



## Posturing and Risk in the Construction Industry

By Rubin M. Zallen, P.E

**T**here are many positions taken by the various parties in the construction process, reflecting a degree of paranoia on the respective responsibilities and risks that they assume on various construction projects.

**The engineer and the architect** say that the construction contractor is solely responsible for the means and methods of construction, and therefore the architect and engineer do not ever involve themselves in these activities.

**The construction contractor** says that all the engineering for a project is supplied by the prime designer (architect or engineer) or his consultants. All he does is construct the work as specified, which requires no engineering. When pressed about providing engineering for a particular means and method of construction, the construction contractor says that there is already an engineer on the project; why does he have to duplicate the service? However, when the construction contractor makes a claim for an extra, and the architect or engineer points out that the claim is for an item required by the contract, the construction contractor says: I'm only a dumb contractor, I'm not an engineer, how am I supposed to know that this (particular thing) is required?

Many a construction contractor calls himself a construction manager; as such, he usually subcontracts out all of the actual work. He says that his only supervisory task is to be a coordinator, and all the responsibility for proper execution belongs to his subcontractors.

**The structural steel fabricator** says that he fabricates steel but does not do engineering. He admits to doing detailing and designing of connections, but says that is neither design or engineering, regardless of complexity.

**The owner** says that the engineer should be responsible for all engineering and should guarantee that the work is done properly. The owner also says the he should not have to pay for engineering twice - once for the design and secondly for construction; its all the same thing to him.

Do these positions correspond to reality? No, they are absolute fiction. However, after making these statements for so long, they become knee-jerk reactions for every problem related to cost or risk, and many of the various people who make these statements come to believe them (i.e., they believe their own posturing). Although there are many responsible architects, engineers, contractors, and owners who do not make any of these statements, there are a great number of the various parties who do.

The attitudes and posturing of the parties, and the resulting construction contracts (whose provisions are interpreted differently by different parties), impact on the safety and quality of the constructed facility, safety during the construction, and the safety of the public. These attitudes and posturing prevent and reduce the likelihood of a clear, realistic, and equitable allocation of risk among the parties in the construction process, and have resulted in the transformation of the industry into "scorpions in a bottle," with each

party trying to position himself in such a way as to reduce his costs and reduce his risks, always at someone else's expense.

The attitudes and posturing are affected to a great extent by outside forces. Judicial decisions, have changed the "rules of the game," and in many cases, are viewed as illogical by many in the industry. The illogical assessment of many risks by insurance underwriters, the resulting limitations on insurance coverage and availability, and the resulting cost of premiums appear to be the driving forces having the greatest effect on attitudes and posturing.

**My view is that there is a five-fold need:**

1. The engineer needs to become involved in the means and methods of construction in certain cases.
2. Engineering needs to be put (back) into construction contracting and fabricating.
3. There needs to be a fair distribution of risk between the owner, engineer, architect, and construction contractor.
4. The insurance industry needs to reappraise its methods of assigning risk, and the methods of insuring the various parties in the construction process.
5. Owners need to be educated as to the various responsible delivery systems for design and construction and the equitable apportionment of risk.

These needs will be discussed in ensuing on-line issues of Forensic Engineering in Construction.

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