

Report on a Case by the Board of Ethical Review

Case No. 60-7

Subject:

Competitive Materials - - Reduction of Standards-Section 4, Canons of Ethics; Section 11, Canons of Ethics; Section 12, Canons of Ethics; Rule 14, Rules of Professional Conduct; Rule 25, Rules of Professional Conduct; Rule 26, Rules of Professional Conduct.

Facts:

A consulting engineering firm was retained by a city to design street pavement, the client requesting that the firm design for alternate bids based on asphalt and concrete. The alternate designs were to be for equal quality and service.

When bids were submitted it was found that the one design (A) was approximately fifteen per cent above the other design. (B) The city rejected all bids and called for new bids on a revised design for A. On the new design the A standards were lowered, but the B design was not changed.

At the second bid letting, the new B bids were all lower than the revised A bids by about seven per cent. The consulting firm recommended the award for the revised A design.

Questions:

1. Is it consistent with the Canons of Ethics for a professional engineer to comply with a client's request for a reduction in standards or quality in order to lower the price on a particular material?
2. Was it ethical for the engineer to recommend the award of a contract based on a design of lower standards at a higher price?

References:

Canons of Ethics-Section 4- "He will have due regard for the safety of life and health of public and employees who may be affected by the work for which he is responsible."

Section 11-"He will guard against conditions that are dangerous or threatening to life, limb or property on work for which he is responsible, or if he is not responsible, will promptly call such condition to the attention of those who are responsible.

Section 12-"He will present clearly the consequences to be expected from deviations proposed if his engineering judgment is overruled by non-technical authority in cases Where he is responsible for the technical adequacy of engineering work."

Rules of Professional Conduct -Rule 14-"His plans or specifications will not be such as to limit free competition, except with his client's consent."

Rule 25-"He will not complete, sign, or seal plans and/or specifications that are not of a design safe to the public health and welfare. If the client or employer insists on such unprofessional conduct, he shall call building authorities' attention to the case and withdraw from further consulting business or service on the project."

Rule 26-"He will not apply his signature of approval or seal on plans that do not meet accepted engineering standards."

Discussion:

Question 1-The first and paramount question to be answered is whether the change in design and lowering of performance standards in any way jeopardize life, limb or property. If so, the Canons and Rules are mandatory that the engineer may not be a party to such a decision, regardless of the wishes of the client.

The facts in this case do not indicate that the public interest would be jeopardized from the standpoint of safety. The decision to lower the standards on one product apparently was motivated solely by Economic reasons. There is also an implication in this case, however, that the engineers were either a party to, or being used by the client, to favor one competitive material over another. Even so, there is no prohibition of such action so long as the client desired the change or was made aware of the consequences to be expected from it. Here it appears that the client directly ordered the second set of plans with lowered performance standards, and it is to be assumed that a city so doing would know of the resulting effects on performance. Rule 14 is particularly applicable in that it contains a clear authorization for the designing engineer to limit free competition among materials *with the client's consent*.

It is not shown that the engineering firm acted in bad faith or stood to gain any financial advantage by acceding to the client's decision to reduce standards in order to justify selection of one material over another. The engineers' primary duty is to serve the client (subject to the public safety) and it is the duty of the client, particularly in the case of a public body, to defend and justify the use of a more expensive material or one of lowered performance standards, not that of the engineer who is carrying out the client's wishes.

Question 2-In all his professional activities, including the design of public works projects, the engineer's first duty is to safeguard life, health and property, and to promote the public welfare. Decisions involving these factors are his alone to make and should be unequivocal. However, final decisions involving other considerations are strictly the prerogative of this client; therefore, he should exert every effort toward keeping his client completely and fully informed on all engineering facets affecting his client's decisions. He should stand ready to make recommendations as to the use of different materials and to substantiate those recommendations by factual information.

In the instant case, the client was dodging his responsibility and putting his consulting engineer in an untenable position. If the original designs were based on equal quality and service, as stated, then the second design placed material A in an inferior position to material B.

The engineer, when recommending A, was recommending a lower standard. It had become so by the change in design. It was below B in quality and service. The engineer should have recommended the award on the basis of B design. The client could then have decided to make the award on the revised A design, based on other factors. The client may waive the impartiality of the engineer between materials on his own responsibility, except for the factor of public safety already noted.

Conclusions:

Q.1-The engineering firm did not act unethically under the circumstances cited, but it is of the utmost importance that the engineer in such a situation not allow the client's wishes to interfere with his basic duty to protect the public safety.

Q.2-In the light of Section 12, the engineer acted unethically.

Board of Ethical Review L. R. DURKEE, P. E. PHIL T. ELLIOTT, P. E. A. C. KIRKWOOD, P. E. MARVIN C. NICHOLSON, P. E. EZRA K. NICHOLSON, P. E. PIERCE G. ELLIS; P. E., Chairman

Note: Member Wylie W. Gillespie, P. E., is recorded as concurring in conclusion 1 and not voting on conclusion 2.