



**Testimony of John O. Woods, Jr., P.E  
Principal,  
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Before the House Committee on Small Business,  
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## **Summary**

The A/E services industry is unique in the impact their work has on the nation's infrastructure and long term related costs. For these and other reasons for public benefit A/E services contracts are awarded based on qualifications. It is an industry that is mostly composed of small high quality, specialized firms. The varied disciplines and unique factors that impact A/E services efforts result in significant natural teaming of firms to achieve most qualified firm status.

The combination of above facts leads to a need for focused federal contracting statutes and measurement requirements. Among these are including all work performed by A/E services firms at prime and subcontract levels when measuring small business participation by federal agencies and establishing subcontract goals as a percentage of funded prime contract value. Several other recommendations are made to improve the effective use of small businesses in the A/E services sector.

## **Introduction**

Chairwoman Velazquez, Ranking Member Graves, and Members of the Committee,

I appreciate the opportunity to testify before you today about *Small Business Participation in the Federal Procurement Marketplace* and specifically about the unique nature of A/E services procurements. In addition, I will address the composition of the engineering industry, why small specialized firms like my own compose the majority of our industry, how we view federal government policies, and provide individual recommendations to enhance results to our firms and the tax payer.

My name is John Woods, and I am the founder and principal of Woods Peacock Engineering Consultants, Inc., a consulting structural engineering firm located in Alexandria, Virginia. Woods Peacock is a Small Service-Disabled Veteran Owned Firm with 16 employees, three of whom have been hired in the past 12 months. All of them are committed to providing our clients structurally sound designs for various sized projects, at home and around the world. I have also served on several councils, foundations, and boards dealing with veterans, children, business, community, and disadvantaged persons' issues, as well as being a Presidential appointee to the U.S. Access Board, a leading Federal agency on accessibility for persons with disabilities and accessible design.

My firm is an active member of the American Council of Engineering Companies (ACEC); the voice of America's engineering industry. ACEC's almost 6,000 member firms employ more than 500,000 engineers, architects, land surveyors, and other professionals, responsible for more than \$500 billion of private and public works annually. Almost 70% of these firms are small businesses, with less than 30 employees. Our industry has significant impact on the long term performance and costs of our nation's infrastructure and facilities. I currently serve on ACEC's Federal Agencies Committee and the Small Firm Coalition, which develop Council positions on legislation and promote infrastructure issues before Congress, executive agencies, and states.

In over 40 years of experience I have designed or been in responsible charge of the design several hundred significant building structures and provided structural consultation on several thousand other projects, both domestic and international. I have served on the national committee of the Coalition of American Structural Engineers which wrote the National Guidelines of Practice and was on the industry committees that wrote the Critical Structures Manuals and the Complex Structures Manuals for many local governments. I have acted both as expert and advisor for legal counsel, particularly in the areas of standard of care and state of the trade, and more recently for design-build contracts. Notable present federal projects include the renovations of the West Wing of the National Museum of Natural History, U.S. Embassies in Rome, Monrovia, Liberia, Kigali, Rwanda, Johannesburg, S. Africa, and Karachi, Pakistan, and the new Department of Homeland Security Headquarters and New Operations Center.

We are at a critical juncture in our nation's history – the risk to people and infrastructure is growing at an alarming rate as a result of more than 100 years of neglect to the nation's infrastructure. At the same time we are in the throws of an economic crisis that is impacting long term infrastructure spending and our small professional architecture and engineering (A/E) services firms directly. The combination of my small firm ownership, long history of involvement with my industry and small firms' issues, performance under federal contracts, and personal interest in serving my community and nation provides me the background to address the following issues.

### **Uniqueness of the Architect/Engineering Industry**

A/E firms provide services in varied technical disciplines (e.g. architecture; mechanical, electrical, civil, structural, chemical, and other engineering; surveying; etc.). States require professional licenses for the individuals performing this work. In most states, the majority ownership of firms providing such services must be held by individuals licensed in their states in their respective disciplines, for the firm to be licensed to work in that state. The ethical codes for licensed professionals to retain their licenses require them to perform work only that they are capable of performing, based on education and experience.

Because of the state individual and firm licensing requirements, firms need to vary their structure for the state in which they are working. This, along with the ethical requirements for retaining their licenses, is why a majority of A/E firms are small and specialized. Since the work is performed by individuals, the quality of the services offered is independent of size. That is why

a firm like Woods Peacock is sought out for its structural engineering services. The principals of such firms are directly involved with work performance.

The reason for state licensing is the direct impact that A/E services have on the life and safety of the public that use or depend on the infrastructure and/or facilities projects designed and constructed. In addition, each project's performance, construction and life-cycle costs, longevity, sustainability, resiliency, energy use, adaptability to on-going technology changes, and similar criteria are established through the A/E services performed. The integration of varying criteria across multiple technical disciplines to assure optimal design is the goal of project owners, users/operators, and the public alike. The costs of A/E services are a very small fraction of the life costs of a project (less than 0.5%), but the impact of those services are significant.

As indicated above, there are many technical disciplines that are required to complete infrastructure and facilities projects. These disciplines must work together under common leadership to achieve optimum and integrated results. Project design management is often a discipline itself. The better the disciplines work together, the better the results. This teaming, whether internal to a large multi-disciplined firm or from separate highly qualified specialty discipline firms is a key to success. Quality teaming may be produced through formalized processes, experience of working together, or both.

Due to varying functions and performance requirements, physical conditions (soils, weather, etc.), locations and jurisdictions (access, utilities, building codes, permitting requirements, etc.) and similar considerations, each project is unique, requiring special capabilities and experience. Teaming arrangements need to accommodate the unique factors of each project. A team formed to optimize services performance for one project may not be the right team for a similar project in a different location or a different project at the same location. Sometimes teams can be optimized with minor changes of the individuals involved and sometimes whole new teams are better. Each project needs to have the project specific qualifications requirements identified and the A/E services teams established by evaluating and choosing the team members with the most capabilities to satisfy those qualifications.

The long term business success of individuals and firms providing A/E services is achieved only when clients and potential teaming partners recognize and accept their qualifications to perform quality services in specific disciplines and areas. A reputation for quality work, working well as a team member, and innovative solutions to technical problems that arise on projects are key to receiving repeat or future work.

Throughout the industry and codified by the Brooks Act (Public Law 92-582) for federal work, A/E services offerors are selected for work based on being the most qualified for the particular project or series of tasks. Since cost of those services are so relatively small in comparison to the resulting benefits of optimum performance of the results, working with the most qualified services provider at a fair and reasonable cost is paramount.

As needs for services are identified and qualifications requirements are made known, potential offerors look at their own capabilities and decide what they need to do to not just perform the

work, but to assure the owner/client that they are the most qualified to successfully complete the effort. Team formation internally and externally becomes critical to obtain the best individuals that can work successfully together on the project and also convince the client that they can. This is why high quality small businesses are routinely included on teams to improve the team's chances of winning and performing individual projects.

### **Degree of Small Business Participation can only be Known by Determining Total Performance of Work (Prime and Subcontract)**

The requirements of the federal government to increase small business participation on government work at the prime contract level is complicating the natural selection and teaming of A/E services providers identified earlier. As discussed, most projects require a mix of technical disciplines to be performed in an integrated and coordinated manner. The ownership, licensing, and ethical requirements for A/E services work has resulted in an industry mostly comprised of small specialized firms working in the technical disciplines.

In order to be selected for work based on being the most qualified offeror, teams are formed based on the contribution brought by each team member to a specific project. Most such teams include small businesses, but under current procedures agencies only report on prime contracts to small businesses when assessing small business participation. This creates a false impression in two ways. First, the entire prime contract is credited to small business participation, even when a significant portion may be subcontracted to large businesses. Second, the record of work performed by small businesses as subcontractors to large businesses is lost. A better process would be to have agencies report the work actually performed by small businesses under any type of contract. This information is already being reported, as currently required, by prime contractors, as part of contract administration and measurement of subcontracting goals.

### **Problems Winning and Doing Federal Work**

The current size standard for A/E services is \$4.5 million based on gross revenues averaged over three (3) years. Pass through costs, including subcontract work and project equipment rentals inflate revenues without indicating real firm growth. This becomes a problem when poorly planned small business set-aside contracts are won by firms that must add technical disciplines and management capabilities to perform the project. The growth therefore is false or forced.

Individual state licensing requirements and large variances in state costs of living also impact gross revenues. The same size firm operating in a state with a high cost of living may show inflated revenues that graduate it from a small business only because of the higher costs of labor and services. Since size standards are consistent across the country and state restrictions do not exist for federal contracts, firms in high cost areas are being penalized.

The unique procurement aspects of the A/E industry vary considerably from the federal procurement "norm". Often the benefits of selecting offerors based on qualifications prior to addressing the costs of services is not fully understood by procurement officers and specialists that do not regularly do such procurements. Also the specialization based on technical disciplines and technical nature of firm principals is not fully considered when developing prime

contacts intended for small A/E businesses. While training of federal procurement staff occurs, the lack of or sporadic use of the unique A/E services tools and processes creates errors. There is a need for a separate career path for A/E procurement staffs and requirements for all such procurements to be appropriately staffed. Assuring that such staffs are properly sized and retained is also needed.

Federal contract planning and sizes do not match the specialized nature of the work, small size standard, need for teaming to perform, and state licensing factors. Care is needed to assure that the contracts developed can be performed by small businesses in the location required, by the experienced personnel offered, and managed properly.

Subcontracting percentage goals for federal large prime contractors is based on amount subcontracted. This allows the prime contractor to adjust the amount subcontracted to achieve the goals. A small firm cannot plan on a certain level of work over an extended period of time. While all A/E services are subject to client requirements and physical conditions encountered, percentage goals based on the funded amount of the prime contract would provide a clearer picture of the future for small business subcontractors. In addition, the latter goal setting eliminates an unintended penalty on mid-size firms and small businesses that graduate. With the goal based on contract dollar amount, other subcontracting is not a factor and teams can be established based on capabilities needed and existing relationships rather than on controlling ratios of subcontracted work. This even allows mid-size and large firms to team with each other in subcontractor roles without penalty on goals attainment.

Of course, the continuously changing federal rules and extensive oversight requirements present a burden of their own. A professional firm involves its principals in the performance of technical discipline work. To keep up with ever increasing statutory requirements and corresponding implementing regulations requires small A/E services firm owners to forgo their technical work or hire additional staff to learn, understand, and comply with the federal specific requirements.

### **Best Use of Industry Achieved Through Understanding of Roles**

The federal workforce needs the managerial and administrative capabilities and numbers of personnel to procure, coordinate, run, and accept the A/E services work. This work is ongoing and consistent and must be performed in a consistent and stable manner.

The private sector provides the project unique capabilities, varied experience, surge ability, and innovation to efficiently and effectively perform on limited duration project work. Using federal in-house technical staffs to perform project A/E services is similar to awarding all such work sole source to a single firm. They could not have all of the capabilities on hand to innovatively and efficiently perform quality work for each unique project. Private sector firms can team or add and delete staff as needed to meet fluctuating technical and schedule demands and are selected for being the most qualified for the specific project. In addition, project work performed by federal technical staffs is done at actual cost (staff payments), while private sector performance is done at negotiated contractual cost. Risks to the government are contained through use of the private sector for A/E services.

## Conclusions and Recommendations

The A/E services industry is unique in how firms are established, perform work, selected to benefit their clients, and work with each other. Most firms in the industry are small, specialized, and have a business plan to remain that way to assure performance and reputation. They also perform technical work on unique projects, of limited duration, and requiring specific capabilities and innovation. These factors result in the need for special considerations when trying to assure appropriate small business participation in federal procurements.

Our industry recommends the following measures to be considered in efforts of making the use of small businesses more effective:

- **Small Business Subcontracting should be Counted as Small Business Participation to Meet Agency Goals.** Small and large business participation should be based on work actually performed by small and large firms, not on who holds the prime contract. Contracts awarded to large businesses require a small business subcontracting plan. The results of that plan are reported to the respective agency. To not count this subcontract work as part of the agency goal would appear to be inconsistent with the small business subcontracting plan requirement.
- **Establish that Large Prime Contractors Account for Small Business Subcontracting Goals by the Prime Contract Funded Value, Rather Than a Percentage of Work Subcontracted.** This:
  - Discourages the prime contractor from reducing subcontract work and doing more in-house, thereby increasing the reported percent of work subcontracted to small businesses of various categories.
  - Provides small business subcontractors with a reasonable expectation of being utilized.
  - Provides a level of effort for the small businesses to perform subcontract work awarded, and a target level, plus verification, of the actual amount to be completed. Hence, the small business can plan accordingly.
  - Encourages the use of both small and mid-size firms based on capability and contribution to contract performance, which is in alignment with the Brooks Act.
- **Stronger Certification Guidelines and Establishment of a Centralized Database Receiving Experience Input from Multiple Agencies**
  - Self-certification allows for inaccuracy and error.
  - A central database of agencies experience with firms, supplements enhanced guidelines.
  - Discovery and punishment of violators does not reverse the damage done to the small businesses losing the original contract opportunities.
  - Awards are going to companies that do not fall under the small businesses classification because they either exceed small business-size standards or are not really qualified.
- **Reinstate the Department of Defense's Small Business Competitiveness Demonstration Program (SBCDP) for A-E Contracts and Expand it to all Federal Agencies**
  - The SBCDP assures that 40% of contracts go to small businesses in open competition, with a requirement for set asides to secure attainment.

- Establishes a 15% participation goal for Emerging Small Businesses (ESB) within each Designated Industry Group.
- Encourages proper contract planning to use the natural teaming of the A/E industry and providing prime contract opportunities for small businesses.
- Eliminates the industry harming effects of overusing AE services as a resource for agencies to attain overall small business goals through set aside contracts.
- **Establish Size Standards Based on Industrial Base and Actual Use at All Levels**
  - Establish small business size standards based on the data gathered on the businesses by sector (classification).
  - Establish categorical small business size standards that reflect subcontractor performance, as much as prime contract, roles by the small business industrial base.
  - Measure work actually performed by small businesses at all levels. Work performed by large firms as subcontractors to small firms, but credited to small firm use, distorts the true extent of effective small business involvement. (Many small business firms are selected by procurement officers because they are subcontracting (backed by) to a large firm.)
- **Small Business Set-Aside Contracts Should be Consistent with the Maximum Size of Small Business Competitors**
  - Large contracts are currently being awarded to small businesses that within a year will exceed the small business standards (when averaged over the last three (3) years), hence, disqualifying them from re-competing the work.
  - Contract size should be limited to a reasonable factor of the size standard.
  - Requirements for the majority of work to be performed by the small business prime when compared to actual staff size must be a consideration.
- **Change Contract Bundling Practices to Ensure Reasonable Small Business Prime Contract Opportunities Exist**
  - Adjust current contract bundling practices to ensure that prime contract opportunities are aligned better with small business capabilities; hence, encouraging more small businesses to compete for federal projects.
  - Presently complex contracts are being awarded to small firms in amounts large enough to negatively impact the sustainability and life of the firm.
- **Strengthen Enforcement of Subcontracting Goals and Plans with Data Monitoring**
  - Verify prime contractor reporting of work performed by small businesses and enforce attainment of goals.
  - Prevent prime contractors from creating requirements and restrictions that small businesses cannot attain and are unnecessary for contract performance.
- **Develop a Career Path for Contracting Officers Specializing in AE Contracting and Hire or Develop Personnel in Sufficient Numbers**
  - Significantly increase the numbers and assure continued competence and retention.
  - Create a cadre that understands and appreciates the benefits of QBS.
  - Fashion contracts of a size and scope that attract qualified small businesses.



- **Consider Changing Size Standards to Number of Full Time Equivalent Employees, Based on SF 330 Forms.** Eliminates the issues of significant pass through costs and the varying costs of living across the nation.
- **Have the Private Sector Perform all A/E Services Work on Unique and Limited Duration Projects or Tasks.** Properly use the diverse capabilities and innovation of the private sector, while controlling risk for the federal government.