

**Six Bad Words ...**

The practice of engineering in Texas is regulated by the Texas Board of Professional Engineers (TBPE). All licensed professional engineers must follow the various requirements of the Texas Engineering Practice Act (Act) and the TBPE Board Rules (Rules). To protect the health, safety, and welfare of the public, TBPE requires that engineers only affix their PE seals to work which has been performed personally by them or under their direct supervision. For many years, through 2005, the Rules defined direct supervision as:

“Critical watching, evaluating, and directing of engineering activities with the authority to review, enforce, and control compliance with all engineering design criteria, specifications, and procedures as the work progresses. Direct supervision will consist of an acceptable combination of: exertion of significant control over the engineering work, regular personal presence, reasonable geographic proximity to the location of the performance of the work, and an acceptable employment relationship with the supervised persons. Engineers providing direct supervision of engineering work under the Act shall be personally present during such work.”

Active enforcement of the last sentence of this definition effectively prevented both plan-stamping and outsourcing of engineering work on projects based in Texas. That abruptly changed when the Rules were inexplicably revised in 2006. Since then, the Rules have defined direct supervision as:

“The control over and detailed professional knowledge of the work prepared under the engineer's supervision. The degree of control should be such that the engineer personally makes engineering decisions or personally reviews and approves proposed decisions prior to their implementation. The engineer must have control over the decisions either through physical presence or the use of communications devices.”

The last six words of this definition provide a loophole that has effectively neutered the requirements for direct supervision. TBPE staff admits that the loophole makes it impossible to enforce this part of the Rules. As long as an engineer can claim that their remote supervision is adequate, they are free to affix their PE seal to work prepared by engineers in other states, by individuals who are not engineers, and by people working overseas at much lower cost.

Structural engineers in Texas long believed that they had nothing to fear from low-priced foreign competition if they focused on providing services rather than products. Even if potential foreign competitors might offer quality analysis and design services, they could not reasonably attend project design meetings, conduct site visits during construction, and so forth. Beyond that, the traditional Rules on direct supervision provided a last line of defense.

By late 2006, the game had changed forever. Just a few weeks after the revised definition of direct supervision went into effect, a new structural engineering office opened in Dallas, a branch office of a firm based in Tennessee. Their website presented an impressive portfolio of completed projects and a list of glowing client testimonials. They offered extremely fast production and deep discounts to traditional fees, proudly explaining that this was possible because all engineering and drafting work was performed twenty-four hours a day, seven days a week, by their affiliate in India.

The engineers in their branch offices sell the work, “oversee” its production, attend project meetings, conduct site visits, and maintain client relationships. In 2006, they had four engineers licensed in Texas, but none of them actually worked here. Today, they have ten engineers licensed in Texas, with one based in Dallas. They now have fourteen offices in eight states and two offices in India; and they now have expanded their services to include mechanical, electrical, and plumbing engineering.

Clearly, this new business model is succeeding in the marketplace. Whether it is good for the public health, safety, and welfare in Texas is another matter. While this business model is undeniably legal, it certainly challenges the traditional understanding of engineering ethics.