

† Certification and Separate Practice Act For Structural Engineering

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The first Structural Engineering seminar and workshop was held and the topics of separate practice act for Structural Engineering and Certification were discussed as additional requirements to better protect the welfare and safety of the public. The final goal is to establish a separate practice act for Structural engineering in each State with similar requirements for Education, Experience and Examination that comity between the States could be achieved with minimum effort by those who wish to practice in multiple States. Certification is considered a “stepping stone” to this end. NCSEA has sponsored the establishment of a separate independent organization to grant and administer a Structural Engineering Certification program. It now becomes apparent that there is a need for certification beyond the original limited scope of separate structural license.

After several in-depth workshops and countless other meeting within and between various interested organizations a protocol similar to that which exist in the medical profession has emerged as follows:

- 1) Establish minimum level of competency, i.e. Education, Experience and Examination (E3) requirements and grant certification as a Structural engineer. This could be noted as Diplomate American Board of Structural Engineers (DABSE). The requirements for this certification should be such that States would be able to accept this certification as sufficient verification of competency to grant a State License to practice structural engineering within that State. Also as noted above if the States all accept the same requirements for licensing, the ability to obtain a license via comity between States should be achieved with minimum effort. Note that this “Base” certification is required prior to granting any specialty certification(s).
- 2) Establish minimum level of competency E3 requirements and grant certification as a Structural engineer with special demonstrated abilities to analysis and design “special Buildings and Structures” for extreme loads/forces such as: Buildings over 5 stories, hospitals, schools, specialty structures, high seismic forces (IBC Seismic Category C, D, E, F), Tornados, Hurricanes, blast, base isolation, damping systems. ...Etc. This could be noted as Diplomate American Board of Special Buildings and Structures (DABSBS)
- 3) Establish minimum level of competency E3 requirements to grant certification as a structural engineer with special demonstrated abilities to analysis and design special bridges and train trestles for operational, environmental and extreme loads/forces such as: Bridges/Trestles that span over 20 feet, specialty transportation structures, high

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seismic forces, tornados, hurricanes, blast, base isolation, damping systems...Etc. This could be noted as Diplamate American Board of Special Bridges and Trestles (DABSBT).

- 4) Establish minimum level of competency E3 requirements and grant certification as a structural engineer with special demonstrated abilities to analysis and design pre-stressed concrete components, buildings and structures for operational, environmental, and extreme loads/forces such as: Pre-stressed beams and columns, post tensioned buildings and structures, pre-stressed water tanks and specialty structures...Etc. This could be noted as Diplamate American Board of Pre-stressed Concrete (DABPC).
- 5) Establish minimum level of competency E3 requirements and grant certification as a structural engineer with special demonstrated abilities to analysis and design marine and offshore structures for operational, environmental and extreme loads/forces such as: Offshore platforms, docks, wharfs, marinas and specialty marine structures...Etc. This could be noted as Diplamate American Board of Offshore and Marine Structures (DABOMS).

The fundamental structural protocol for this expanded and comprehensive certification program has the following major attributes:

- 1) The base certification (DABSE) is required prior to granting of any specialty certifications
- 2) The E3 requirements for all certifications shall be coordinated with each other. For example it is implied that if the design of pre-stressed concrete is not specifically included in the E3 requirements for DABSE and is specifically included in the E3 requirements for DABPC, the engineer with DABPC certification has demonstrated special abilities to analysis and design this type of structure and should receive appropriate recognition for award of these types of projects.
- 3) Each Certification requires a separate Board.
- 4) A structural engineer with only a “base” certification (DABSE) is not specifically prohibited from practicing in areas where they do not have specialty certification. The intension/hope is that the public and governing jurisdictions will come to recognize the value of specialty certification and impose requirements similar to existing requirements in California that require a Structural Engineering License to design specific structures such as public schools, hospitals and buildings over 160 feet in height.