Published in PLAN,
September-october 2010, page 50

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Helping and being helped: limits that must be respected

The Ordre's Disciplinary Council rendered two decisions recently that demonstrate how important it is for engineers to take into account the limits of their proficiency and aptitudes before accepting a mandate.

TAKING PART IN THE ARCHITECT'S PLANS

The first case[1] deals with the rebuilding of a small railroad station that was no longer in use. The work required the temporary relocation of the building in order to build new foundations. However, part of the foundations under construction collapsed suddenly but no one was hurt. The Commission de la santé et de la sécurité du travail contacted the Ordre's Syndic which, in turn, filed a complaint against a member (hereafter "the respondent").

During the hearing, the complainant explained to the Council that, at the outset, an architectural firm had been retained to provide professional services for this project but that no engineers were expected to participate. It is only later that the respondent agreed to "help out" the architectural firm which gave the respondent an engineering mandate to design elements of the framework without preparing engineering plans.

The Syndic's inquiry established that the plans for the foundations had been prepared by the architects. The plans contained elements generally found in engineering plans such as design of the foundations and concrete framework as well as excavation, filling and levelling works. As for the respondent, he testified that he initially accepted the mandate solely to help the architect and explained the context in which he accepted the mandate. He pointed out that he agreed to provide assistance to the architects in order to "help them out" since the architectural firm was a good client, but that he neglected the mandate given his heavy workload at the time.

Furthermore, the complainant emphasized during testimony that the respondent did not have soil testing results, among other things, and thus took the soil's bearing capacity for granted. What's more, the respondent testified that he believed that the railroad station would only be lifted; he had no idea it was to be moved. According to him, his design would have been completely different if he had taken the time to obtain this information. The respondent therefore admitted that "he made the mistake of accepting such a mandate without having all the required information and pointed out that he should have known that the initial intention was to move the station"[2].

The complainant also testified that the inquiry uncovered that the municipality in question had initially refused to issue a building permit because the plans that had been submitted did not include engineering plans for the foundations. The municipality had finally issued the permit upon receipt of a letter from the architectural firm bearing the respondent's seal confirming that he had calculated and analysed the measurements found in the architects' plans relating to the foundations and the framework. In so doing, the complainant felt that the respondent tried to resolve a situation he knew to be irregular.

Can you acknowledge the limits of your proficiency and aptitudes when offered a mandate?

It should be noted that the complainant indicated to the Council that the collapse was not directly caused by the respondent's fault since the architectural firm had made structural changes without informing the respondent who, as it were, did not direct and supervise the work.

In short, the respondent pleaded guilty to the following counts: First, by accepting a mandate to carry out the calculations relating to and the design of the foundations without preparing plans and specifications, the engineer omitted to bear in mind the extent of his proficiency and aptitudes as well as the means at his disposal to carry out the mandate.

Second, by carrying out calculations and annotating plans prepared by a non-member of the Ordre, the engineer expressed opinions based on insufficient knowledge of the facts, contributed to the illegal practice of engineering and did not take into account the consequences of the performance of his work on the environment and on the life, health and property of every person. Third, by affixing his seal to a letter attesting to the compliance of engineering plans prepared by an architect, the engineer lent himself to a dishonest or doubtful practice and used his seal in a manner which violates the Code of ethics of engineers[3]. Finally, the respondent also pleaded guilty to neglecting to keep a file relating to this mandate at his usual place of business. After having analysed the facts relating to this case and taken into consideration, among other things, the respondent's counsel's remarks which were deemed relevant, the Council confirmed the joint submission on sentence put before it, imposed five reprimands upon the respondent and ordered him to pay fines totalling $7,000, plus costs.

CERTIFYING THAT EVERYTHING IS IN COMPLIANCE

The second case[4] shows that we must ask for help when we reach the limits of our knowledge since the public might face

serious risks should we fail to do so. The Ordre's Syndic conducted an investigation following a request to that effect by the Régie du bâtiment du Québec.

The Syndic's inquiry revealed the following facts: during a football game at Sherbrooke University, the guardrail on one of the bleachers gave way due to a scuffle. Three people fell nearly six feet and suffered minor injuries.

Prior to the incident, the engineer (hereafter "the respondent") was asked to examine the temporary bleachers' conformity, once they were installed for the season that year, in order to prevent any dangers. A month before the incident, he had issued a certificate of compliance which stated that

"the temporary bleachers were adequate." The complainant explained that the respondent had been negligent in light of "[…] inspections that were carried out in the days following the September 16, 2006 incident, which demonstrated very clearly that the installations could not have been deemed adequate."[5]. The complainant pointed out that the respondent had neglected to carry out calculations relating to the solidity of the guardrails, calculations that were critical in ensuring the public's protection. Furthermore, pursuant to reports produced after the incident, several elements of those bleachers were inadequate. For example, certain parts of the stands were held by simple plastic ties, commonly known as "tie wraps". The respondent in fact admitted the he should not have agreed to examine the adequacy or conformity of the entirety of the bleachers.

Based on expert evidence brought before the Disciplinary Council, the respondent should have, in this particular case, adjoined himself to a professional knowledgeable in the Building Code and its standards, since he was not proficient in matters of "health, safety, design and conformity"[6].

The respondent should have, in this particular case, adjoined himself to a professional knowledgeable in the Building Code.

Consequently, the respondent pleaded guilty to eight counts: in addition to having expressed a technical opinion based on insufficient knowledge, the engineer was found guilty of having accepted a mandate without bearing in mind the limits of his proficiency; he also neglected to keep a complete and proper technical file. Finally, he affixed his seal to documents in circumstances which are not authorized by the Code of ethics. The Disciplinary Council imposed eight reprimands upon the respondent and ordered him to pay fines totalling $5,000, plus costs.

1. C.D.O.I.Q., file 22-08-0358.
2. Id., para. 71.
3. Code of ethics of engineers, c. I-9, r.3.
4. C.D.O.I.Q., file 22-07-0356.
5. Id., para. 46.
6. Id., para. 31 and 32.