

# Gazette

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The Discipline Committee of the Association of Professional Engineers of Ontario

In the matter of a hearing under the *Professional Engineers Act*, R.S.O. 1990,  
Chapter P.28

And in the matter of a complaint regarding the conduct of

## A member

of the Association of Professional Engineers of Ontario and

## Spectrum Engineering Corporation Ltd.

A holder of a Certificate of Authorization

## Summary of Decision and Reasons

A Panel of the Discipline Committee of the association met in the offices of the association on August 19, 1997, to hear allegations of professional misconduct and incompetence against a licensed professional engineer and Spectrum Engineering Corporation Ltd., hereinafter referred to as "Engineer X" and "Spectrum" respectively.

William D. Black, of McCarthy Tétrault, appeared as legal counsel for the association. W.H. Steele, of Cassels, Brock & Blackwell, appeared as legal counsel for Engineer X and Spectrum.

The hearing arose as a result of Engineer X and Spectrum's involvement in a construction project in a town in the Province of Ontario.

At the commencement of the hearing, counsel for the association informed the panel of the Discipline Committee that the facts set out in the Notice of Hearing were agreed to and that both defendants would be entering a guilty plea to professional misconduct, in particular, breach-

es of Ontario Regulation 941 made under the *Professional Engineers Act*, and specifically, Section 72(2)(a) pertaining to negligence and Section 72(2)(j) limited to unprofessional conduct.

The allegations of incompetence were withdrawn by the association's counsel at the commencement of the hearing. The allegations of professional misconduct set out in Appendix A to the Notice of Hearing are summarized as follows:

### Allegations

1. In November 1994, an Engineer, hereinafter referred to as "Engineer Y," licensed to practise in the Province of Ontario, was employed by a general contractor, a design-build vendor, hereinafter referred to as "the contractor," to provide structural engineering services for a building project in a town in the Province of Ontario, hereinafter referred to as "project 1."

2. From November 1994, through January 1995, Engineer Y assisted the contractor with the design-build bid preparation for the project and the contractor was awarded the contract by the town.
3. From March through June 1995, Engineer Y prepared six computer-aided design (CAD) drawings numbered S1 to S6 for project 1. These included a drawing of general notes and details, a foundation plan, a mezzanine floor/low roof plan, a roof plan, and various specific sections and details that included concrete foundations and masonry walls. These drawings were dated June 5, 1995 and were provided to the contractor for the purposes of the building permit application. The building permit was issued on the strength of these drawings and construction on project 1 began in late August 1995.
4. The scope of Engineer Y's work excluded the pre-engineered steel building but included all other structural aspects, including foundations.
5. During June and July 1995, the contractor prepared a proposal for a similar project in another town in the Province of Ontario, hereinafter referred to as "project 2". The contractor submitted an initial proposal to the town in July 1995 and a revised proposal in August 1995.
6. Engineer Y, who was retained on the first project, was not asked to participate in the proposal.
7. The contractor instead engaged the services of Spectrum for the provision of structural mechanical and electrical engineering design services.
8. The contractor was ultimately engaged by the town for the design and construction of project 2.
9. In early October 1995, an employee of the contractor requested electronic CAD files of the first project from Engineer Y and pursuant to this request, he provided an electronic copy of the CAD drawing files to the contractor.
10. On October 20, 1995, under cover of a transmittal letter from Spectrum signed by Engineer X, a set of drawings for the second project marked "Preliminary" and "Not for Construction" was issued to the town. The set of drawings included architectural drawings, a site servicing plan, a grading layout plan, and four structural drawings.
11. On October 26, 1995, three CAD structural foundation drawings for the project bearing the seal of Engineer X under the title block of Spectrum and the contractor, marked as "Preliminary" and stamped "For Your Information" were submitted to the town.
12. On October 30, 1995, the town issued a building permit for the construction of foundations only.
13. In mid-December 1995, seven CAD structural drawings (Set 2) for the project initialled, dated, and bearing the seal of Engineer X under the title block of Spectrum and the contractor were submitted to the town. Set 2 included drawings S1 to S5 plus drawings S6 and S7 (Sections & Details). The majority of these drawings were dated December 11, 1995 and became part of the contract documents for project 2.
14. On January 26, 1996, a building permit application to construct the full building was reviewed by the town and the building permit was issued that same day.
15. On February 2, 1996, a structural steel fabricator sent Engineer Y, who had been involved in the first project, a set of drawings and requested that Engineer Y prepare a quotation for the preparation of steel shop fabrication drawings. On examining the drawings received from the steel fabricator, the engineer recognized that many details were identical or very similar to the details on drawings, which he had prepared for the project 1. Specifically, he noted that drawing S1 sealed by Engineer X with respect to the second project was virtually an exact copy of his drawing S1 submitted with respect to the earlier project. While layout plans were different for each structure, certain of the details were copied in part or in full as follows:
  - (a) six of 11 lintel details, two wall anchor plate details, and a lintel note on drawing S4;
  - (b) 13 of 17 sections and three of nine details on drawing S5;
  - (c) eight of 27 sections on drawing S6; and
  - (d) one of 17 sections on drawing S7.
16. On February 22, 1996, seven further CAD structural drawings (Set 3) for the project, initialled, dated and bearing the seal of Engineer X under the title block of Spectrum and the contractor, were submitted to the town. Set 3, which included drawings S1 to S7, was stamped as "Approved for Construction" and dated February 21, 1996. The majority of these drawings also contained the date of December 11, 1995, at the bottom.
17. An independent engineer engaged by PEO reviewed the prints of the CAD drawings for the two projects.
18. In comparing drawings S1 to S6 produced by Engineer Y engaged on project 1 to drawings S1 to S7 produced by Spectrum and signed and sealed by Engineer X for project 2, the independent engineer found that:
  - (a) On Spectrum drawing S1, the General Construction Notes had the same content as the notes on drawing S1 prepared by Engineer Y on project 1, except where they had been edited for differences between the

- projects or where minor editorial changes had been made. There were 17 details on both drawings which, when laid one over the other, were identical. One detailed dimension had been changed by Spectrum but not the detail itself;
- (b) Drawings S2 and S3 for both projects consisted mainly of plans. Since there were differences between the layouts of the two buildings, they appeared to have been independently drawn using CAD;
- (c) On Spectrum drawing S4, one note, two of two anchor plate details, and six of 11 lintel details had been copied from the first project's engineer's details. Where there were differences, they were due to the fact that thicker walls were needed in some parts of the second project;
- (d) On Spectrum drawing S5, 16 of the 26 details closely resembled the corresponding details on the original drawings and repeated the engineer's notes, although many had been adjusted for the different wall thickness or depth to the bottom of footings. On the original project, Engineer Y showed a detail for the resistance of horizontal thrust that could never have been so closely duplicated by Spectrum without access to Engineer Y's detail; and
- (e) On Spectrum drawing S6, eight of the 27 details closely resembled the corresponding details on Engineer Y's details, but some had been modified to reflect differences such as differing roof elevations.
19. The independent engineer then reviewed Set 1, Set 2, and Set 3 of the Spectrum drawings and compared those sets of Spectrum drawings to the first engineer's original drawings (as well as to the Spectrum Set 4). In comparing Engineer Y's drawings and the Spectrum's Set 1 drawings, the independent engineer found even further similarities between Engineer Y's drawings and Spectrum's set than had been the case with Spectrum's Set 4.
20. The Notice of Hearing set out seven examples of details that matched Engineer Y's drawings in Spectrum Set 1 that had been revised by the time Spectrum Set 3 drawings were issued.
21. The independent engineer found that Sets 2 and 3 appeared to have been made from the same reproducible drawings with the later date of February 22, 1996, for Set 3 stamped on after the prints for Set 2 were made. Set 4 was the same in content as Sets 2 and 3 and Set 4 was equivalent to the Set approved for construction.
22. The independent engineer concluded that parts of the CAD drawings prepared by Engineer Y for project 1 were electronically copied and incorporated into the drawings for project 2, which were prepared and submitted by Spectrum bearing the seal of Engineer X.
23. The Notice of Hearing alleged that Engineer X and Spectrum *inter alia*:
- (a) accepted CAD files prepared by another engineer without checking with that engineer to verify that the receipt of such files had been authorized;
- (b) used these files as the basis for the preparation of their own drawings for a similar project; and
- (c) stamped and sealed drawings that were partly or mostly copied from the work of another engineer without any contact with or authorization from the other engineer.
24. **By reason of these facts, it was alleged in the Notice of Hearing that Engineer X and Spectrum were guilty of professional misconduct as defined in Section 28(2)(b) of the *Professional Engineers Act, R.S.O. 1990, Chapter P. 28.***
25. **The sections of Regulation 941 made under the said Act, relevant**

**to the alleged misconduct to which a plea of guilty was entered were:**

- ◆ **Section 72(2)(a): negligence as defined at Section 72(1): In this section, "negligence" means an act or omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances; and**
- ◆ **Section 72(2)(j): conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as unprofessional.**

**Charges under Section 72(2)(d) and Section 72(2)(e) were withdrawn.**

The independent engineer retained by the association to review the drawings was called as a witness and was qualified as an expert.

He testified that general construction notes contained in Spectrum drawing S1 had the same content as Engineer Y's drawing for project 1, and that there were 17 details on both drawings which matched in content. In drawing S4, nine Spectrum details had been identified by Engineer Y as copies of his own details and the independent engineer agreed with this assessment.

He stated that on Spectrum's drawing S5 of the 26 details of this drawing, 16 closely resembled the corresponding details and repeated the notes of Engineer Y in project 1.

He testified that parts of the drawings prepared by Engineer Y for project 1 were copied and incorporated into the drawings for project 2 prepared by Spectrum and bearing the seal of Engineer X.

He stated that on review of further drawings, it was his opinion that the evidence was greater that parts of the drawings prepared by Engineer Y on project 1 were copied and incorporated into the drawings for project 2 prepared by Spectrum and Engineer X.

A table prepared by the independent engineer setting out the comparisons

between the two sets of drawings was filed as an exhibit. In the opinion of the independent engineer, Engineer X and Spectrum did not meet the standard of a reasonable and prudent engineer and engineering company respectively and prepared drawings which were subject to copyright and took another engineer's drawings and used them for a similar project.

Engineer X testified that Spectrum was approached by the contractor in mid-1995, and that he was engaged as the project engineer on project 2.

He admitted that he stamped the drawings. He testified that in late September/October 1995, they were asked to prepare drawings. At that time, he testified that he was provided with sketches of typical foundations, which the contractor wanted him to use. These were on legal size paper and were probably extracts from the drawings prepared by Engineer Y on project 1. He testified that the contractor advised him that the town had requested a complete set of drawings by the end of October. He told the project manager that he could not meet these time requirements and requested the CAD files from the previous project. He testified that he was provided with these and informed by the contractor that Engineer Y on project 1 was content for him to use them. He believed implicitly that they had permission to use the CAD drawings and he admitted that the CAD drawings were used essentially for the foundation drawings. He was content to use these drawings because the Architect involved in project 2 advised that the details would be the same as for project 1. He stated that he used the drawings for the foundation and the thrust footing. On reviewing the drawings, he found that the loads were almost identical. He testified that there was a 60 to 70 per cent difference between all of their drawings and the drawings prepared by Engineer Y on project 1.

He testified that neither he nor Spectrum obtained any financial benefit from using Engineer Y's CAD files, as they billed their client on a time and materials basis.

On cross-examination, he testified that he believed that Engineer Y had authorized the use of the CAD drawings. He stated that if Engineer Y had declined the

use of them, he would not have used them. He testified that the only benefit to Spectrum was that they were able to meet the imposed deadline. The reason that Engineer X and Spectrum were engaged was that they were 10 minutes travel time from the project and could respond very quickly during the construction phase.

A plea of guilty was entered by Spectrum and Engineer X to Section 72(2)(a) pertaining to negligence, for failing to obtain permission, and Section 72(2)(j). Following the entry of the guilty plea, a joint submission with respect to penalty was made. Mr. Black, for PEO, informed the panel of the Discipline Committee that the association viewed the conduct seriously and submitted that an engineer's design effort should be protected.

In Spectrum and Engineer X's favour were three factors. First, the association considered that there may have been a misunderstanding about the use of original design efforts. Second, the association was satisfied that this was an exceptional and isolated set of circumstances and there was no evidence of incompetence with respect to the structural design. Third, both Spectrum and Engineer X had been very cooperative and had acknowledged their shortcomings.

By way of joint submission by the association and the defendants, the proposed penalty recommended was a reprimand to Engineer X and Spectrum and that a summary of the matter be published in summary form with only Spectrum identified by name. It was submitted that no other party's names should be published and that the projects be described in as generic terms as possible.

**After considering the evidence and exhibits filed, the Committee found Spectrum Engineering and Engineer X guilty of a breach of Section 72(2)(a) (negligence) and Section 72(2)(j) (unprofessional conduct only) of Regulation 941.**

**By virtue of the power vested in it by Section 28 of the *Professional Engineers Act*, the panel of the Discipline Committee ordered that:**

◆ **An oral reprimand is to be given by the panel to Engineer X and Spec-**

**trum immediately following the conclusion of the hearing.**

◆ **The Decision and Reasons is to be published in the *Gazette* in a generic manner identifying only Spectrum Engineering Corporation Ltd.**

**Immediately following the hearing a representative of Spectrum and Engineer X received the reprimand.**

Although the panel of the Discipline Committee imposed the lenient penalty recommended by Counsel for both the association and Spectrum and Engineer X, the panel considers this to be a serious matter. The unauthorized use of another engineer's work is considered by the panel to be unethical and unprofessional.

In this case, Engineer X and Spectrum relied on a statement from the contractor who engaged them that Engineer Y on project 1 had authorized the use of his drawings.

While in this case authorization was apparently implied by a third party, the panel considers that such authorization requires a direct request and that any authorization granted must be confirmed in writing. Members must be aware that they cannot rely on a third party.

The panel also considers that this case illustrates a significant potential concern with electronic technology. The ease with which proprietary information may be transferred or may change hands calls for renewed attention to the responsibility and ethics of members when dealing with another engineer's work product.

Dated at Toronto this 22nd day of October 1997.

Boris Boyko, P.Eng. (Chair)

(For and on behalf of the panel of the Discipline Committee)

Barry Bradford, P.Eng.  
Ed Rohacek, P.Eng.  
Tom Smith, P.Eng.  
Don Turner, P.Eng.