Professional Engineers
Ontario

Volume 19, No. 6
November/December 2000

Gazette

THE DEPARTMENT OF THE REGISTRAR, PEO

Published by
the Association of
Professional Engineers
of Ontario

25 Sheppard Avenue W.,
Suite 1000
Toronto, Ontario
M2N 6S9
Tel: (416) 224-1100
(800) 339-3716

Editor: Eric Newton

Staff Contributors:
Roger Barker, P.Eng.
Ian Eng, P.Eng.

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 and a Certificate of Authorization holder

Both licensed by the Association of Professional Engineers of Ontario

Between a member and a Certificate of Authorization holder,

both licensed by the Association of Professional Engineers of Ontario.

Summary of Decision and Reasons

A panel of the Discipline Committee of the Association of Professional Engineers of Ontario (PEO) met in the offices of the association recently, to hear allegations of professional misconduct and incompetence against a member and a Certificate of Authorization holder, and to consider ratification of a Stipulated Order agreed to between a member of the Discipline Committee (hereinafter referred to as the "reviewing member") and the member, arising from a previous Stipulated Order meeting.

Legal counsel appeared for the association. The member appeared, but was not represented by legal counsel.

The Stipulated Order meetings, the agreed Stipulated Order and the meeting of the panel of the Discipline Committee arose from a complaint by the chief building official of an Ontario municipality.

In summary, a construction company (hereinafter referred to as the "contractor") submitted a building permit application to the municipality proposing to construct an industrial building in the municipality. Some of the drawings submitted with the permit application were under the title block of a technologist who was the contractor's son, (hereinafter referred to as the "designer") retained by the contractor. Some of the drawings submitted with the permit appli-

cation were under the title block of the member.

All the drawings carried the seal of the member. Upon review of the drawings, the municipal officials had concerns with the content of the drawings and brought these concerns, which included structural matters, to the attention of the contractor's designer and the member. It appeared to the complainant that the member sealed drawings that contained structural design deficiencies, and that were not in accordance with the requirements of the Ontario Building Code. As well, it was submitted that the member had failed to submit his site inspection reports to the municipality as required by the Ontario Building Code.

The reviewing member of the Discipline Committee chaired the Stipulated Order meetings, met with the chief building official for the municipality, two professional engineers retained by PEO (hereinafter referred to as the "structural" and "mechanical" experts) and the member.

The chief building official (hereinafter referred to as "the CBO") advised that the municipality received a building application for construction of an industrial building. The drawings submitted with the permit application were under the title block of the contractor's designer. The contractor was the builder, and they were proposing the construction of a second storey building, which was to be a sister building to an adjacent property.

The CBO advised that the plans examiner at the municipality was not a professional engineer. The CBO was the only professional engineer with the municipality. He advised that they therefore rely on submissions by an engineer and on an engineer's seal. The plans examiner reviewed the drawings. There was some information missing, and he found the drawings to be deficient.

Further, the CBO advised that the building inspector noted that the walls of the structure were not being built in accordance with the plans. The CBO stated that the municipality asked for verification from the contractor that an engineer was doing on-site inspection.

The CBO reviewed the drawings, which were prepared by the contractor's designer, but which were stamped and sealed by the member. The CBO had concerns with the content of the drawings, which were brought to the attention of the contractor's designer and the member. He advised that the east wall comprised a 300-millimetre masonry wall, and that they were building it with hollow block.

In response to a request from the municipality, the CBO stated that the municipality eventually received a revised sketch from the member, indicating that lateral bracing would be required in order to provide lateral stability. The member also provided certification that the building was built in accordance with his plan and the Ontario Building Code.

The municipality reserved judgment after the building was built and occupied, pending the findings of PEO, based on the member being a licensed professional engineer.

The CBO stated that the rear wall was the first indicator of concern. The second concern was with respect to the long walls with windows and doors punched in. The third concern was with respect to a canopy, as there was insufficient information on the drawings as to how this was to be supported. On the canopy wall, the long piers were double brick with no fill.

The member stated that the back wall was to be built as a 10-inch wall, which had to be reinforced using some type of bracing.

The CBO advised that he could not find specifics of what was done in the field to satisfy the municipality's requirements with respect to the rear wall.

The complaint to the PEO was initiated based on the design drawings sealed by the member. The CBO stated that he had never met the member, but was aware that the member had done work for the contractor and its designer. He advised that the drawings had been drafted by the contractor's designer, who was now deceased, and were then stamped by the member. The drawings were submitted with a stamp as part of the application for a Part 4 building. The CBO stated that the site inspector had some difficulties getting responses from the member, and that the member did not file site inspection reports as required by the Ontario Building Code.

The member did prepare site inspection reports and provided these to the contractor. The Building Code, however, requires site inspection reports to be provided to the municipality.

The CBO advised that the reports eventually were submitted directly to the municipality, after the complaint had been filed with PEO. When the municipality raised concerns about the masonry, the CBO advised that the member responded within six days of the complaint being brought to his attention.

The CBO stated that he was not aware of any structural distress in the adjacent building, which the member also designed earlier. The municipality was, however, concerned that problems with the second building may have also been present in the first building. The second building had roof tie downs, which were not present in the first building. The member's response to this was that the first building had stood for 13 years and therefore was performing adequately.

The structural expert was an engineer, who was retained by PEO to review the design and drawings. He carried out a structural assessment by sampling the design. With respect to drawing A3, which contained electrical work, the structural expert noted that the member is not an electrical engineer. Drawing A4 contained an architectural floor plan. Drawing A7 contained mechanical works. The drawings were stamped by the member.

With respect to the wall thickness on the back wall of the building, it indicated that it was to be 10 inches thick on one drawing and 12 inches on another. Structural drawing S1 and the architectural drawings were in conflict.

The structural expert advised that the details show lateral wall support at the bridging line. He also advised that:

- the details did not make it clear how to support walls when no bridging lines exist;
- the drawings did not identify anchor plates, and there was no detailing for wind uplift;
- there was no bearing detail for some members; and
- the drawings generally lacked detail. He stated that there was a lack of coordination between the engineering and architectural drawings. He stated that for this type of building, an architect is not required.

He noted that there is a low canopy shown spanning between piers, which is part of the front wall. With respect to the masonry wall at this canopy, he stated that the design depended on the canopy roof diaphragm for lateral support. The collar joints were never filled in this wall, thereby rendering it a cavity wall, rather than a solid wall. The structural expert stated that either reinforced masonry was required or the wall should have been thicker.

He advised that the member used outdated masonry codes. The masonry bearing wall at its loading dock was improperly designed, and the intent of the code misinterpreted. This wall should have been thicker or braced differently.

The structural expert referred to, and showed the reviewing member, a set of photographs in which it was evident that there was no mortar in the collar joints between the brick and block wythes. He noted that there were no roof anchors to resist wind uplift. On the north wall, there were no continuous bond beams.

The first building was designed in 1987. CSA-M-84 was the masonry standard for the design of that building. That standard was not appropriate for the second building. He advised that the nominal thickness was assumed to be the thickness, whereas the current standard requires the use of actual thickness, which is less than nominal.

In his opinion, there were fundamental errors in the design philosophy and the design itself. He stated that based on his experience, he would not expect the building officials in the municipality to review drawings for structural design. The structural expert did raise the question of whether both buildings were unsafe. He did not know whether these deficiencies had been corrected and brought up to code standards. He stated it appeared to him that the member depended on trades to provide many of the structural details.

In his opinion, the drawings were not suitable for tender. He stated that the member agreed to this in his original rebuttal. The structural expert advised that PEO guidelines require engineering drawings to be prepared under the supervision of the engineer who seals the drawings. In this case, he submitted that the member did not take the time and effort to review the drawings with respect to this building, and in his opinion, the member was not competent to apply his seal to the masonry design.

In his opinion, the member was guilty of negligence pursuant to Section 72(2)(a) of Regulation 941 made under the Professional Engineers Act in that the member did not design the building to the Building Code requirements.

With respect to 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 a practitioner," the structural expert stated that the member had misinterpreted regulations, codes and standards.

With respect to 72(2)(e), "signing or sealing a final drawing, specification, plan, report or other document not actually prepared or checked by the practitioner," the structural expert stated that he could not call the document final, and therefore sealing was improper or premature.

With respect to 72(2)(h), he stated that the member did not provide reports to the building official, which to him suggested ignorance of the requirements of the Ontario Building Code and the performance standards of PEO.

With respect to 72(2)(j), "conduct or an act relevant to professional engineering that, having regard to all of the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable, or unprofessional," in his opinion, the member's conduct in this particular case was unprofessional.

In the structural expert's opinion, with respect to any penalty imposed, he suggested that the member should at the very least undergo a practice review.

The mechanical expert retained by PEO was a professional engineer licensed to practise in the province of Ontario. He provided a report to PEO, following review of drawings A1, A3, A4, A6 and A7, which were submitted with the permit application.

The mechanical expert stated that the building is a building pursuant to Section 2.3 of the Ontario Building Code and required the services of an architect or a professional engineer.

He stated that there was nothing on the drawings that enabled him to conclude whether the member was competent to provide mechanical engineering details. He advised that there was not enough content for a building permit application for construction. He stated that there were no heat loss/gain calculations.

The mechanical expert noted that the permit application was for a shell, and he had not been provided with subsequent submissions to the municipality. The drawings he reviewed were stamped by the member and were submitted for a permit. In the mechanical expert's opinion, both the mechanical and electrical drawings were significantly incomplete. There were no heating system and no electrical distribution shown. The drawings were more incomplete than one would expect for even preliminary drawings, rather than permit drawings.

He stated that there was really nothing for him to review, and that the problem with the drawings was incompleteness rather than incorrectness. He stated that there was nothing provided in the drawings that gave any indication of the member's competence. He stated that the member retained a mechanical and electrical engineer after the member had received the complaint.

In the mechanical expert's opinion, it was inappropriate to seal these drawings.

In his opinion, the member breached Sections 72(2)(a), (b), (d) and (e) of Regulation 941 made under the Profes-

sional Engineers Act. With respect to Section 72(2)(h), in the mechanical expert's opinion, the member was guilty by omission. With respect to 72(2)(j), he considered that the member was unprofessional with respect to this project.

The reviewing member met with the member on March 9, 1999, and explained the process. He said that there appeared to be three aspects to the complaint: The first was the issue of permit drawings; the second was the design; and the third was the member's role in the field review.

The member stated that in 1979, he was approached by the contractor's designer to seal plans for the shell of the first building. The contractor's designer hired mechanical and electrical contractors, who did the layout for the mechanical and electrical. The member did a final review of the drawings of the building and sealed the drawings. He advised that the contractor's designer was a technologist rather than an engineer.

The member stated that he does not normally design masonry, and that his engineering specialty is structural steel. He advised that he relied on the contractor's designer with respect to meeting the masonry codes.

With respect to the first building, he advised that they had no difficulty in obtaining a permit. The member stated that, in 1997, the contractor's designer wanted to erect a second building. It was going to be the same as the first building, and they were going to use the same plans. The first building was built in 1979. It was the same arrangement, and he was to check and seal the drawings based on this. He had known the contractor and his designer for a long time. They were the owners of these buildings. He advised that they were good builders and did not cut corners.

On the first building, he stated that he was not involved in the site plan. On the second, the builder wanted a site plan sealed. A surveyor prepared the plan, and he superimposed the building onto the survey and sealed the site plan. The member advised that he was not without fault. He stated that all of the permit drawings were prepared by the contractor's designer. They were the same as the 1979 drawings, except for minor changes to the structural steel made by the member.

The member did not have the drawings or the calculations for the first building. He stated that the contractor's designer prepared the drawings, but the wall thickness was his own responsibility.

He stated that he went to inspect the site during the construction of the foundations. He advised that he relied on the designer's advice and was not familiar with the masonry code.

He stated that, after the first building was constructed, he became aware of the changes in the masonry code. But he was not aware of the change in the code that had occurred in 1984, or at the time the second building was designed.

He stated that, in the past 10 years, he had designed 50 similar buildings. The masonry on those projects was done by the architect on the project. The member stated that he provided the structural framing design. He agreed that he is responsible for the masonry, when he applies his seal to a drawing. He agreed with the experts' report that his design of some of the walls was deficient. He stated that he believed that the contractor and his designer had carried out additional work requirements once the deficiencies were discovered.

In response to the complaint, he submitted some calculations that he had prepared, and he stated that he did the calculations to satisfy the CBO. At that time, he did not realize that the wall had to be reinforced.

He stated that the 12-inch wall would have met the code, but, as constructed, it did not meet the code. When he inspected this wall, he saw a cavity, and this was reported to the contractor's designer. They agreed to do reinforcing, which he designed. This work was done in April 1998. He stated that this was identified before the complaint in September 1997, but the work was done after the complaint.

The member stated that he did some research and contacted another consulting engineer, who told him that the member could not use the performance of the first building as justification for using the old code in the second. He stated that he did not agree entirely with that advice. He stated that there were no signs of distress in the first building, and that he felt that there was justification for his saying that the original design was a prototype.

The member admitted that roof tie downs were not shown on the drawings. He stated that the need for tie downs was recognized at the time. During his review of the shop drawing, he discovered the need for tie downs. Around the same time, the contractor's designer informed him that they had made a mistake and built a wall to a 10-inch thickness, rather than the 12 inches specified.

The member stated that he would not have submitted these drawings for a general tender. It was because of the design/build/owner relationship that he considered the drawings were satisfactory. His scope of work did not include preparing the drawings; these were prepared by the contractor's designer.

The member received the drawings for the first building and did not update the standards noted on the drawings. He stated that it is not uncommon to see drawings with outdated codes. This did not seem to concern him. The structural steel codes with which he was familiar were updated. He agreed that the canopy wall was over stressed, and that it failed to meet the Code.

To the member, the diaphragm at the front wall was adequate to provide lateral support. The front wall did not have adequate uplift, so they added ties. He advised that uplift had now been looked after throughout the building. He had advised the contractor's designer in writing that they had also strengthened the first building in this same manner.

He stated that he did not realize that the collar joints had to be filled. He advised that a cavity wall was built in the first building and that met the slenderness requirements. Although it was built as a cavity wall, there were no weep holes on the drawings. There were no control joints indicated on the drawings, but they were constructed.

With respect to not issuing a report to the municipality, the member stated that he sent his reports directly to his client, expecting that the client would submit the information to the municipality. He conceded that the Code does require that reports be provided directly to the municipality by the field review engineer.

On this job, he made several site visits. He stated that, typically, he likes to see the foundations, the structural steel framing, the roof deck and structural masonry. He stated that the complaint referred to his stamping mechanical and electrical drawings. He stated that he had no intent to stamp mechanical and electrical drawings.

He submitted that they were architectural drawings, with some electrical and mechanical detail. He stated that it was a shell, and that the permit application was reviewed for a shell only. The basic electrical and mechanical information was put on the drawings by the contractor's designer, and the member's intent was to seal only the parts of the drawings that were within his field of expertise. He advised that he later hired a mechanical and electrical engineer, and proper drawings were done, submitted and approved. He was aware that there was a concern that he was holding himself out as being capable of preparing mechanical and electrical drawings.

He stated that his report should have indicated "Field Review" instead of "Field Inspection." With respect to the lack of mechanical and electrical details on the drawings, he stated that he did not consider that to be his responsibility, since the terms of retainer with the contractor were for the building shell. He stated that there was no correspondence confirming his scope of work. He stated that the principal part of his business is in steel fabrication/structural steel. He agreed that he is not qualified to do mechanical or electrical drawings and because of this, he subcontracts such work to mechanical and electrical engineers.

His preference is to work on industrial buildings as a prime consultant and subcontract the other work out. In this case, he worked more on an "as required" basis for the client.

The member stated that he has owned his own business since 1983, and is seriously looking at retirement. His immediate plans are to provide his services only in his structural steel design specialty.

Findings of the reviewing member

The reviewing member indicated that he accepted that the intent of the permit was for the building shell only. He was satisfied that the mechanical and electrical designs were to be developed further by parties other than the member.

He noted, however, that the member used the same drawings for this structure as he did for the first building that was erected in 1979. The reviewing member stated that the member did not prepare the drawings, but he did seal them. He also stated that the member did not check the masonry, although he was admittedly not competent to do so. He was satisfied that the member checked the structural steel and foundations. The reviewing member found that the member did not review the current masonry codes, and that the masonry, as designed and constructed, was inadequate and required reinforcement. The canopy wall design was inadequate, and reinforcement at the buttress was needed.

The reviewing member found that there was no documentation regarding the member's scope of work. The member did not consider himself to be responsible for life and safety issues beyond the structural work, yet he improperly stamped the drawings with respect to the entire building. He stated that the member lacked awareness of the difference between "site inspection" services and "periodic field review services."

Although the member had alerted the contractor about the roof tie downs to resist wind uplift, these were not factored into the member's original drawings.

The member, in the reviewing member's opinion, demonstrated that he was not familiar with the latest masonry codes, and it was naive and improper of him to rely upon the contractor/builder for this knowledge.

The reviewing member stated that, in the future, because the member had very limited experience in masonry structure, he should focus only on his structural steel framing expertise, and he should develop procedures on how that work is to be performed in his office.

A Stipulated Order proposed by the reviewing member was agreed to by the member. The particulars are as follows:

Whereas:

1. The member and the C of A holder have been advised that a concern has been raised about their practice based upon a review of a complaint from the Chief Building Official for the municipality;
2. The member and the C of A holder have been fully apprised of the fact that:
   a) PEO is prepared to proceed to the drafting of a Notice of Hearing, and to hold a discipline hearing based on the complaint that was referred to the Discipline Committee;
   b) a panel of the Discipline Committee at a discipline hearing has the power and authority, in accordance with Section 28 of the Act, to reprimand, impose conditions, suspend and revoke membership for each offence; and
   c) they have the right of defence at a discipline hearing.
3. The member and the C of A holder wish to expedite the resolution of this matter by means of this Stipulated Order, and do not desire to proceed to a discipline hearing;
4. They understand that this Stipulated Order will become binding when signed by the member, the C of A Holder and the reviewing member of the Discipline Committee.

Based upon the foregoing, the parties hereby agree to the following:

- That the member and the C of A holder were guilty of incompetence as defined in Section 28(3)(a) of the Professional Engineers Act, R.S.O. 1990, Chapter P.28, with respect to masonry design contained in drawings submitted for a permit application to which the member applied his seal; and
- That the member and the C of A holder were guilty

of professional misconduct in that they breached the following Sections of Ontario Regulation 941 made under the Professional Engineers Act, specifically:

- Section 72(2)(a): negligence;
- Section 72(2)(d): failure to make reasonable 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; 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 parties have agreed there was a basis for concluding there was professional misconduct, and the following Order has been agreed to:

1. The matter be brought before a discipline panel (the panel) of the Discipline Committee for ratification of the Order, before the Order is formally entered on the register. If the panel is in agreement with the Order as written, the Order will be signed by the panel chair and entered upon the register.

   If the panel is not in agreement with the Order as written, a Notice of Hearing will be delivered to the member, and the matter will proceed to a full discipline hearing before a differently constituted panel;

2. The member and the C of A holder undergo a practice review by an independent structural engineer retained by PEO, such review to include internal and external documentation of projects and policies, protocols, and procedures relating to projects with recommendations made by the independent structural engineer to be implemented by the member to the satisfaction of the reviewer and the Registrar within 60 days of the independent structural engineer's report;

3. The member's licence be limited to structures comprised of structural steel and reinforced concrete foundations for industrial buildings only, pursuant to Section 28(4)(d) of the Professional Engineers Act.

4. The member's Certificate of Authorization be limited to structures comprised of structural steel and reinforced concrete foundations for industrial buildings only, pursuant to Section 28(4)(d) of the Professional Engineers Act;

5. The member and the C of A holder undertake to make recommendations to the contractor and to the CBO for the municipality, within ten (10) days of this order being formally entered, with respect to the remediation required to the industrial building, built in 1979 and the "sister" building built in 1997; and

6. The matter be published in the official journal of the association, without reference to names, dates or locations. The member and the C of A holder have been apprised that the association shall not be precluded from taking further action in accordance with the Act in the event of a violation of this Stipulated Order.

Accepted by the member, the C of A holder, and PEO.

The Discipline Committee then met to determine whether it agreed that the Stipulated Order was an appropriate disposition of the matter.

Legal counsel on behalf of the association filed a Hearing Brief as an exhibit, which included: Form of Complaint, response of member; response of chief building official, documents and drawings relating to the project and reports prepared by the engineering experts retained by PEO.

No viva voce evidence was called, and legal counsel for PEO submitted that the panel's task was to determine whether the Stipulated Order was an appropriate disposition.

In giving evidence on his own behalf, the member submitted that he had been practising as a professional engineer for 39 years. He stated that the deficiencies appeared worse than they were, and that the building was a second building. He conceded that he had not reviewed the drawings as closely as he normally would. He stated that another municipality was a major client of his, and he had not had similar problems in the past.

He submitted to the panel that, when deficiencies were identified, compliance with the Code occurred. He submitted that he sealed the structural and architectural drawings only, and there was never an intent to stamp electrical and mechanical drawings. He submitted that he had no problem with having his licence limited to structures comprising structural steel and reinforced concrete foundations for industrial buildings only, pursuant to Section (4)(d) of the Professional Engineers Act. He stated that the first building was 11 years old and showed no signs of distress.

In response to questions by the panel, the member stated he agreed to the terms of the Stipulated Order. He stated that he had never met with the building official who filed the complaint with the association.

The significant deficiencies were with respect to the masonry, and the member acknowledged that his experience and expertise had been in structural steel.

Following submissions by counsel for PEO, the panel retired to consider the exhibits and deliberate.

Upon reconvening, the chair, on behalf of the panel, advised the member that even though the builder was a masonry contractor, the panel believed that there was over reliance on the contractor by the member. The panel was concerned that the member did not respond to the orders to comply in an appropriate manner.

Having considered all of the facts, the panel was satisfied that the Stipulated Order, agreed to between the reviewing member on behalf of the PEO, and the member on behalf of himself and the C of A holder, was an appropriate disposition of the matter. The panel ratified the Stipulated Order.

Council approves designation and redesignation of Consulting Engineers

At the 396th meeting of Council held October 12-13, 2000, the following members were designated and redesignated as Consulting Engineers pursuant to Ontario Regulation 941 of the Professional Engineers Act. Also listed are firms to which Council has granted permission to use the title "Consulting Engineers."

Designation as of a Consulting Engineer is for a period of five years; at the end of that time, the member must be redesignated. For more information on the Consulting Engineers Program, contact Angela Gallant, Department of Professional Affairs, at (416) 224-1100 or (800) 339-3716, or email: agallant@peo.on.ca.

Newly designated Consulting Engineers

Norman Q.C. Chung, P.Eng.
Poulos & Chung Limited
Markham, ON

Michael Girard, P.Eng.
Pinchin Environmental Limited
Mississauga, ON

Kenneth MacKenzie, P.Eng.
Sole Practitioner
Bright's Grove, ON

David McCloskey, P.Eng.
D.C. McCloskey Engineering Ltd.
Windsor, ON

Gordon Mida, P.Eng.
Power & Controls Engineering Ltd.
Kanata, ON

David Brent Thompson, P.Eng.
Wardrop Engineering Inc.
Thunder Bay, ON

Kevin Ward, P.Eng.
Demaiter Engineering Inc.
Waterloo, ON

Peck-Hee Wee, P.Eng.
Sole Practitioner
Windsor, ON

Redesignated Consulting Engineers

Nabil Ahmed, P.Eng.
Ralph W. Barker, P.Eng.
Ralph W. Barry, P.Eng.
David Bender, P.Eng.
Scott William Brumwell, P.Eng.
William J. Bryant, P.Eng.
James G. Burns, P.Eng.
Walter Buryniuk, P.Eng.
Gordon M. Cameron, P.Eng.
Donald Cane, P.Eng.
James Carter, P.Eng.
Edward Chiesa, P.Eng.
Chi-Shing (Eric) Cho, P.Eng.
Glenn Clark, P.Eng.
Parvaneh (Gina) Cody, P.Eng.
Nicholas Colucci, P.Eng.
John P. Conforzi, P.Eng.
Frederick L. Connon, P.Eng.
John Cooke, P.Eng.
Robert Dale, P.Eng.
Geoffrey Davies, P.Eng.
William Dengler, P.Eng.
James Denham, P.Eng.
Peter DiLullo, P.Eng.
Roland Drouin, P.Eng.
John Egan, P.Eng.
Adel El-Hamzawi, P.Eng.
Seymour Epstein, P.Eng.
John Ferguson, P.Eng.
Ronald Fleming, P.Eng.
John Frederick, P.Eng.
Larry Galimanis, P.Eng.
William Gastmeier, P.Eng.
J. Shawn Gibbons, P.Eng.
Owen R. Glendon, P.Eng.
John Stuart Hall, P.Eng.
Donald Hannigan, P.Eng.
Brian Harris, P.Eng.
John Harris, P.Eng.
Ralph Hinde, P.Eng.
Michael Huang, P.Eng.
Mark Jackson, P.Eng.
William Jackson, P.Eng.
Howard Joe, P.Eng.
Robert Jones, P.Eng.
Sidney Joseph, P.Eng.
Walter Kembel, P.Eng.
Alfred Kettle, P.Eng.
Joseph Klement, P.Eng.
Vlad Knop, P.Eng.
Helmut Kron, P.Eng.
Clive Lacey, P.Eng.
Robert Lackey, P.Eng.
Jean LaFontaine, P.Eng.
Gerald LaLonde, P.Eng.
Peter Leong, P.Eng.
Alfred Lightstone, P.Eng.
Robin Loudon, P.Eng.
William Magyar, P.Eng.
Anthony McDonnell, P.Eng.
Gary McFarlane, P.Eng.
John McGlone, P.Eng.
Leo P. Meyer, P.Eng.
Ezzat Mitri, P.Eng.
Rodney Mons, P.Eng.
Mori Mortazavi, P.Eng.
William Notenboom, P.Eng.
Guenter Nuessler, P.Eng.
Glen Pearce, P.Eng.
Louis Piche, P.Eng.
Krzysztof Pioro, P.Eng.
Ed Poras, P.Eng.
Douglas Reeve, P.Eng.
Ross Ritchie, P.Eng.
Young Ro, P.Eng.
Isabelle Roberts, P.Eng.
Gordon Russell, P.Eng.
John Ryan, P.Eng.
David Sawicki, P.Eng.
Anthony Sergautis, P.Eng.
Earl Shannon, P.Eng.
Benny Skalmstad, P.Eng.
Gene Smallwood, P.Eng.
John D. Smith, P.Eng.
Joseph Stephenson, P.Eng.
S. Alan Stinson, P.Eng.
Richard J. Stoltz, P.Eng.
Kurt Strobele, P.Eng.
Jan Svihra, P.Eng.
Charles Tatham, P.Eng.
Brian Tuthill, P.Eng.
John Vallee, P.Eng.
Lambertus Van Berkel, P.Eng.
Frederick Weinstein, P.Eng.
Ray Yamamoto, P.Eng.
Luigi Zarlenga, P.Eng.
John Zirnhelt, P.Eng.

Consultants granted permission to use the title "Consulting Engineers"

1037234 Ontario Limited (o/a) Belanger Engineering
Mississauga, ON

Burgess Engineering Inc.
Grimsby, ON

Current Engineering Limited
Windsor, ON

Ecotech International Systems Inc.
Vaughan, ON

Jp2g Consultants Inc.
Pembroke, ON

McIntosh Hill Engineering Services Ltd.
Carp, ON

Neegan Burnside Engineering and Environmental Ltd.
Orangeville, ON

Trow Consulting Engineers Ltd.
Brampton, ON

Professional Engineers
Ontario

Order form is online at www.peo.on.ca

Publications Order Form

	$	No.	Total
The Professional Engineers Act, R.S.O. 1990, Chapter P.28	N/C		
Ontario Regulation 941	N/C		
By-law No. 1	N/C		
Practice Guidelines			
Acting Under the Drainage Act (1988)	10.00		
Acoustical Engineering Services in Land-Use Planning (1998)	10.00		
Building Projects Using Manufacturer-Designed Systems & Components (1999)	10.00		
Commissioning Work in Buildings (1992)	10.00		
Communications Services (1993)	10.00		
Engineering Services to Municipalities (1986)	10.00		
Environmental Site Assessment, Remediation & Management (1996)	10.00		
General Review of Construction as Required by Ontario Building Code (1996)	10.00		
Geotechnical Engineering Services (1993)	10.00		
Guideline to Professional Practice (1998)	10.00		
Human Rights in Professional Practice (2000)	10.00		
Land Development/Redevelopment Engineering Services (1994)	10.00		
Mechanical & Electrical Engineering Services in Buildings (1997)	10.00		
Professional Engineer as an Expert Witness (1997)	10.00		
Professional Engineer's Duty to Report	2.50		
Project Management Services (1991)	10.00		
Reports as Required by S.7 & S.8, Reg. 851, Ontario Occupational Health & Safety Act (1999)	10.00		
Roads, Bridges & Associated Facilities (1995)	10.00		
Selection of Engineering Services (1998)	10.00		
Solid Waste Management (1993)	10.00		
Structural Adequacy in Arenas (1990)	2.00		
Structural Engineering Services in Buildings (1995)	10.00		
Temporary Works (1993)	10.00		
Transportation & Traffic Engineering (1994)	10.00		
Use of Agreements Between Clients & Engineers (2000) (including sample agreement)	10.00		
Use of Computer Software Tools Affecting Public Safety & Welfare (1993)	10.00		
Business Publications			
Agreement Between Architect & Consultant (1992) (Guide to CCAC Doc. 6C)	5.00		
Agreement Between Prime Consultant & Sub-Consultant (1993) per package of 10	10.00		
Schedule of Fees for Engineering Services (1998)	10.00		
Required Experience for Licensing in Ontario (1995)	10.00		

Fax to: 416-224-8168 or 1-800-268-0496
Phone: 416-224-1100 or 1-800-339-3716
Mail to: Professional Engineers Ontario
25 Sheppard Ave. W., Suite 1000
Toronto, ON M2N 6S9

Name

Shipping Address

City

Province

Postal Code

Tel

Fax

Shipping and handling is included.
Please allow 10 days for delivery.

Subtotal

7% GST

Total

❑ Please charge to VISA number

(please list all numbers on card) Expiry Date

Signature

❑ I have enclosed a cheque or money order made payable to Professional Engineers Ontario.

Membership #