

Structural Engineer Separate Licensure Summit
November 13, 1004
New Orleans, LA

Breakout Session Notes
State A - Assume that there is no structural designations (P.E. only)

Group I Grandparenting

One person can stop process

Discussion:

Need to recognize that change in the law may, in the eyes of some, affect their practice. Thus this person may object to the change and voice opposition to those in authority such as members of the State Board of Registration or their State Legislator.

People do not want to be regulated.

Discussion:

It is probably an inherent nature that people basically do not want more laws to inhibit their normal way of life. Because of this people will need to be persuaded that the proposed regulation, i.e. law, will be to their benefit and for the life and safety of the public.

Having a failure helps.

Discussion:

When a failure occurs, such as the Hyatt House failure, people want to know what and why such a catastrophic event took place. They want to know what can be done to prevent (or minimize) further such occurrence. While such a failure remains fresh in the minds of the public is the time to propose a change in the state law.

People don't want change.

Discussion:

The public probably tends to be suspicious of proposed changes. Therefore it is important to arrive at good sound reasons for any proposed change in the present law.

Reasons why someone might oppose.

Discussion:

It is important to attempt to identify all reasons for opposition and be prepared beforehand to logically counter and answer such objections.

Come up with reasons for change.

1. Have case studies
2. Stress public safety

Discussion:

Come up with actual case study examples depicting problems caused by improperly trained engineers performing inadequate structural design. Need to demonstrate how these poor designs could endanger the public.

We have a national consensus.

Discussion:

The national structural engineering organizations, i.e. SEI, NCSEA, and CASE all favor a separate Structural Engineering License.

Have SEI web site listing case studies.

Discussion:

Having such a listing would provide illustrations of problems nationwide from which examples can be taken and used by those seeking to convince legislators and others of the necessity of creating legislation for the creation of separate licensing of Structural Engineers.

Group 3 Case Studies

You have a hard time getting people to come forward.

Discussion:

In developing case studies of actual problems caused by inadequate structural design it is desirable to obtain factual information from those people highly acquainted with the facts. The engineer of record is fearful of discussing the matter primarily due to the possibility of pending litigation. Outside engineers and others called in to independently investigate the problem are likewise hesitant to reveal their findings and opinions. Fear of litigation is a problem and their fear needs to be overcome before the informed person may be willing to openly discuss the matter. This could be a considerable length of time after the problem has occurred.

Honest mistake vs. incompetence.

Discussion:

It needs to be pointed out that while structural problems are caused by incompetent engineers, problems are also due to human error. The competent structural engineer, like everyone else, is only human and can unknowingly create an honest mistake. The difference between a problem caused by the incompetent as opposed to that due to a human mistake needs to be well defined and explained.

Education is a factor. This has reduced over the years while codes have become more complicated.

Discussion:

Years ago the requirement to obtain a Bachelor of Science degree in engineering was in the realm of 140 to 150 semester hours. This has been reduced so that the requirement is today approximately 124 semester hours. Obviously courses have been deleted from the curriculum. Meanwhile structural engineering design and building codes have become more complicated. The engineering graduate today is not getting the academic training that his counterpart received years ago.

Get discipline records from State Boards, Get data.

Discussion:

State licensing boards hear complaints brought against engineers. They listen to and investigate the particulars of the case and based on the facts issue their verdict as to the validity of the complaint. Thus the state boards have records pertaining to engineers performing incompetent structural engineering design and services. Records of such incompetence, which may be of public record, should be obtained in order to generate data to be used to convince legislators of the need for separate Structural Engineering Licensing.

Group 3 Other Things

Identify key players.

Discussion:

Identify those people and groups, both pro and con, who would be actively interested in separate licensing of Structural Engineers. These could include legislators, members of the State Licensing Board, professional organizations and other interested parties.

Be persistent

Discussion:

When there are roadblocks, be prepared to immediately provide sound and persuasive reasons to countermand the negative given.

Lobbyist.

Discussion:

Consider obtaining the services of a paid lobbyist. Such a person should be effective in identifying, approaching, and delivering the message to those people in the governing process who would be influential in passing legislation in establishing Licensing of Structural Engineers.

Resources for public information.

Discussion:

Develop written information explaining the reasons for having separate licensing of Structural Engineers and its importance for the life and safety of the public. Have this information immediately available to interested parties. Identify good and well informed speakers and have them available to speak before interested groups.

Be prepared for the opportunity.

Discussion:

Always be ready for the unanticipated opportunity. For example, a sudden earthquake may cause severe damage to structures, resulting in injury and even death. This may be the time to express the need for the separate licensing of Structural Engineers.

Group 2

Employers should encourage their engineers to be Licensed Structural Engineers.

1. Helps in marketing
2. Needs no or less supervision

Discussion:

Having licensed Structural Engineers on their staffs should be advantageous to owners of structural engineering firms. They will be able to show prospective clients the quality of their staff and of the people who will be working on the client's project, These engineers have demonstrated their

competency. They have obtained their License as Structural Engineers by having the appropriate education, obtained a set minimum amount of experience and have past a written examination in structural engineering design.

Employers need to realize that Licensed Structural Engineers in their firm are to their advantage.

Discussion:

Some employers may feel that having Licensed Structural Engineers in their firm is not really advantageous. The employer may reason that he is after all, licensed and can provide the structural engineering seal required on the contract documents. This employer may further rationalize that licensed SE's on his staff may become too acquainted with his clients and their staffs and may feel that this may open the door for these SE's to start their own practices and become competitors. This is probably shortsightedness on the employers part. The employer should use licensed SE's on his staff to his advantage as already discussed above.

Inform the public.

1. Who are we?
2. What do we do?

Discussion:

The general public probably does not know what structural engineering is or what structural engineers really do. They probably do not know (nor care for that matter) the role of a structural engineer in the design of a building. Many probably feel that the structural design of a building is performed by the architect or the building contractor. Structural engineers need to do a better job in explaining who they are, what they do, and their role in the design of a building.

Create safe buildings - life safety.

Discussion:

Structural engineers need to make the public aware of potential dangers that may exist in inadequately designed structures. Structures which may have been serviceable for many years and therefore deemed safe, may in fact not be able to withstand the maximum loads and forces spelled out in the building codes. It needs to be explained and emphasized that those are rarely occurring but real loads associated with the high forces of nature such as those associated with extreme earthquakes, hurricanes, or high snowfalls. It needs to be emphasized that when such catastrophic events occur, the public needs to be protected from failures due to inadequately designed structures. To protect the welfare and safety of the public, structures need to be designed by competent Licensed Structural Engineers who

have demonstrated their competency through education, experience, and written examination

Create economical and safe buildings.

Discussion:

A structure can be designed which may be safe and meets the building code, but yet, is not the most cost effective structural system being used. With the many different types of building materials and structural systems in existence, the properly qualified structural engineer needs to have the knowledge and experience to be able to select the proper materials and design the proper structural system which will produce the most cost effective yet safe product for the client. This knowledge is obtained through proper education, training, and experience such as that which would be expected of a Licensed Structural Engineer.

Supported by ASCE, NCEES, NCSEA.

Discussion:

The concept of each state having a separate license for structural engineers has the support of major engineering organizations.

Associate major structures with the name of the structural engineer.

Discussion:

There are many outstanding structures which have been and are being built. Yet, the general public rarely knows the name of the structural engineer responsible for the design of these structures. An effort should be made to make the public aware of who these structural engineers are and the responsibility they have in providing a design for the welfare and safety of the public.

PAC contributions to pay lobbyist.

Discussion:

A law providing licensing of structural engineers will require legislation approved by the State Legislators. To obtain such approval may require the services of a qualified lobbyist. Money to pay such lobbyists may be required to come from PAC contributions.

ACEC, NSPE, etc. have lobbyists--get their support

Discussion:

Many engineering societies already have lobbyists representing them pertaining to issues of interest to them. In addition to working on these issues have their

lobbyists also promote Licensing of Structural Engineers when dealing with legislators with whom they are in contact.

List of lobbyists who can be of help.

Discussion:

Obtain from the various engineering societies the names of lobbyist who have been proven effective in their dealing with legislators.