparent or reasonably foreseeable safety hazard exists. In addition, the *Carvalho, supra*, decision makes it clear that where such a duty is found to exist, it may prevail over exculpatory or indemnification provisions included in the contract for work.

** Comments of the above case represent the author's opinion and are not a conclusive statement of the law of the case.**

Insurance

The last element of the Safety and Risk Management Plan of the Pochuck Quagmire Bridge was to provide proper insurance protection for all the participants. The primary liability (tort claim) and injury protections due to volunteers working on the Pochuck Quagmire Bridge were afforded through the federal Volunteers-in-the-Parks program (known as VIP), and administered by the National Park Service (NPS) for "operation, development, maintenance and monitoring of the Appalachian Trail." This program has a sister program - the Volunteers-in-the-Forests (VIF) that extends to volunteers working on the Appalachian Trail in National Forests. The program considers bona fide Appalachian Trail volunteers as federal workers vis-a-vis the Trail, thus enjoining the US Government to defend (provide indemnity to, and legal representation for) volunteers if they are named in a liability lawsuit concerning alleged injury or damages while on the Appalachian Trail.

The program also considers Appalachian Trail volunteers as federal employees to receive supplemental medical coverage in the case of in-the-field injury in connection with their Appalachian Trail duties as quoted above. This coverage is intended to supplement a volunteer's own medical insurance, but can be used as the primary coverage if a volunteer has no medical coverage. Use of the medical provision, as a primary coverage, for treatment has not been tested on NY-NJ Trail Conference projects in terms of a claim actually being paid by the US Government (luckily no in-the-field mishaps). As would be expected, the paperwork is tedious and very time-consuming. The Trail Conference (or other officially designated Appalachian Trail clubs) must be the intermediary to get the appropriate information to, and forms from, the NPS Appalachian Trail office concerning any injury, claim, or lawsuit. The NPS provided VIP protection for the 2,285 volunteer work hours on the Pochuck Quagmire Bridge project.