

PROFESSIONAL ETHICS

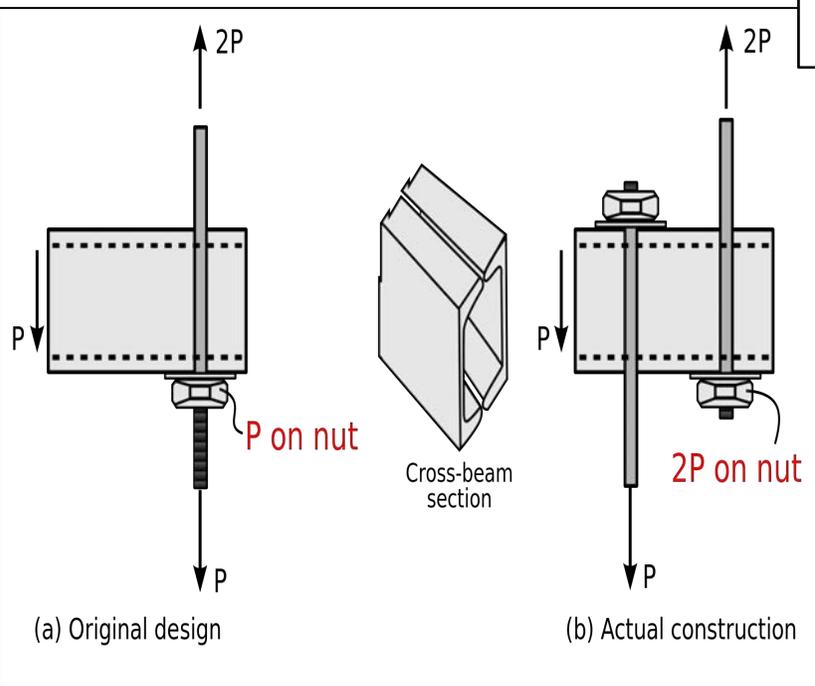
FOR ENGINEERS



Why Engineering Ethics?



IN THE NEWS



NSPE CODE OF ETHICS

1

Hold paramount the **safety, health, and welfare** of the public.

2

Perform services only in areas of their **competence**.

3

Issue **public statements** only in an objective and truthful manner.

4

Act for each employer or client as **faithful agents** or trustees.

5

Avoid **deceptive acts**.

6

Conduct themselves honorably, responsibly, ethically, and lawfully enhance the honor, reputation, and usefulness of the profession.



Case 20-5

Gifts—Mining Safety Boots











What should Engineer A do?

Reference the NSPE Code of Conduct

Engineer A visits a remote mining site to assess compliance with codes, standards, and state and federal regulations.

One day, at a remote site visit to a Mine Engineer A realizes he forgot to bring the necessary PPE—he does not have his safety boots.

Mine staff offer him a new pair of safety boots; they routinely make boots available to visitors to the mine who may not have the necessary PPE.

Engineer A's company has a policy that forbids accepting gifts valued at more than \$100.

Engineer A knows the boots the Mine is offering are valued at more than \$100.

If he returns to his motel to get his own boots, he will be unable to complete the inspection.

BER CONCLUSION

It would be **ethical** for Engineer A to use the safety boots **during his inspection** of the mine.

Engineer A should return or pay for the boots and report the incident and circumstances to the employer.

NSPE References:

I.4.

I.6.

II.4.b.

III.5.a.



Case 20-1

Job Qualifications—Disclosure of Material Fact



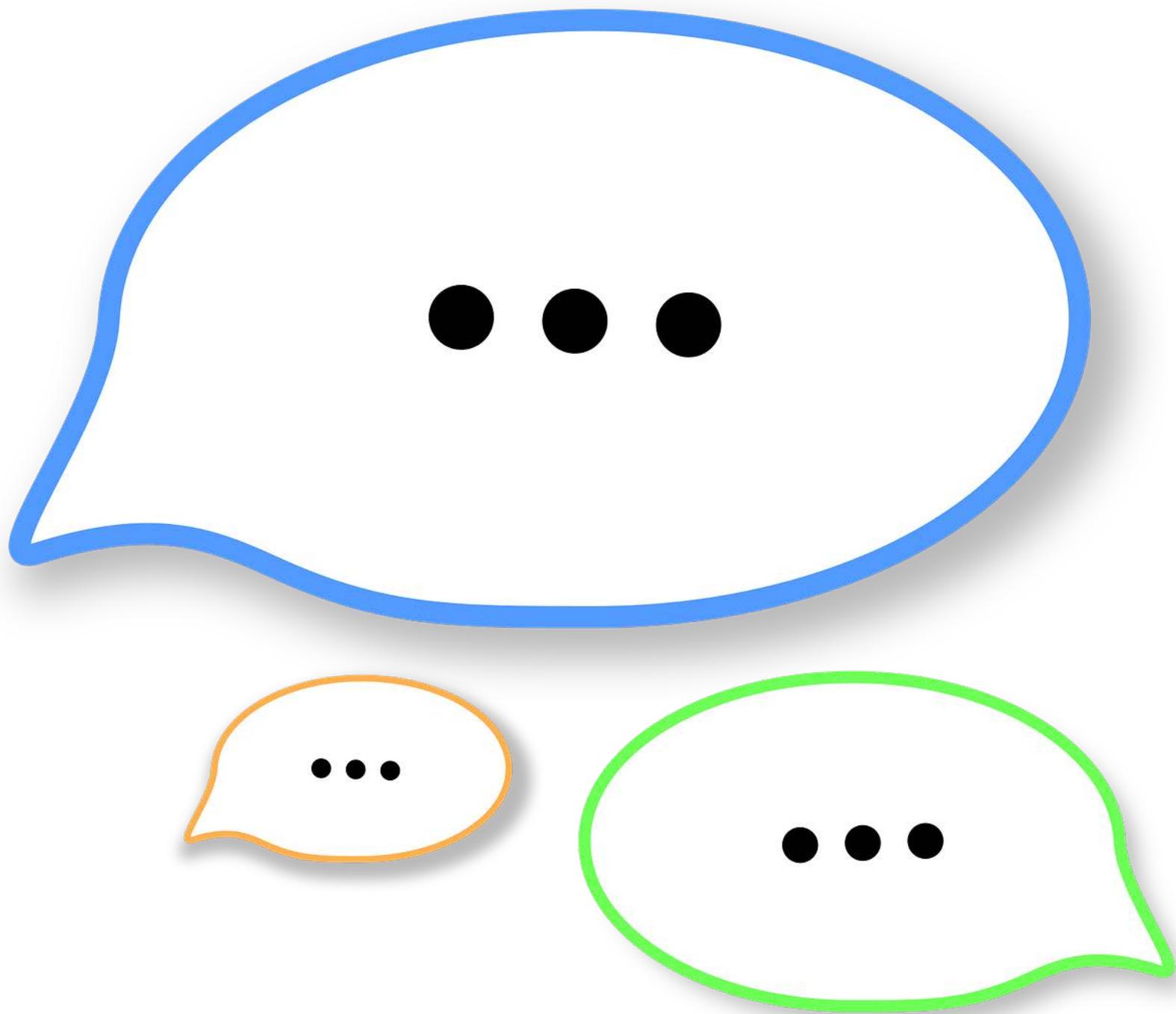


WE ARE HIRING

XYZ Job Requirements

- 4+ years' experience
- PE in New Mexico required or achieved within 90 days after date of hire.







Was it ethical for Eric **not to have mentioned** at the interview his two **previous failures** at passing the PE exam if he was not asked that question by XYZ Consultants?

Reference the NSPE Code of Conduct

Eric, an Engineer Intern with five years of experience applied for a position advertised by XYZ Consultants.

The qualifications listed in the advertisement included a PE required or achieved within 90 days after date of hire.

At his interview, Eric explains he is not a licensed PE but indicates an intention to take the PE exam in the coming weeks.

Eric did not indicate in the interview his previous attempts to pass the PE exam, and XYZ Consultants did not ask. XYZ Consultants offered the position to Eric with the expectation that Eric was on the track to obtain a PE license.

A month after starting work, Eric told his supervisor that his third attempt to pass the PE exam had been unsuccessful. Eric also explained that the licensing board required additional experience and new references following a third failure before sitting for the exam again.

BER CONCLUSION

It was **imprudent but not unethical** for Eric not to have mentioned at the interview his two previous failures to pass the PE exam, as the question was not asked by XYZ Consultants.

NSPE References:

I.5

I.6

II.3.a.

II.5.a.

III.1.e

III.3.a

Case 20-4

 **Public Health, Safety, and Welfare—Drinking Water Quality**





CAUTION
SLOW





What are the ethical obligations of Engineer A and Engineer B in this circumstance?

What should Engineer A and Engineer B do?

Reference the NSPE Code of Conduct

Engineer A is a professional engineer who serves as the superintendent and chief engineer for the Metropolitan Water Commission (MWC). In order to reduce municipal expenditures and lower water rates, the MWC has been considering changing its water supply source from purchasing water from remote reservoirs from another regional authority to using the local river as the MWC's source.

Engineer B, a consulting engineer retained by the MWC charged with evaluating water treatment needs for the change in water source, provided a report to Engineer A recommending extensive capital investments and a three-year timeline for further evaluation of water quality, design, and construction of improvements.

The improvements are needed prior to the change in water source to ensure that sufficient corrosion control is provided so that old service pipes in the MWC service area don't leach lead at levels in excess of drinking water standards.

Both Engineer A and Engineer B met with the MWC at a meeting attended by the public and recommended that the change in water source be substantially delayed until improvements could be completed. Despite those recommendations, the MWC voted to proceed simultaneously with the accelerated evaluation and design of needed water treatment improvements and the change in water source.

BER CONCLUSION

Engineers A and B should formally communicate their concerns to the MWC and other appropriate agencies.

They may provide a joint and cooperative report, each has an independent obligation.

NSPE References:

II.1.

II.1.a.

II.1.c.

III.1.b.

Case 20-3

**Conflict of Interest—PEs Serving on State
Licensure Boards**

Board of Licensure

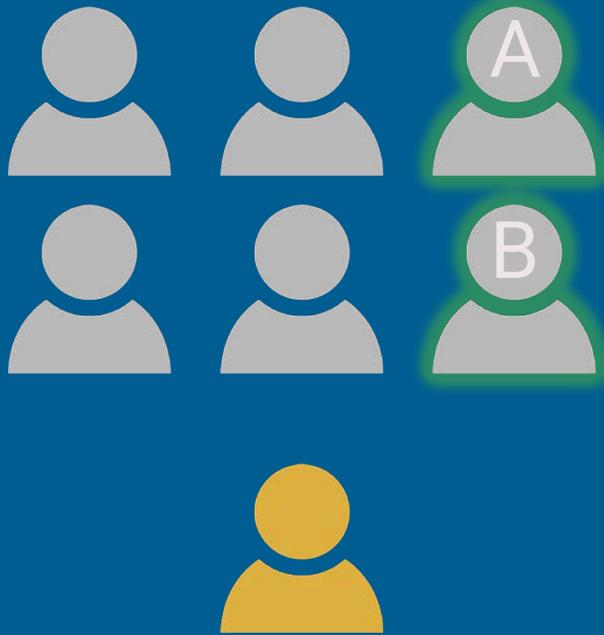
ENGINEERS



PUBLIC MEMBER



Board of Licensure









Does Engineer A have a conflict of interest with respect to PE Board service?



Does Engineer B have a conflict of interest with respect to PE Board service?



Reference the NSPE Code of Conduct

The Board of Licensure for Professional Engineers (“the PE Board”) for a State consists of six professional engineers and a public member. The governor of the State has recently appointed two new board members, Engineer A and Engineer B, to fill two expiring terms.

Engineer A otherwise is a member of the board of directors of a membership engineering organization in that state. Engineer B serves as a committee chair of a national engineering organization. At the first meeting of the newly constituted PE Board, the public member asks whether these outside professional activities constitute a conflict of interest with respect to PE Board service.

Engineer A responds that (1) although her state organization has been advocating for the improvement of the state’s continuing professional development requirements to the PE Board and the legislature, (2) she has not been making those presentations, but (3) that the advocacy has been discussed at meetings of the state organization’s board of directors. Engineer B responds that he is the chair of an engineering education committee of the national engineering organization, with a role, in part, to recommend changes to his engineering discipline’s engineering education accreditation criteria, for subsequent review and approval by ABET. The PE Board begins to discuss these professional involvements.

BER CONCLUSION



Engineer A has a conflict of interest.



Engineer B does not have a conflict of interest.



NSPE References:

II.3.

II.4.e.

II.3.c.

III.2.a.

II.4.a.

III.2.e.

II.4.d.

III.5.



Case 20-2

Responsible Charge and Sealing Drawings





Agency B



Firm A (*Janet's firm*)







What should Janet do?

Reference the NSPE Code of Conduct

Agency B hires Consulting Firm A to prepare rehabilitation plans for underground utility lines owned by Agency B. Janet at Firm A is qualified to do the design.

Agency B's engineering staff reviewed the existing conditions and relevant data for the utilities and performed the design by recommending the rehabilitation methods for each segment of the utility. Agency B provided the recommendations to Firm A and Firm A's licensed engineers prepared the CAD drawings for the work based on Agency B's recommendations, including making any revisions directed by Agency B. The drawings are based on as-built plans and GIS mapping also provided by Agency B.

Janet reviews the drawings prior to submitting to Agency B and Agency B ultimately approves the design and the drawings produced by Firm A.

Agency B is now ready to bid the work and requests that Firm A affix a PE seal to the drawings. Janet informs Agency B that since she and Firm A did not make any engineering decisions on the project and only provided drafting of the drawings, it is not appropriate for her to seal the drawings. Agency B believes that since Janet prepared the documents and reviewed them prior to submitting to Agency B, that is enough to seal the drawings.

BER CONCLUSION

It would be **unethical** for Janet to sign and seal the drawings for Agency B.

NSPE References:

II.2.a.

II.2.b.

II.2.c.

III.1.b.

III.2.b

ETHICAL TAKEAWAYS

1

If in doubt...disclose it! Intentional omission = falsification [3, 5]

2

Don't sign someone else's work, period! [2, 5]

3

Protection of the public is paramount...even when it's hard [1]

4

Spirit of the law does matter... but be careful [6]

CONTACT US



RON LEMONS, PE RETIRED, DWRE
ron.lemons@freese.com



GINA SMITH, SPHR, SHRM-SCP
gina.smith@freese.com