



# Gazette

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## REGULATORY COMPLIANCE DEPARTMENT, PEO

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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

**Bruce D. Crozier, P.Eng.**

a member of the Association of Professional Engineers of Ontario and

**Bruce D. Crozier Engineering Inc.**

a holder of a Certificate of Authorization

BETWEEN

The Association of Professional Engineers of Ontario and

Bruce D. Crozier, P.Eng. and  
Bruce D. Crozier Engineering Inc.

## Decision and Reasons

This matter came for hearing before a panel of the Discipline Committee (the panel) on September 9 and 10, 2002, at the Association of Professional Engineers of Ontario (PEO) in Toronto, Ontario. PEO was represented by William Black (Black) of McCarthy Tétrault LLP. Bruce D. Crozier, P.Eng., was present and he and Bruce D. Crozier Engineering Inc. were represented by Raymond G. Colautti (Colautti) of Raphael Partners.

of Hearing dated May 3, 2002, are that Crozier is guilty of professional misconduct as defined in section 28(2)(b) of the *Professional Engineers Act* (the Act). This Section of the Act is as follows:

“28(2) A member of the Association or holder of a Certificate of Authorization, temporary licence or a limited licence may be found guilty of professional misconduct by the Committee if,...

## The Allegations

The allegations against Bruce D. Crozier, P.Eng. (Crozier) as stated in the Notice

(b) the member or holder has been guilty in the opinion of the Discipline Committee of professional misconduct as defined in the Regulations.”

The sections of Regulation 941 made under the Act that are relevant to the alleged professional misconduct are:

- ◆ Section 72(2)(a): “negligence”;
- ◆ Section 72(2)(b): “failure to make responsible provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible”;
- ◆ Section 72(2)(d): “failure to make responsible provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner”;
- ◆ Section 72(2)(e): “signing or sealing a final drawing, specification, plan, report or other document not actually prepared or checked by the practitioner”;
- ◆ Section 72(2)(g): “breach of the Act or Regulations, other than an action that is solely a breach of the Code of Ethics”; 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.”

The original Notice of Hearing also included an allegation that Crozier was incompetent and that Bruce Crozier Engineering Inc. (“Crozier Engineering”) was also guilty of professional misconduct. These allegations were not pursued by PEO following the revised plea of Crozier, as detailed below.

## Plea by Member

Crozier denied the allegations of professional misconduct set out in the Notice of Hearing.

## The Evidence

In his opening statement, counsel for PEO outlined the case for PEO and identified those paragraphs of the Notice of Hearing that formed an Agreed Statement of Facts in the case. Well into the hearing, Crozier changed his plea and admitted additional allegations set out in the Notice of Hearing. As a result of the initial admission and the subsequent admission by Crozier, the agreed facts are that:

1. Crozier was first licensed as a professional engineer in the Province of Ontario in January 1975.
2. Crozier Engineering has held a Certificate of Authorization under the Act since March 1994.
3. In or about May 2000, Kelly and Elizabeth Golden (the Goldenes) retained R.T. Garant (Garant) and R.T. Garant Construction Ltd. (Garant Construction) to construct a new single-family residence at 1409 Erie Road South in Harrow, Ontario.
4. The house design featured a continuous veranda along the south and east sides of the “great room” on the ground floor. This veranda provided an exit route from the interior of the residence to the exterior grade in two locations.
5. The house design also featured a continuous veranda along the south and east sides of the master bedroom on the second storey. This veranda did not provide any access to the exterior grade.
6. Both verandas featured an enlarged circular floor area at the southeast corner of the house.

**Note: Facts 7, 8 and 9 were not agreed or denied by Crozier at the outset because he was not involved at the time and had no personal knowledge of these events. They are included here for clarity:**

7. On December 18, 2000, Kevin Carter, C.E.T., (Carter) chief building official

for the Town of Essex, conducted a rough framing inspection of the under-construction home. Carter noted that both verandas “had been framed in a very unconventional manner.” Carter spoke with Garant on site regarding the framing technique utilized.

8. Carter instructed Garant and Garant Construction to either frame the verandas according to *Ontario Building Code* (OBC) Part 9 Framing Regulations, or to have the existing framing method approved by a professional engineer.
9. During a subsequent inspection on January 15, 2001, Carter noted that the veranda framing had not changed and again asked Garant for a report from an engineer. At that time, Carter told Mrs. Golden that he doubted that a professional engineer would approve the existing veranda framing. Carter also advised Mrs. Golden that if Garant’s engineer’s report was not received by Friday, January 19, 2001, he would issue an Order to Comply and a Stop Work Order against the project.
10. Later that week, Carter received a letter from Crozier on the letterhead of Crozier Engineering. The letter stated that the existing veranda framing method was suitable for the intended purpose.
11. Carter telephoned Crozier and told him that the Town of Essex could not accept Crozier’s letter because it had no supporting documentation (including a sketch or details as to relevant dimensions) and because it did not bear Crozier’s seal.
12. Carter asked Crozier if Crozier had visited the site and he stated that he had not. Crozier said that he had received all the framing information from Garant and Garant Construction.
13. Carter suggested that Crozier visit the site to inspect the framing in person and expressed very serious concerns to Crozier regarding the structural stability of the verandas. Carter told

Crozier that the Building Department would only accept a sealed, signed and dated drawing showing the precise framing configuration and dimensions.

14. On January 24, 2001, Crozier faxed a report and sketch to the Town of Essex, to Carter's attention, stating that the "floor systems of the circular verandas are structurally acceptable." The report included a signed, sealed, but undated, sketch of the second story veranda framing. The report stated that the framing of the ground floor veranda was enclosed around the perimeter and covered with wood decking and hence could not be seen clearly. Crozier's report stated, however, that by looking between the decking, it appeared that the ground floor veranda framing was constructed in the same manner as the upper floor veranda framing. The report and/or sketch did not include detail with respect to design loads and standards used.
15. Based on the sketch sealed by Crozier, two joists in the verandas had their shear capacity exceeded by factors ranging from 1.2 to 1.5.
16. The letterhead for Crozier's January 24, 2001, report included the words "consulting engineers" under the Crozier Engineering company name. Crozier Engineering had not received permission from the Council of PEO to use the title "consulting engineers" under the terms of section 68 of Regulation 941 made under the *Professional Engineers Act*.
17. As a result of the concerns expressed by Carter relative to the veranda design the Goldens retained Vincent Aleo, P.Eng., and Aleo Associates Inc. in June 2001 to review the veranda framing and Crozier's report. In a signed and sealed report to the Goldens dated June 27, 2001, Aleo stated that one joist was grossly undersized in longitudinal shear and also undersized in flexure.
18. Aleo's report included a marked-up copy of Crozier's undated sketch of the second storey veranda and noted that

a cantilevered, 6-inch length of the east wall header board, shown on the sketch, did not exist in the actual framing configuration. Aleo's recommendations included that a professional engineer prepare a reinforcement drawing and inspect any reinforced work.

The panel heard the following evidence: PEO counsel called Carter as his first witness. Carter described his background and role, and then detailed his actions in this matter. The latter was detailed in Carter's field notes and his building department activity report, both of which were entered into evidence as exhibits.

Carter's evidence included the building permit and plans approved for construction of the building by Carter. These documents were entered as exhibits. The documents show that the general contractor for this project is Mrs. Golden. In addition, they show that she is one of the owners of the building and one of the residents. The building's plans were prepared by and approved by Garant Construction. A professional engineer did not prepare or approve the plan for Garant Construction.

Carter stated that the veranda is "framed in a very unconventional manner." That is, the framing is contrary to his experience and understanding of the correct application of the OBC. Specifically, Carter noted that what appeared to be a beam at a 45-degree angle to the building's walls is not a beam under the veranda, but is a spacer. The only load-carrying beam is around the perimeter of the veranda. Consequently he decided not to approve the framing as constructed and provided the general contractor with the option to frame the veranda in accordance with Part IX of the OBC or to have the framing approved by a professional engineer.

Carter did understand the limitations on Crozier's review as described in Crozier's letter of January 18, 2001, which was entered into exhibit. These limitations included that Carter based his review on Garant's description and that Carter did not attend the site.

On January 24, 2001, Carter received and accepted a letter from Crozier that included a sealed drawing and that stated

that Crozier had visited the site and that Crozier's review was limited by the fact that all the members were not visible. It stated that "I have found the floor system of the circular verandas are structurally acceptable."

On June 27, 2001, Carter received a letter, signed and sealed by Aleo, that concluded that a member is grossly undersized. This letter was entered into exhibit. Consequently, Carter advised the general contractor that he, Carter, would not issue a Notice of Completion or Occupancy Permit until the deficiencies with veranda framing were corrected. No reinforcement was done. In addition, some time later, Carter did allow the residence to be occupied with a barricaded-off veranda.

PEO's expert witness, Earl E. Mumford, P.Eng. (Mumford) gave the evidence below regarding the documents provided to him by PEO. Mumford's report and calculations were entered into evidence as exhibits. Mumford's evidence was that:

- ◆ Part IX of the OBC applies to residential construction.
  - ◆ Part IV of the OBC deals with special loading for specific uses.
  - ◆ Canadian Standards Association (CSA) standards are used to determine specific capacities.
- Mumford applied these standards in his report and concluded that:
- ◆ The assumed live load is 40 pounds per square foot (psf) and the assumed dead load is 7.3 psf on the second-floor veranda, the latter based upon the assumption that there is no snow load.
  - ◆ Three joists on the second storey are overloaded beyond their capacity in shear and bending.
  - ◆ The assumed live load is 100 psf on the main floor veranda, since the veranda is an exit corridor.
  - ◆ Seven joists on the main floor are overloaded in shear and five in bending.

Mumford testified that there is no Factor of Safety in the OBC for wood but

the usual practice is to use a Factor of Safety between four and five to avoid an engineering failure of the material (defined as exceeding the strength or the allowable deflection of the wood).

Mumford described the framing system as unconventional and concluded that there was progressive loading of one joist by all of the joists between it and the corners of the veranda.

Mumford testified that practitioners must rely on their own judgment and should review what they see, make their own analysis and reach their own conclusions. In addition, a practitioner's report should outline what the practitioner's conclusion is based upon, the live and dead loads used and the conclusions reached.

Mumford concluded that Crozier was negligent because he did not provide the design basis or conduct a visual inspection and evaluation upon which to prepare his report.

Mumford concluded that Crozier failed to make responsible provision for the safeguarding of life, health or property of a person who may be affected by the work for which Crozier was responsible since Crozier's review did not comply with the OBC.

Mumford concluded that Crozier failed to make responsible provision for complying with applicable statutes, regulations, standards, codes, bylaws and rules in connection with work being undertaken by or under the direction of Crozier as Crozier's review failed to comply with the requirements of the OBC.

Mumford testified that the posts supporting the roof over the second-floor veranda transmit their loads to the floor joists, increasing the loading on the joists and worsening the overloading of these joists.

In addition, Mumford testified that the location of the column should have been indicated on the drawings prepared by Crozier.

Counsel for the defence provided his opening statement and called the expert witness for the defence, Norbert Becker, PhD, P.Eng. (Becker).

Nancy Spies (Spies), independent legal counsel for the panel, noted for the record that all members of the panel know Becker as a colleague through their work at PEO. None of the panel mem-

bers know Becker socially or has had an employer-employee relationship with him or has had a contractual relationship with him. Neither Black nor Colautti objected to any member of the panel continuing to hear the matter, based upon any panel member's knowledge of Becker.

Becker was accepted as an expert witness and provided the following evidence:

- ◆ that the 100 psf design load used by the expert for PEO is incorrect. Becker's report was entered into evidence as an exhibit;
- ◆ that he inspected the veranda with Crozier and that Becker did not find any failure or distress or reinforcing in or on the members that were identified as being overstressed. Becker provided photographs of the site that were entered into evidence as an exhibit;
- ◆ that it is professional practice to visit the site that is the subject of the review; and
- ◆ that it is usual not to include the assumed loading in reports to municipal building officials, as they are fully aware of the assumed loadings used by professionals.

Becker was not cross-examined by Black.

At this point, the hearing was halted because the panel was advised that Crozier wished to change his plea. The hearing continued on the basis of a Revised Statement of Facts and an admission of professional misconduct.

## Revised Agreed Statement of Facts

Black advised the panel that an agreement had been reached based upon the facts set out in the Notice of Hearing. Black provided a revised Agreed Statement of Facts. The revised Agreed Statement of Fact includes all the agreed facts set out in the initial Agreed Statement of Facts with the following additions:

- ◆ In addition to the factual allegations, Crozier admitted certain allegations of professional misconduct. In particular, Crozier admitted that he:
  - (a) failed to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances by approving a veranda framing design that failed to meet applicable codes and standards in that multiple joists had their shear and/or bending capacities exceeded;
  - (b) failed to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances by submitting an unsealed letter to a building department approving an existing veranda framing design without providing any supporting documentation or details;
  - (c) failed to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances by submitting an approval for an existing veranda framing design without having visited the site;
  - (d) failed to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances by signing and sealing a sketch that lacked design load and referenced standard information; and
  - (e) acted in an unprofessional manner.
- ◆ Crozier admitted that Crozier Engineering breached section 68 of Regulation 941 by using the title "consulting engineers" without having permission to do so from PEO Council.
- ◆ Crozier also accepted certain conclusions of the PEO's expert, Mumford, as follows:
  - (a) Assuming standard expected live loads and dead loads, assuming metal joist hangers were used at all joist/joist connections and at all joist/header connections and assuming specified design stresses for number 1 grade spruce-pine-fir unincised pressure-treated lumber, two joists in the second floor veranda construction were found to be loaded beyond their shear capacity. The shear capacity of the joists is exceeded by a fac-

tor of 1.2 to 1.5 times and, assuming one joist was not connected to the header as shown in the sketch, that joist had its bending capacity exceeded by a factor of 1.43 and another joist had its shear capacity exceeded by a factor of 1.45;

- (b) A practitioner experienced in the design of wood framing would have been concerned about this design upon first seeing it. Such practitioner should have confirmed his suspicions/concerns by conducting a design check using appropriate OBC design loads in conjunction with appropriate CSA standards for the building materials used. A reasonable and prudent practitioner, proceeding in this fashion, would have recognized the danger associated with the unconventional design of the verandas in question;
- (c) Given that it appears that for the purposes of the initial letter Crozier and Crozier Engineering relied solely on information provided by Garant Construction, Crozier and Crozier Engineering should have stated in the initial letter to the chief building official for the Town of Essex that Crozier had not attended on site and that all information upon which he was relying was provided by his client, Garant Construction;
- (d) An engineering report should contain all necessary parameters upon which the engineer relies to reach his or her conclusion in order that anyone reading the report has all the facts necessary to understand how the engineer arrived at the conclusion reached. Crozier should have specified design loads, live and dead, and what standard or standards were used; and
- (e) Based on Aleo's statement that the 6 inch length of header board in Crozier's drawing "does not exist" and assuming therefore no connection at the header the bending capacity of the joist is exceeded by a factor of 1.43 times and its shear capacity is exceeded by a factor of 1.45 times.

The panel accepted the revised Agreed Statement of Facts.

## Revised Plea by Member

Crozier changed his plea and admitted some allegations of professional misconduct set out in the Notice of Hearing as detailed in the balance of this section.

By reason of the facts set out above, Crozier admitted that he is guilty of professional misconduct as defined in section 28(2)(b) of the Act as follows:

"28(2) A member of the Association or holder of a Certificate of Authorization, temporary licence or a limited licence may be found guilty of professional misconduct by the Committee if, ...

(b) the member or holder has been guilty in the opinion of the Discipline Committee of professional misconduct as defined in the Regulations."

**Crozier agreed that the sections of Regulation 941 made under the Act relevant to the alleged professional misconduct are:**

- ◆ **Section 72(2)(a): "negligence";**
- ◆ **Section 72(2)(b): "failure to make responsible provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible";**
- ◆ **Section 72(2)(d): "failure to make responsible provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner";**
- ◆ **Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report or other document not actually prepared or checked by the practitioner";**
- ◆ **Section 72(2)(g): "breach of the Act or Regulations, other than an action that is solely a breach of the Code of Ethics"; and**
- ◆ **Section 72(2)(j): "conduct or an act relevant to the practice of profes-**

**sional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as... unprofessional."**

The panel conducted a plea inquiry and was satisfied that Crozier's admission was voluntary, informed and unequivocal. The panel accepted Crozier's plea.

## Decision

The panel considered the evidence and the revised Agreed Statement of Facts and finds that the facts support a finding of professional misconduct and, in particular, finds that Crozier committed an act of professional misconduct as alleged in the Notice of Hearing, and as defined in section 28(2)(b) of the Act.

## Reasons for Decision

The panel accepted the revised Agreed Statement of Facts for the following reasons:

- (a) The revised Agreed Statement of Facts was clear and admitted all of the major elements of the complaint.
- (b) The two engineering calculations both agreed that the veranda framing contained one or more joists that were stressed beyond the allowable stress.
- (c) Both experts' opinions were that providing a report without visiting the site was not good engineering practice.

## Penalty

Black advised the panel that a Joint Submission as to Penalty had been agreed upon. The Joint Submission as to Penalty provides as follows:

1. Crozier's licence is to be suspended for two months to take effect 60 days from September 10, 2002, that is, from November 9, 2002, until January 8, 2003;
2. Crozier must write and pass a Professional Practice Exam set by PEO with-

in 12 months from September 10, 2002. If Crozier fails to pass the Professional Practice Exam, this matter will be brought back before the Discipline Committee for further penalty;

3. Crozier's licence be subject to a condition and limitation that will bar him from engaging in professional engineering for the structural engineering analysis or design of residential, commercial or industrial buildings. For greater clarity, this restriction will not affect Crozier's ability to conduct his practice of municipal engineering, including the design of drains, sewers and watermains;
4. Crozier will receive a reprimand and the fact of the reprimand will be recorded on the register of PEO for 12 months;
5. Crozier shall pay costs to PEO in the amount of \$1,000 to be paid within 12 months from September 10, 2002.

Black advised Crozier that PEO receives the results of the Professional Practice Examination nine weeks after the examination and that Crozier should take this into account to avoid the matter being brought back before the Discipline Committee. In addition, Black advised the panel that Crozier is aware that the Decision and Reasons will be published.

Black made submissions to the panel as to why the Joint Submission as to Penalty ought to be accepted by the panel. In summary, Black submitted that the penalty must and does provide both specific deterrence and general deterrence.

Black described specific deterrence as a penalty that will bring home to the engineer that the engineer's actions were inap-

propriate and to ensure that the individual engineer will not engage in like conduct in the future.

Black submitted that the suspension of Crozier's licence, the requirement for Crozier to pass the Professional Practice Examination and the restriction on Crozier's licence against similar work fulfils this criterion.

Black described general deterrence as demonstrating to the profession the consequences of accepting work outside an individual's area of expertise. Black submitted that publication of the Decision and Reasons with a description of the circumstances and the penalty fulfils this criterion in that engineers in the profession will be deterred from undertaking work outside their areas of expertise and they will take particular care to remain within their areas of expertise.

Black reiterated that this was a Joint Submission as to Penalty and that it should be departed from only in exceptional circumstances and in circumstances when the proposed penalty is clearly inappropriate.

Colautti confirmed that this was a Joint Submission as to Penalty. He described the act by Crozier as a lapse of judgment and the penalty as a significant punishment that will affect Crozier's business.

Spies agreed with Black's advice with regards to not varying or changing the Joint Submission as to Penalty, particularly when both sides in a matter are represented by experienced counsel.

## Penalty decision

The panel accepted the Joint Submission as to Penalty and accordingly ordered that:

1. **Crozier's licence be suspended for two**

**months to take effect from November 9, 2002, until January 8, 2003;**

2. **Crozier write and pass the Professional Practice Exam set by PEO within 12 months from September 10, 2002. If Crozier fails to pass the Professional Practice Exam, PEO will bring this matter back to this panel for further penalty;**
3. **A condition and limitation be imposed on Crozier's licence to bar him from engaging in professional engineering for the structural engineering analysis or design of residential, commercial or industrial buildings. For greater clarity, this restriction will not affect Crozier's ability to conduct his practice of municipal engineering, including the design of sewers and watermains;**
4. **Crozier receive a reprimand and the fact of the reprimand be recorded on the register of PEO;**
5. **Crozier pay costs to PEO in the amount of one thousand dollars \$1,000 to be paid within 12 months from September 10, 2002.**

The panel concluded that the proposed penalty is reasonable and in the public interest. By agreeing to the facts and the proposed penalty, Crozier demonstrated that he accepts responsibility for his actions.

The written Decision and Reasons in this matter were dated May 20, 2003, and were signed by the Chair of the panel, Colin Moore, P.Eng., for and on behalf of the other members of the Discipline Panel: Nick Monsour, P.Eng., Glenn Richardson, P.Eng., Ken Serdula, P.Eng., and Tom Smith, P. Eng.

## Note from the Regulatory Compliance department

Crozier waived his right of appeal in this matter and the Discipline Panel administered the reprimand at the conclusion of the hearing. The fact of the reprimand and the condition and limitation on his licence have been recorded on the Register of the association. Crozier paid the \$1,000 cost award in January 2003. Crozier wrote and passed the Professional Practice Examination in April 2003.