



CALIFORNIA LEGISLATIVE COUNCIL OF PROFESSIONAL ENGINEERS

IN REPLY PLEASE ADDRESS:

Robert A. Katin, P.E.
Katin Engineering Consulting
P. O. Box 4727
Antioch, California 94531-4727
(925) 755-1150
e-mail bobkatin@katinengineering.com
www.clcpe.org

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Ms. Karen Hedlund
Deputy Administrator
Federal Railroad Administration
1200 New Jersey Avenue SE
Washington, DC 20590

Subject: High Speed Rail cannot be built unless the State Engineers' Act is ignored

Dear Ms. Hedlund:

I am president of the California Legislative Council of Professional Engineers (CLCPE). This is an organization of engineering societies. The main purpose of CLCPE is to advise the California Legislature regarding laws affecting professional engineers. Because the California Professional Engineers Act (PE Act) provides civil engineers with a complete monopoly over all infrastructure projects, such as railroads, we have been supporting the reform of that law.

Other states regulate the engineering profession on the basis of competence. People who are licensed as engineers are able to provide all engineering services within their area of competence. Forty states do not indicate the discipline of the engineer on the license.

The engineering laws in other states do not regulate other professionals, such as scientists, programmers and planners. In every state, but California, the Class I railroads and Federal Railroad Administration (FRA) are able to rely on competent experts for railroad projects without checking to see that the expert is a licensed civil engineer.

California enacted the PE Act decades ago to require any person providing any professional expertise needed for a railroad project to be a licensed civil engineer. The PE Act includes all professions, not just engineering. The organization that represents the engineering companies in California, the Association of Consulting Engineering Companies-California (ACEC-CA), and the union representing the state employee engineers, the Professional Engineers in California Government (PECG), both strongly oppose reforming the law.

Efforts to reform the law have been going on for over ten years. The latest was Senate Bill 692, as amended 1-4-12, which was defeated in the Senate Business, Professions and Economic Development Committee. It would have provided California with the same law as exists in other states. ACEC-CA and PECG claim the PE Act, with the monopoly for civil engineers, is in the best interest of the state of California. CLCPE does not see any further effort to reform the law in the foreseeable future.

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The PE Act should be considered in the light of the legal opinion issued by the Legislative Counsel, the attorney for the Legislature. That opinion, which is enclosed, was considered in the deliberations of the committee when the vote on SB 692 occurred. Since the vote was to maintain this monopoly, the ability to conduct projects in California by using the most competent expertise is not available in California.

California is now engaged in developing a high speed rail project (HSR) connecting the Bay Area and Southern California. The High Speed Rail Authority requires the construction contractor to recognize that it will be subject to the PE Act, and that there will be no expenditures of public monies for any services that violate it. The law cannot be ignored.

These are the code sections in the PE Act that contain the prohibition against any person, not licensed as a civil engineer, from providing services:

1. Sections 6731 and 6731.1 of the Business and Professions Code which define the services comprising “civil engineering.” “6731. Civil engineering embraces the following studies or activities in connection with fixed works for.....railroads...: (a) The economics of, the use and design of, materials of construction and the determination of their physical qualities. (b) The supervision of the construction of engineering structures. (c) The investigation of the laws, phenomena and forces of nature. (d) Appraisals and valuations. (e) The preparation or submission of designs, plans and specifications and engineering reports. (f) Coordination of the work of professional, technical, or special consultants. (g) Creation, preparation, or modification of electronic or computerized data in the performance of the activities described in subdivisions (a) through (f).
6731.1 provides that “civil engineering” includes the use of technology such as GPS in locating “fixed works”.
2. Section 6730, Business and Professions Code which requires any person practicing, or offering to practice, civil engineering to be licensed as a civil engineer “in order to safeguard life, health, property and public welfare.”

The legal opinion refers to other sections that emphasize the need for a licensed civil engineer to be competent and in direct charge. There are no exceptions that allow the civil engineer to stamp the work of anyone else performing “civil engineering.” In fact, other sections not referenced in the opinion emphasize the monopoly.

Section 6747, Business and Professions Code, is one example, and is considered to provide public utilities (railroads) with the ability to use employed engineers who are not licensed. That section includes the phrase “except for those provisions that apply to civil engineers and civil engineering”. Civil engineering, as shown above, includes everything. Every person, even if an engineer, must be licensed as a civil engineer. Section 6747 is actually a confirmation of the monopoly.

HSR, as proposed in California, will be the most advanced system in the country. The system approved by the voters is similar to the systems in China, and more advanced than the systems in Japan or Europe. Many, if not most, of the challenges will require expertise far beyond that provided by civil engineers.

The focus of civil engineering is to ensure the integrity of structures, but not to design electrical systems. There is no overlap between electrical and civil engineering. And, as stated in the legal opinion, the definition of electrical engineering does not include services regarding fixed works. That is

exclusively in the definition of civil engineering. I made an inquiry to the engineering licensing board and they were not able to give me the name of any California licensed electrical engineer who is also licensed as a civil engineer. If that is the case, and in my experience it is, there will be no one available in California to design the power system for HSR.

The FRA report to Congress this August regarding positive train control (PTC) describes the complexity of such systems. As well as being the president of CLCPE, I am a licensed chemical engineer. Also, I am a retired U.S. Navy Captain, nuclear submariner; and have been a chemical plant manager, petroleum refinery operations supervisor, project manager, Chief Engineer for DuPont Environmental; and am now an owner of an engineering firm. This background gives me some capability to understand the complexity involved in developing PTC. Anyone is able to see that it is very complex, but I can also see that the expertise needed for PTC will come from professions beyond civil engineering. That expertise cannot be provided in California.

We are only discussing two of the major elements of HSR. They are most important, and very little room for error can occur. Public safety is a primary focus in the FRA report to Congress. Reliable performance of train operations is also necessary. These obvious goals cannot be met in California.

ACEC-CA and PECG represent that licensed civil engineers must provide all the services needed to develop projects, such as HSR. The relevant sections of the PE Act, and the opinion from Legislative Counsel, are being circulated in order to inform entities, such as the FRA, that this is the law in California.

We are enclosing our letters to Gov. Jerry Brown and the office of the State Treasurer. HSR in California has the potential of being the largest public works project in the state's history. To consider that it will entail the need to violate the PE Act, and require a breach of contract, in order to be constructed is puzzling at best.

If you have any questions, I would be happy to answer them.

Sincerely,



Robert A. Katin, PE
CLCPE President

Enclosures:

- legal opinion of the PE Act issued by the Legislative Counsel
- letter to Gov. Jerry Brown
- letter to the office of the State Treasurer

cc: Mr. Peter Osborn, Senior Project Manager, Office of Railroad Safety
650 Capital Mall, Ste. 4-100
Sacramento, CA 95814