

Navigating the Complexities of SUE Certification

A Closer Look at Professional Liability and Expertise

In the realm of Subsurface Utility Engineering (SUE), a recent resurgence of interest in my older article, “Almost SUE is not SUE,” has sparked a vital conversation about the qualifications and liabilities of professionals in this field. This discussion, fueled by insightful comments from readers, raises an essential question: should engineers and licensed surveyors be mandated to undergo specific training and experience before certifying SUE drawings?

Understanding the Liability in SUE

The core issue at stake is the extent of liability that a professional assumes when certifying SUE drawings. This liability spectrum can range from negligible to potentially limitless, contingent upon the accuracy and thoroughness of the subsurface utility data. If SUE technicians execute their tasks proficiently, ensuring comprehensive record review, accurate documentation, and use of appropriate technologies, the risk diminishes significantly.

However, the scenario becomes markedly different when professionals lack training, hands-on experience, or direct oversight of SUE projects. Without these, they are ill-equipped to conduct effective quality assurance and quality control, leading to a concerning knowledge gap.

Key Questions Raised

Tyler Bristow, GIS Specialist at Centerline Mapping, posed pertinent queries further highlighting this issue. He questions the current framework allowing licensed surveyors and engineers to certify SUE drawings without specific training in utility locating methods. “What does a licensed surveyor or engineer know about utility locating methods and how can we test them on this subject? There are zero questions regarding utility locating fundamentals or principles and practices on the FS and PS exams and likewise on the FE and PE exams I assume, so why do these two professions get to take the cake? I’m asking because there are surveyors and engineers who may know little about subsurface utilities and locating them, but they are allowed to stamp drawings because they have a license. Should they have to take and pass an SUE test before they can practice SUE, similar to having to take and pass the FE, FS, PE, and PS before they can practice engineering and surveying?”. The absence of utility locating fundamentals in the FS, PS, FE, and PE exams raises doubts about their competence in handling SUE tasks, suggesting a need for a specialized SUE certification.

Bridging the Knowledge Gap: The Utility Investigation School (UIS)

Recognizing this educational void, Jim



Anspach, PG, Distinguished Member of ASCE, in collaboration with Dr. Tom Isley of Purdue University and the Buried Asset Management Institute – International (BAMI-I), developed a curriculum aimed at addressing these concerns. The Utility Investigation School (UIS) has conducted over eighteen comprehensive training sessions, providing 40 hours of instruction to industry professionals. This training, while substantial, only begins to address the complexities of SUE.



The critical question remains: does completing the UIS Course sufficiently prepare a professional to certify SUE deliverables?

The Dual Roles of Engineers and Surveyors in SUE

Engineers and surveyors typically have limited knowledge regarding utility designating or location. While surveyors are adept at confirming the physical accuracy of visible elements, engineers excel in theorizing about unseen structures. Both professions, ideally, should comprehend the theories and methodologies underlying the placement of utility markers, such as electromagnetic, ground-penetrating radar (GPR), acoustic, and time-domain electromagnetics (TDEM) techniques. The UIS training significantly contributes to filling this knowledge gap, but is it adequate?

To help answer that question, Jim Anspach provided the following update: ASCE's Civil Engineering Certification Board, accredited by the Council of Engineering and Scientific Specialty Boards, has initiated a program for Board Certification of a Subsurface Utility Engineer.

This certification will require a PE license, 10-20 years of experience, attainment of the Body of Knowledge specific to the practice, and a written exam. The Body of Knowledge will encompass pertinent aspects of geophysics, design and construction of utility systems, engineering survey, and utility conflict analysis and resolution. Specialty certification is a rigorous process, and the UIS schools, while highly relevant, will not contain all the elements of the BOK that is needed. It will help practitioners pass aspects of the written test.

Conclusion

The dialogue initiated by "Almost SUE is not SUE" underscores a critical issue in the field of SUE: the balance between professional qualification and liability. While the UIS offers a foundational step towards better-equipped professionals, the industry must ponder whether this is sufficient for the complex and risk-laden task of certifying SUE drawings. As the field evolves, so must the standards and training for those who hold the responsibility of ensuring the safety and accuracy of subsurface utility projects.

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Jim specializes in subsurface utility engineering science, utility engineering science, mapping, coordination, corrosion, water & gas leakage detection and has spent over 40 years developing and leading the subsurface utility engineering profession and the utility engineering profession through development of standards and teaching.

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