

Public Health Safety and Welfare—Engineering Standards

Case No. 17-7

Facts:

A proposed amendment to a local ordinance that is being promoted by a city citizen's group has been brought forth by a city council member. The proposed change to the ordinance is contrary to established engineering standards. The changes would install traffic engineering infrastructure that many within the local engineering community, including Engineer A, consider unsafe, believe does not satisfy current standards and best practices, and is contrary to a state law that requires an engineering study before proceeding with the change. The city attorney attempted to explain these factors to the members of the city council in a recent public forum, but the city council voted to proceed with the proposed change to the ordinance.

Question:

What are Engineer A's obligations under the circumstances?

NSPE Code of Ethics References:

- Section I.1. - *Engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health, and welfare of the public.*
- Section II.1.f. - *Engineers having knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.*
- Section II.3.a. - *Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.*
- Section II.3.b. - *Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.*
- Section III.2.a. - *Engineers are encouraged to participate in civic affairs; career guidance for youths; and work for the advancement of the safety, health, and well-being of their community.*
- Section III.2.c. - *Engineers are encouraged to extend public knowledge and appreciation of engineering and its achievements.*

NSPE BER Case References: 00-5, 07-10, 10-5, 12-11

Discussion:

Professional engineers are frequently faced with engineering ethical situations that impact the public health, safety, and welfare. These situations can manifest themselves in a variety of ways between the professional engineer and the public, client, employer, other professionals, and other third parties. While each situation is different, the one constant in those situations is the

clear and unambiguous responsibility and obligation on the part of the professional engineer to hold paramount the public health, safety, and welfare.

Over its almost 60 years of deliberations, the NSPE Board of Ethical Review has examined each of these situations. These situations have involved a variety of circumstances: a professional engineer observed a failing bridge structure that was reopened in the aftermath of public pressure applied to government officials (BER 00-5); a professional engineer becomes aware of post construction modifications to the engineer's design that could result in a structural failure (BER 07-10); a professional engineer who while onsite for a client, observes a safety violation on an adjacent property (BER 10-5); and a professional engineer who is aware that commercial drivers who frequently violate parkway restrictions could be seriously endangered by a road repair (BER 12-11). While these cases are significantly different in many respects, including the duty and responsibility of the professional engineer to take action in each case, it is clear the first and foremost obligation in each situation is the obligation to protect the public.

The NSPE Code of Ethics provides important guidance for professional engineers in the present situation. In addition to their public health and safety responsibilities, professional engineers must explore the specific affirmative actions to take, to whom the information should be reported, and the responsibility to be honest and truthful in their reporting. Professional engineers should be certain that they are in command of the facts and relevant technical information, may need to deliver recommendations that may not be well-received by the public or public officials, are capable of engaging with civic groups to explain the situation, and can articulate why engineering judgment and expertise matter.

The present case illustrates a very public situation. While it may not be necessary for Engineer A to formally report the situation to a public authority since public authorities are aware of the facts and circumstances, Engineer A has an obligation to further report the situation to appropriate local, state, and/or federal authorities to ensure that relevant engineering standards are consistent with protecting the public health, safety, and welfare.

Conclusion:

Engineer A has an obligation to further report the situation to the appropriate the local, state, and/or federal authorities to ensure that relevant engineering standards are consistent with the public health, safety, and welfare.

Board of Ethical Review:

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Each opinion is intended as guidance to individual practicing engineers, students, and the public. In regard to the question of application of the NSPE Code to engineering organizations (e.g., corporations, partnerships, sole proprietorships, government agencies, and university engineering departments), the specific business form or type should not negate nor detract from the conformance of individuals to the Code. The NSPE Code deals with professional services, which must be performed by real persons. Real persons in turn establish and implement policies within business structures.

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