



## THE BURNING QUESTION

# WHY DO WE NEED AN ARE ANYWAY?

It's controversial. It's a lot of work. It's difficult. So what's the point?

You're on the operating table. The bright light above you is suddenly obscured by your doctor, who already has a scalpel in her hand. She looks down at you and nods. "Don't worry," she comfortingly reassures, "I'm a professional." And you know that she is. Somewhere in the back of your mind, you take comfort in the fact that she's gone through medical school, spent years in training, and has successfully passed a rigorous test of her knowledge and skills. Your life is in her hands; you should expect nothing less.

Why should it be any different for architects?

When medical doctors—or engineers, accountants, or lawyers, for that matter—are not held to these strict standards, they run the risk of endangering public safety and pose a threat to consumers. Architects plan and design the buildings and structures in which many of us live and work and have a direct effect on the public's health, safety, and welfare.

Testing assesses a candidate's ability to understand and apply important concepts needed to practice in his or her field. It is not just another hurdle to cross. For architects, licensure exams evaluate the skills that are necessary for protecting the public's safety.

"Knowledge base in architecture is gained during the educational process and many skills in the profession are developed during internship. It is important that standards be in place to verify that the minimum knowledge and skills have been attained to allow a candidate to practice architecture as a sole practitioner," says Dennis S. Ward, AIA, Former ARE Subcommittee Chair and member of NCARB's Board of Directors.

## **A NEED FOR A STANDARDIZED WAY TO DETERMINE COMPETENCY**

While early examinations were always written and scored by practicing architects and educators, they haven't always been standardized across states and jurisdictions. Previously, each board prepared its own test specifications and questions and set its own passing standards. Because of this, the examination process varied from jurisdiction to jurisdiction. An effective system for reciprocal licensure was not possible as standards were widely varied across the country.

To address this issue, NCARB worked with its Member Boards to create an examination that would evaluate all future architects in the same manner. Doing so would ensure that all who passed the exam would possess the same level of ability. This, in turn, would lead to a single national standard accepted by all jurisdictions.

The first national exam was administered by NCARB in 1965. This exam was made up of seven, machine-graded multiple-choice sections and two graphic sections. However, it still lacked universal scoring in that each individual jurisdiction independently graded the two graphic sections.

NCARB continued to work over the next few years on many updates and improvements to the exam including the nationalized delivery and scoring of standardized content that reflected a candidate's education and

experience. In 1979, NCARB commissioned a "task analysis and validation study" to ensure that the exam included content that evaluated a candidate's knowledge and skills needed to perform day-to-day tasks required in independent practice. The study involved independent experts, profession-wide surveys and psychometric analyses; and the results were used to create the Architect Registration Examination® (ARE®).

The first ARE was administered in June 1983 as a nine-division, 32.5-hour paper and pencil examination. This examination included seven multiple-choice and two paper-and-pencil graphic divisions and was taken over four consecutive days. Over the last 20 years, NCARB has made numerous improvements to keep the ARE current.

## **FAST FORWARD TO TODAY: ARE 4.0**

The ARE tests a candidate's ability to apply the skills needed to practice architecture independently in two ways. The first is a set of multiple-choice, check-all-that-apply, and fill-in-the-blank questions that are used to test knowledge, analysis, and comparative reasoning. The second is through the graphic portion of the exam. The vignettes gauge critical-thinking skills and the ability to evaluate the many program requirements in each vignette and synthesize these requirements into an effective solution.

Candidates are not evaluated on how well they can use a specific software program

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(AutoCAD®, Microstation, SketchUp, etc.). NCARB developed its own proprietary software program specifically used for testing so that all candidates have a fair and equal opportunity to perform regardless of their specific experience.

“The ARE is recognized as a gold standard of professional licensure examinations. It is in a constant state of review and refinement in order to keep it current with the constant changes in the architectural profession,” says Ward. “The ARE is a test developed by actual practitioners from across the United States and Canada, young and old, from large and small firms who have their ‘fingers on the pulse’ of the profession and are familiar with its trends and idiosyncrasies.”

The ARE Subcommittee, NCARB’s largest volunteer committee, is responsible for writing questions (or “items”) for the exam. This committee of more than 60 volunteers (including architect Member Board Members, Canadian Board Members, engineers, and recently licensed practitioners) is committed to using and implementing innovative testing methodologies to ensure all sections of the exam remain fresh, current, and forward thinking.

Subcommittee members are divided into more focused groups and asked to write questions or vignettes pertaining to a particular topic or area of knowledge based on the findings of the *Practice Analysis*—a comprehensive assessment of the knowledge/skills that are

important to the competent performance of a recently registered architect. Multiple-choice items are screened and formatted by NCARB’s testing consultant, Prometric, and reviewed again by the group. If the questions are acceptable, they are first pretested by committee members who wrote items for a different content area, and then by actual candidates in test centers across the United States and Canada. After this extensive pretest process, Prometric reviews the psychometric data for each item to ensure it is performing appropriately based upon nationally recognized standards. Items that perform well are incorporated into the actual exam.

The process of creating vignettes is similar, with the exception that the pretesting is done by recently licensed volunteer architects, not by actual candidates.

In all cases, development is rigorous, time consuming, and challenging—and absolutely necessary. This intense process assures that the ARE is legally defensible and psychometrically justifiable. NCARB’s Member Boards base initial licensure on the ARE in addition to the education and experience requirements.

#### HOW THE ARE IS SCORED

Multiple-choice items are equally weighted and scored with each correct answer receiving one point and each incorrect or unanswered question receiving zero points.

Graphic vignettes are scored through a computer-based analysis of a candidate's solution. This analysis evaluates each solution against many predetermined requirements that are weighted by importance. Based on a candidate's overall performance for each requirement, a solution is reported as acceptable, indeterminate (moderate deficiencies), or unacceptable (major deficiencies).

NCARB utilizes a process called "conjunctive scoring" to combine scores for the multiple-choice section and the graphic vignette section into a single pass or fail score. This scoring model allows candidates to compensate for a poor vignette performance if he or she performed well on the multiple-choice section or vice versa.

### REAL PRACTICE SKILLS TESTED

NCARB has continuously worked over the years to create a stronger ARE. ARE 4.0 reflects current architectural practices and uses methodologies that more accurately assesses a candidate's knowledge, skills, and ability.

The *Practice Analysis* process is only one of the many ways NCARB works to ensure that the ARE remains a legally defensible and valid exam. Every portion of the ARE is constructed to reflect the current psychometric standards established by the testing industry.

"The ARE is constantly refreshed and validated by subject-matter experts and testing organizations to ensure that it remains consistent in quality and validity," says Ronald B. Blitch, FAIA, FACHA, Chair, NCARB Committee on Examination.

### A STANDARDIZED EXAM THAT WORKS FOR THE PROFESSION

In collaboration with our Member Boards, NCARB set out to accomplish a goal over 40 years ago to develop a national standardized examination that measures a candidate's skills in order to facilitate reciprocity among jurisdictions. Numerous volunteer architects have dedicated countless hours to ensure the ARE reflects current practice and evaluates every future architect's ability to perform the services required in all aspects of architectural practice.

Today, the purpose of the ARE remains the same: to assess a candidate's ability to safeguard the public's health, safety, and welfare. It also measures a candidate's ability, not only to perform measurable tasks, but also demonstrate the skills that reflect the practice of architecture as a whole. This national standardized test was born from the need of architects for mobility. A national examination, combined with standardized requirements in both education and experience, make it easier for architects to seek licensure outside of their home jurisdiction—to be mobile in our mobile society. **DC**

### THE EXAM AND RECIPROCITY

Can you imagine a United States where every jurisdiction created its own standards for architects? If each state had different education requirements? Different experience qualifications? A different exam?

In this imagined world, pursuing opportunities across state lines would become very difficult. Following a client into a new jurisdiction would be time-consuming and expensive. It would require that you prove that your education is valid in another state, and the experience you earned through your internship is acceptable in the new state. With no nationally recognized examination, you'd probably have to take each jurisdiction's local examination.

In fact, prior to the ARE's development, this was a reality for many architects. The earliest examinations were written and scored by each individual state board. Practicing architects and educators were organized to prepare and score these tests. As long as each state prepared its own test specifications and set its own passing standard, there was little chance for uniformity across the boards on examination, no effective reciprocity system, and no consistent protection for the public across the nation.

The ARE is an integral part of an architect's ability to achieve reciprocity. By establishing a single standard for examination that all jurisdictions rely upon, it's that much easier for architects to pursue opportunities wherever they appear. The ARE is also beneficial to each Member Board because it ensures that testing standards for architects are consistent, current, and relative to the profession. It also reduces the time and resources needed for each board to create, score, and deliver an examination.