



Ontario Association of Architects

Elliot Lake
Commission of
Inquiry
Roundtable
Questions and
Answers

November 12, 2013

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The Ontario Association of Architects (OAA) appreciates the opportunity to be a part of the Roundtable discussions established by the Elliot Lake Commission of Inquiry. We have provided the answers to the questions posed of all three Roundtables.



A. ROUNDTABLE 1 – INCREASING PUBLIC SAFETY

MONDAY, NOVEMBER 18, 2013

Moderator: Peter Doody

CONFIRMED PARTICIPANTS:

- Randal Froebelius is BOMA Canada's Secretary-Treasurer and also the Principal of Equity ICI Real Estate Services.
- Association of Ontario Municipalities, Stuart Huxley, Senior Legal Counsel, City of Ottawa
- Dean Findlay, Ontario Building Officials Association
- Warwick Perrin, Ontario Association of Property Standards Officers
- Ministry of Labor - Wayne DeL'Orme, Director – Mining Health and Safety Review
- Ministry of Municipal Affairs and Housing - Brenda Lewis, Director of the Building and Development Branch
- Ann Borooah, Chief Building Inspector, City of Toronto
- Peter Sharpe, former CEO, Cadillac-Fairview

Roundtable 1, Question 1

- 1. Should there be mandatory periodic inspection of all buildings? If so, by whom (province, municipality or building owner)? How often? What kinds of buildings?**

ANSWER to Roundtable 1, Question 1

Yes, building owners could be responsible to hire professionals to inspect buildings for public use (assembly occupancy for instance) every decade.

The specific type of reporting required by the Architect or Professional Engineer should be defined, and filed with and enforced by local Building Officials.

There currently is legislation, the *Building Code Act*, S.O. 1992, c. 23 (OBICA) that allows Building Officials to enter and inspect without warrant where they have concern for public safety.

The *Building Code Act* is attached at Appendix 3.

Roundtable 1, Question 2

2. Should there be mandatory minimum property standards for all buildings? If so, who should establish them (province or municipality?) How should they be enforced?

ANSWER to Roundtable 1, Question 2

Municipalities and Planning Boards have this responsibility already.
Enforcement should be by local Building Officials.

Roundtable 1, Question 3

3. Should those who have responsibility for public safety in buildings (municipalities, MOL etc.) have the power, or be required, to force owners to retain a professional (engineer or architect) to approve proposed repairs or maintenance to existing buildings? Should a record be kept of all remedial actions undertaken by the owners?

ANSWER to Roundtable 1, Question 3

The power to have standards and enforce maintenance is set out in the *Building Code Act*, S.O. 1992, c. 23, s. 15.1 (3).

The *Architects Act*, R.S.O. 1990, c. A. 26, s.11 and the *Professional Engineers Act*, R.S.O. 1990, c. P. 28, s.12 define which professional is required in what type of building.

A copy of the *Architects Act* is at Appendix 1.

There used to be a Table in the Building Code 2006, Ontario Regulation 350/06, that clearly set out when an Architect or Architect and Professional Engineer were required for easy reference by Building Officials.

A copy of the Table is at Appendix 4.

The Table was an accessible tool that brought all the legislation together for professionals and non-professionals alike. It made it possible for every Building Official, from large or small jurisdictions, to have an easy to use tool that conveyed the impact of multiple pieces of legislation on their work.

If records are to be kept then the local building department should keep them so they are available for future reviewers.

OFF

Roundtable 1, Question 4

- 4. Should clear guidelines be established in the regulations governing the Chief Building Official in cases where public safety may be at risk based on the degree and imminence of the threat and the response of the owner, making it clear that in cases where an owner is either unwilling or unable to take steps necessary to avoid risks to human safety that (a) an order be promptly issued; (b) a clear period of time be allowed for compliance; (c) at the end of that time, the city must take further enforcement steps to prosecute, conduct the work at the owner's expense or to close and condemn the structure.**

ANSWER to Roundtable 1, Question 4

The Chief Building Official (CBC) has that power already under the *Building Code Act*.

Roundtable 1, Question 5

5. Is the training for building officials, in particular, for property standards officers, sufficient? Should there be mandatory training, competency qualifications and certification of property standards officers? What degree of independence should property standards officers have from other municipal officials? Should building officials, including property standards officers, be regulated as a profession?

ANSWER to Roundtable 1, Question 5

Municipalities should be encouraged to hire Architects, Engineers or Code Professionals as set out in the legislation for these positions.

Resources, like the Table mentioned in the answer to Roundtable 1, Question 3 should be made readily available to Building Officials.

Building officials should be a regulated profession.

Roundtable 1, Question 6

6. Considering the information you have gleaned from the proceedings of the Elliot Lake Commission of Inquiry, can you provide your top five recommendations as to what should be done to ensure that a similar tragedy does not occur again in Ontario or Canada? If possible, identify the sort of buildings or occupancies which should be the highest priority?

ANSWER to Roundtable 1, Question 6

a. Answered with the questions for Roundtable 3

B. ROUNDTABLE 2 – IMPROVED SHARING OF REPORTS AND INFORMATION

TUESDAY NOVEMBER 19, 2013

Moderator: Mark Wallace

CONFIRMED PARTICIPANTS:

- Randal Froebelius is BOMA Canada's Secretary-Treasurer and also the Principal of Equity ICI Real Estate Services.
- Ministry of Labour - Vivien Wharton-Szatan, the Provincial Coordinator for the Industrial Health and Safety Program
- Ministry of Municipal Affairs and Housing, Brenda Lewis, Director of the Building and Development Branch
- Ryan Stein, Director, Policy, Insurance Bureau of Canada
- Ann Borooah, Chief Building Inspector, City of Toronto
- Alan Shaw, Ontario Building Officials Association

Roundtable 2, Question 1

Roundtable 2, Question 1 a

- 1) Should the Owner of a building be required to keep a secure record of and provide the information relating to the condition of a building (all private, as well as public, documents and information dealing with the condition of those buildings over their lifetime, including information on the nature and extent of the services provided by an engineer and an architect, the name, identity and contact information of those professionals and any remedial actions taken as a result of inspections)
 - a. to any purchaser or other person seeking to acquire an interest in the building, financial or otherwise****

ANSWER to Roundtable 2, Question 1 a

Reports by an Architect or a Professional Engineer related to a property could be filed with and would then be available from a building department. The Building Department has the original information submitted for permit, all the information related to certain types of renovations. This would enable the Building Department to have a complete set of documents related to buildings they are responsible for.

Roundtable 2, Question 1 b

- 1) Should the Owner of a building be required to keep a secure record of and provide the information relating to the condition of a building (all private, as well as public, documents and information dealing with the condition of those buildings over their lifetime, including information on the nature and extent of the services provided by an engineer and an architect, the name, identity and contact information of those professionals and any remedial actions taken as a result of inspections)
 - b. to any person or agency conducting or supervising any inspection, assessment, repair or renovation of a building before any such inspection, assessment, repair or renovation begins****

ANSWER to Roundtable 2, Question 1 b

This is not always possible and will not change what is evident upon proper inspection.

Roundtable 2, Question 1 c

1) Should the Owner of a building be required to keep a secure record of and provide the information relating to the condition of a building (all private, as well as public, documents and information dealing with the condition of those buildings over their lifetime, including information on the nature and extent of the services provided by an engineer and an architect, the name, identity and contact information of those professionals and any remedial actions taken as a result of inspections)

c. To the municipality whenever a building permit is required for repairs and renovations?

ANSWER to Roundtable 2, Question 1 c

This is not always possible and will not change what is evident upon proper inspection.

Roundtable 2, Question 1 d

1) Should the Owner of a building be required to keep a secure record of and provide the information relating to the condition of a building (all private, as well as public, documents and information dealing with the condition of those buildings over their lifetime, including information on the nature and extent of the services provided by an engineer and an architect, the name, identity and contact information of those professionals and any remedial actions taken as a result of inspections)

d. to a provincial agency

ANSWER to Roundtable 2, Question 1 d

This is not always possible and will not change what is evident upon proper inspection.

Roundtable 2, Question 2

2) Should the Owner of a building (and perhaps those who prepared the building information?) be required to register the information (i.e. Reports) relating to the condition of a building on the title to the property?

ANSWER to Roundtable 2, Question 2

This may not be practical and may go more to title insurance than ensuring the parties have accurate information about previous work done.

It merits noting that no registration system will change the requirement for professional expertise and judgment in the assessment of a building's condition and what is evident upon proper inspection.

Roundtable 2, Question 3

3) If so, should the availability of this information apply to all buildings or just commercial buildings?

ANSWER to Roundtable 2, Question 3

If so, the availability should apply to commercial and assembly occupancy and maybe some institutional (hospitals).

Roundtable 2, Question 4

- 4) If there is no requirement to register the information (i.e. Reports) relating to the condition of a building on title to the property, should the information be made accessible to the public by some other means such as a central registry? Or should they at least be filed with the Chief Building Official?**

ANSWER to Roundtable 2, Question 4

- a. No system will change the requirement for professional expertise and judgment in the assessment of a building's condition and what is evident upon proper inspection.
- b. Reports filed by an Architect or a Professional Engineer related to a property should be available from a building department

Roundtable 2, Question 5

5) Should the building owner be required to complete an Affidavit as mandatory closing document that states at a minimum the following:

- 1. The owner has disclosed all engineering reports that have been conducted while the building has been owned by the present owner.**
- 2. That the owner has undertaken appropriate inquiry in order to obtain the history of all engineering reports on the property and there are stated here.**
- 3. There are no report or document that the owner is aware of with respect to this real property that deal in any way with the structural assessment or condition of this building that has not been disclosed to the purchaser.**

ANSWER to Roundtable 2, Question 5

- a. No comment**

Roundtable 2, Question 6

6) Should any and all engineers and architects who have provided services to an owner of a building make available all information in their possession to successor engineers or architects requesting such information?

ANSWER to Roundtable 2, Question 6

All reports filed by an Architect or a Professional Engineer related to a property should be available from a building department

Professional Engineering and Architect's practices are not always longstanding so this is not practical.

Roundtable 2, Question 7

7) Should municipal governments be required to document all oral and written complaints, even if the person wishes to remain anonymous? Should municipal governments be required to keep a public registry of all property standards bylaw violations that deal with the safety and soundness of a building structure, including any follow up action taken by the municipality and remedial action taken by the owner or municipality?

ANSWER to Roundtable 2, Question 7

Municipal governments are responsible for the safety and security of the population they serve and should take action as allowed under the *Building Code Act*, S.O. 1992, c. 23 (OBCA) where they see the need.

Documenting reports about serious concerns helps measure the (1) nature of the concern and (2) the nature of the complainant but may not protect the public more than they are already protected.

Roundtable 2, Question 8

8) The *Occupational Health and Safety Act* (sections 51 and 52) currently provides for certain obligations on employers to provide notice to the Ministry of Labour where a person is critically injured or killed at a workplace or a person is disabled from performing his/her work or requires medical attention because of an accident, explosion, fire at a workplace. Should these notice obligations be expanded to include situation of imminent danger, accident or injury? In addition, should an employer be required to report to the Ministry of Labour any health and safety recommendation made by a joint committee or a health and safety representative which is not followed and may lead to critical injury?

ANSWER to Roundtable 2, Question 8

No comment

Roundtable 2, Question 9

9) Considering the information you have gleaned from the proceedings of the Elliot Lake Commission of Inquiry, can you provide your top five recommendations as to what should be done to ensure that a similar tragedy does not occur again in Ontario or Canada? If possible, identify the sort of buildings or occupancies which should be the highest priority?

ANSWER to Roundtable 2, Question 9

Answered with the questions for Roundtable 3

C. **ROUNDTABLE 3 - ROLE OF PROFESSIONALS and OTHER BUILDING CONSULTANTS**

WEDNESDAY NOVEMBER 20, 2013 – THURSDAY NOVEMBER 21, 2013

Moderator: Bruce Carr-Harris

CONFIRMED PARTICIPANTS:

- Professional Engineers of Ontario (PEO) CONFIRMED NAME TO FOLLOW
- Paul Acchione , President, Ontario Society of Professional Engineers
- J. William (Bill) Birdsell, President, Ontario Association of Architects
- Gregory (Greg) Miller, C.E.T., CBCO, Vice President on OACETT (Ontario Association of Certified Engineering Technicians and Technologists) Council and is Manager, Building and By-Law services and Chief Building Official for the Town of the Blue Mountains
- Dale Craig, Chairman of J.L. Richards and Associates Ltd.
- Prof. Jag Humar, Carleton University

Roundtable 3, Question 1

1) Should the term “prime consultant” be defined and the roles and responsibilities clearly enunciated?

ANSWER to Roundtable 3, Question 1

The term prime consultant should not be defined because in the design and construction industry the prime consultant is mainly determined by contractual relationships.

When there is more than one consultant generally there is a prime consultant and sub-consultants. The prime consultant is the one with a contract directly with the owner (or the owner’s agent) and the other consultants have a contract with the prime consultant, thus establishing who the prime is and who the sub-consultants are.

The prime consultant and sub-consultants are determined by the client’s decisions.

Traditionally an Architect is a prime consultant having a direct contract with an owner with structural, mechanical and electrical engineers as sub-consultants of the Architect. Engineers also fulfill this role. Both the *Architects Act* and *Professional Engineers Act* say that either an Architect or a Professional Engineer “may act as prime consultant”.

Architects Act, R.S.O. 1990, c, A, 26, s. (11)(4)(8)

8. An architect or a professional engineer may act as prime consultant for the construction, enlargement or alteration of a building.

Professional Engineers Act, R.S.O. 1990 c. P. 28 s. 12(6)(8)

8. A professional engineer or an architect may act as prime consultant for the construction, enlargement or alteration of a building.

The standard form of contracts developed by the OAA contain sections where the parties identify which consultants the Architect will be responsible for coordinating and which consultants are engaged / contracted to the Architect and which, if any, are engaged / contracted directly to the client. In addition the documents provide definitions of consultant and consultant coordination. Specifically, OAA Standard Form Contract 600 states that:

Consultant is a person or an entity engaged by the Client or the Architect to provide services supplementary to those provided by the Architect.

Consultant Coordination consists of:

- managing the communications between Consultants and with the Client, and
- providing direction as necessary to give effect to any design decisions taken, and
- reviewing the product of the Work to assist in identifying conflicts and to monitor compliance with directions.

Document 600 is attached at Appendix 5.

The traditional team make up described is not the only way in which teams are contractually composed. The Architect's client might not be the owner,

but a project manager or other third party, thus distancing the Architect from a direct relationship with the owner. Architects and Professional Engineers can instead find themselves each working individually for an owner, or a project management agent of an owner, without the benefit of coordination of the various consultants (their designs and general review) by a professional, sometimes as a result of the owner's perception that it will save coordination costs.

That being said, clients enter into contracts that do define each party's roles and responsibilities. Requiring, by legislation, that a prime consultant be identified will not change the contractual obligations the parties have to each other and may not enhance the specialized requirements for Architects, Professional Engineers, Contractors or Building Officials. Building Officials have expressed a desire for identification of the entity responsible for the role of "coordinator of all consultants". There is a joint liaison group of Professional Engineers (PEO), Consulting Engineers (CEO), Architects (OAA) and Building Officials (OBOA) called EABO. The standard EABO Commitment to General Review Form has a space to identify the role "coordinator of all consultants" but without the benefit of definitions or requirements.

Adding a definition of the term "Coordinating Professional" into the *Building Code Act*, S.O. 1992, c. 23 (OBCEA) would be beneficial. The Coordinating Professional should be an Architect or Professional Engineer. It is not reasonable that coordination of professionals is done by a project manager or others for whom there are no legislative qualifications.

The EABO Commitment to General Review Form is found at Appendix 6.

Coordination is critical to public safety. We believe that more success may be found by identifying the critical roles of coordination in design and general review during construction and ensuring that they are always in place rather than defining the term ‘prime consultant’. One way to do this is to require that the owner, where there is more than one consultant, have a coordinating professional (Architect or Professional Engineer) to perform specific coordination roles. On a project the ‘prime consultant’ could be a different entity provided the coordinating professional’s roles are fulfilled. This would still allow varying contractual relationships that owners desire and require in their businesses while providing the necessary coordination. British Columbia resolved a similar issue by establishing a “Coordinating Registered Professional” under their building code legislation.

Roundtable 3, Question 2

2) Should Consultants, including engineers, architects and building inspection companies, be required to clarify the scope of their expertise to their clients and to clearly establish which elements of the building they are qualified to provide an opinion on and which elements of the building they will not be inspecting or addressing due to lack of sufficient expertise.

ANSWER to Roundtable 3, Question 2

Every professional providing services should be clear about his or her expertise. Architects and Engineers both have clear definitions in their respective legislation that sets out what he/she can do. Both Architects and Engineers are also responsible for knowing what falls within his or her area of expertise and doing work within his or her purview. The Regulations under the *Architects Act* make it professional misconduct for an Architect to mislead a client about their experience or capabilities.

Clarifying the scope of their expertise is in general done during the client's assessment of who the client will engage to provide an identified service.

Requirements and guidelines already exist for inspections during initial construction – which are termed *general review* in the *Architects, Professional Engineers and Building Code Acts*.

Where a client wants an existing building inspected at a point subsequent to original construction the client would determine the services required and the Architect or Professional Engineer would provide a proposal of services. A proposal of services usually includes references or background information indicating the relevant experience the professional holds to assist the client in determining whom to engage.

If guidelines or requirements were in place for building elements related to specific critical life safety items, owners could identify these requirements as part of services required and professionals could respond to them specifically stating that they would be included or not. There will be other reasons why an owner seeks the professional opinion of an architect about the state of an existing building unrelated to issues of safety or performance requirements mandated by code, i.e. interior design improvements or space utilization.

OAA 600, a standard form of contract between a client and the architect sets out the scope of service in an itemized format to encourage discussion and agreement between the parties about the specific professional services the client is requesting.

Roundtable 3, Question 3

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to: (a) through (o)

ANSWER to Roundtable 3, Question 3 - General

The Ontario Building Code Act (OBCA) could be strengthened to include minimum prescriptive performance standards and enforcement of the minimum standards applicable to ensure that an existing building is maintained to achieve the same level of safety and performance as was required when it was originally constructed.

There may be room for guidelines applicable to specific types of inspections related to compliance with code or statute. The extent of the services for inspections should remain a matter of professional judgment based on the objectives of the client seeking the advice. Inspections of buildings for owners are done for varying reasons many completely unrelated to reviews for code compliance, structural soundness or life safety.

Roundtable 3, Question 3a

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

a) establish clear terminology to ensure that clients and regulators understand the scope of work, defining the scope of work expected in various types of inspections (for example, opening up concealed areas to examine connections or measuring corrosion) and ensuring that the engineer has sufficient resources, and a sufficient retainer, to be able to complete the required work;

ANSWER to Roundtable 3, Question 3a

The *Ontario Building Code Act* (OBCA) provides the Province with the authority related to measures to ensure the safety of an existing building. Any “terminology” or changes would be properly housed in the OBCA and not the separate regulatory bodies. Any required content or procedures related to an existing building should be linked back to the OBCA.

Roundtable 3, Question 3b

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

b) clarify which documents should be reviewed prior to the inspection;

ANSWER to Roundtable 3, Question 3b

Requiring documents that may not exist or are no longer available is a futile exercise. That being said “everything that is available” is the right answer. This still requires the professional judgment of the Architect and Professional Engineers to assess what is significant about the information provided and its usefulness as part of the inspection.

Professional judgment should always have a role in assessing the value of the content of any available documents related to the initial construction and subsequent alteration / maintenance and/or condition of any existing building. The documents that will prove useful will vary.

Roundtable 3, Question 3c

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

c) clarify which questions must be asked of the on-site owner representative, including a request for production of previous structural engineering reports;

ANSWER to Roundtable 3, Question 3c

The critical key is the dialogue which will result in the objective being clearly defined. The questions will depend on the circumstances, and the quality of the answers will vary with the capability, knowledge and experience of the on-site representative.

It is improbable that the quality of the answers can be assured and asking a set of “official” questions will be less reliable than reliance upon professional judgment and expertise of the professional.

Roundtable 3, Question 3d

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

d) identify the critical areas and determining the appropriate number of samples on which to draw credible conclusions;

ANSWER to Roundtable 3, Question 3d

Identifying critical areas and determining sampling criteria is appropriately addressed by the professional judgment and experience of the Architects and Professional Engineers hired to do the work. Sampling in an existing building will be impacted by size of the building, use of the building, occupancy type, identified issues or concerns and accessibility.

Setting a minimum number of samples could lead to circumstances where an owner feels that the minimum number is sufficient regardless of the professional's recommendations or in the converse an excessive number required would be unreasonably costly.

Roundtable 3, Question 3e

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

e) document the inspected areas, including photographs, measurements, samples and notes.

ANSWER to Roundtable 3, Question 3e

Any guidelines established respecting inspections of an existing building should require ample documentation using whatever technology is appropriate and available. “A picture speaks a thousand words” and provides visual evidence that can be used for comparison of the status over time, but may not be appropriate in every circumstance.

Roundtable 3, Question 3f

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

f) clarify and define terms such as ‘visual’ inspection’, ‘condition assessment’, ‘detailed condition assessment’, ‘structural assessment report’, ‘structural elements’ etc.

ANSWER to Roundtable 3, Question 3f

Definitions would need to be established provincially in the OBCA to avoid inconsistencies or conflicts. Such definitions should be consistent with other descriptions of procedures common in the design and construction field. Leaving the establishment of definitions to professional associations or municipalities could lead to variances and a lack of consistency.

Roundtable 3, Question 3g

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

g) prohibit the use of statements in reports such as “*All beams inspected had little loss of section and we would consider the members still structurally sound*” where the location of those beams or structural elements on which that opinion was based has not been identified within the report;

ANSWER to Roundtable 3, Question 3g

All reports should be specific as to what was examined, what was found and the implications thereof. Where specific terms, such as “structurally sound”, are to be used and are not currently defined, only a province wide definition would be helpful and enable the creation of effective guidelines.

Roundtable 3, Question 3h

- 3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:**
- h) establish a baseline of what is deemed to be an appropriate representative sample of the structural system and its components, including joints and connections, and structural steel to be inspected before the professional inspecting the building can confidently confirm that a building is ‘structurally sound.’**

ANSWER to Roundtable 3, Question 3h

When it comes to what constitutes the practice of engineering we defer to the PEO.

That being said, the issue applies to all types of structures, not just steel. Determination of what is a fair and appropriate representative sample in the circumstances is a matter of professional judgment.

Any enhanced provisions in the OBCA or regulations stemming from the OBCA could include a checklist of areas to be sampled. The list will be long since there is no element that can be ignored in such a checklist. Where specific terms, such as “structurally sound”, are to be used and are not currently defined, only a province wide definition would be helpful and enable the creation of effective guidelines.

Roundtable 3, Question 3i

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

i) set out the minimum standards for inspection by the professional inspecting the building to determine whether there has been ‘section loss’ of structural elements. In particular whether actual measurement is required where corrosion has been identified or that a ‘visual assessment’ of the degree of corrosion is sufficient?

ANSWER to Roundtable 3, Question 3i

When it comes to what constitutes the practice of engineering we defer to the PEO. That being said, the question is specific to structural steel. Variants of the question would also apply to other materials, including reinforced concrete or wood.

Where corrosion is evident from a visual inspection, the extent of damage to / loss of section will be useful and important information to assess residual structural capacity and whether or not emergency repairs or vacating the structure is in order.

However, the source of the corrosion should be identified and resolved. Without the mechanism causing the corrosion or other degradation of the

structure being identified and eliminated, the corrosion or other degradation will continue.

Evidence of significant corrosion / degradation means that the original design and its life safety factors have been compromised and will need to be restored / reinforced to comply with the original designed capacity (assuming same complied with the Building Code at the time of construction).

Changes in use (and loading) over time will also impact the capability of any existing structure, sound or degraded, to continue to be considered “safe” for the present occupants.

Roundtable 3, Question 3j

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

j) define what the professional inspecting the building must include in their reports in relation to which elements of the building have and have not been inspected. Should the Guidelines require that a review of structural steel must include an inspection of and report on the condition of the connections, failing which the structural review is not complete?

ANSWER to Roundtable 3, Question 3j

If there were provincially legislated critical life safety standards those would establish the content requirements for reports. Reports are based on the professional's knowledge, experience and judgment and are limited or enhanced by what he or she was retained to review and what the existing conditions are.

Roundtable 3, Question 3k

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

k) specify when the professional conducting the inspection should include a warning in their report to the client of the potential risks of failing to follow the recommendations in the report where significant or potentially unsafe deficiencies in the building have been identified and recommendations have been made for the repairs;

ANSWER to Roundtable 3, Question 3k

The professional should include a warning where, in his or her judgment significant or potentially unsafe conditions exist.

It should be noted that there are provisions in the OBCA (s. 15) for Unsafe Buildings and Property Standards.

There is room for professional judgment respecting the urgency of the matters, as well as the development of the necessary program of repairs or replacements. However, dropping below the code provisions at the time(s) of construction appears a clear benchmark for assessment.

Where there are requirements regarding the reporting of unsafe conditions there should also be clear requirements regarding follow up and who these should be reported to. Only the Building Department has the authority to enforce.

Roundtable 3, Question 3I

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

I) set out when it is appropriate to make changes to a draft report based on client feedback;

ANSWER to Roundtable 3, Question 3I

The original draft of the report must contain an accurate assessment based on the professional's judgment. The professional should not make changes to the report contrary to his or her professional judgment or where it may be intended to obscure relevant and significant facts or deceive a reader, or where it might misrepresent the state of the building and or the portions thereof that were inspected.

Roundtable 3, Question 3m

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

m) set out when copies of the reports for the buildings which have been inspected in the past should be retained;

ANSWER to Roundtable 3, Question 3m

Reports related to the Property Standards, Unsafe Buildings and Maintenance Inspection Programs provisions in the OBCA and other legislated criteria related to the safety of existing buildings should be retained until the building is demolished. The appropriate entities to retain them would be the authorities having jurisdiction (municipality) and the owner(s).

Roundtable 3, Question 3n

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

n) establish an obligation to create and maintain a searchable database within their respective offices (locally and nationally) which would allow the professional conducting the inspection to search to see if their respective companies have inspected a particular building in the past (for any reason) and to review the previous files and reports prior to taking on a new retainer, or conducting a further inspection of the building; and

ANSWER to Roundtable 3, Question 3n

The owner and the municipality should be required to keep track of any reported unsafe conditions as this will provide continuity regardless of the status of a Certificate of Practice (closed, merged etc..).

Roundtable 3, Question 3o

3) Should the PEO, the OAA and the OACETT provide guidelines with clearer standards for the inspection of an existing building, including best practices to:

o) clarify the procedure to be followed when signing a report prepared by a graduate professional in training, a C.E.T. or an unlicensed engineer.

ANSWER to Roundtable 3, Question 3o

A supervising professional should only “sign off” where the report has been prepared in its entirety under his or her personal supervision and direction.

Roundtable 3, Question 4

4) Should there be a requirement on engineers and architects to advise clients (past and present?) of the suspension or revocation of their license?

ANSWER to Roundtable 3, Question 4

An Architect can lose his or her licence for both professional misconduct and administrative reasons (late or non-payment of fees). The requirement should be on the professional association to make that information available and easily accessible to the public.

Pursuant to *Architects Act* Regulations 42(40) & (41), professional misconduct includes:

40. Knowingly employing a former member whose licence or temporary licence has been revoked or engaging in the practice of architecture with such person.

41. Knowingly employing a member whose licence or temporary licence is under suspension or engaging in the practice of architecture with such person.

Roundtable 3, Question 5

5) Although architects and engineers currently have a duty to report a building which poses a threat to the safety and security of the public, should a guideline be issued by the PEO, OAA and/or the OACETT which provides:

- a. a standard of when the professional is to report the unsafe conditions (i.e. degree of risk);**
- b. that public safety should be the primary consideration;**
- c. to whom the professional is to report the unsafe condition (i.e. professional organization, CBO of the municipality in which the unsafe building is located, owner, etc.); and**
- d. whether the professional (architect, engineer, C.E.T.) reporting the unsafe building should be afforded immunity from liability where the building has been reported in good faith.**

ANSWER to Roundtable 3, Question 5- General

Public safety is always the primary issue. The OAA governs the practice of architecture in the public interest. A duty to report exists in the OBCA where an Architect or a Professional Engineer has been retained by a client for general review (buildings under construction).

The *Architects Act* and OBCA do not currently have a specific duty to report any existing building which poses a threat to the safety and security of the public; however, this could be changed.

OCHA

Roundtable 3, Question 5a

5) Although architects and engineers currently have a duty to report a building which poses a threat to the safety and security of the public, should a guideline be issued by the PEO, OAA and/or the OACETT which provides:

- a. a standard of when the professional is to report the unsafe conditions (i.e. degree of risk);**

ANSWER to Roundtable 3, Question 5a

Legislation does not currently set any such standards. Competent professional judgment is the critical factor in an assessment of unsafe conditions.

Roundtable 3, Question 5b

5) Although architects and engineers currently have a duty to report a building which poses a threat to the safety and security of the public, should a guideline be issued by the PEO, OAA and/or the OACETT which provides:

b. that public safety should be the primary consideration;

ANSWER to Roundtable 3, Question 5b

Public safety already comes first. The *Architects Act* sets the primary objective of the organization as the regulation and governance of the practice of architecture in order that the public interest may be served and protected. Public safety is at the top of the list.

Roundtable 3, Question 5c

5) Although architects and engineers currently have a duty to report a building which poses a threat to the safety and security of the public, should a guideline be issued by the PEO, OAA and/or the OACETT which provides:

- c. to whom the professional is to report the unsafe condition (i.e. professional organization, CBO of the municipality in which the unsafe building is located, owner, etc.); and**

ANSWER to Roundtable 3, Question 5c

Reporting should be to the client and the building officials. The building officials are the only ones with the legislated power to intervene and enforce where there are unsafe conditions.

Roundtable 3, Question 5d

5) Although architects and engineers currently have a duty to report a building which poses a threat to the safety and security of the public, should a guideline be issued by the PEO, OAA and/or the OACETT which provides:

- d. whether the professional (architect, engineer, C.E.T.) reporting the unsafe building should be afforded immunity from liability where the building has been reported in good faith**

ANSWER to Roundtable 3, Question 5d

Good faith reporting could include immunity.

Roundtable 3, Question 5A

5A) The Algo Centre Mall included an open air parking lot over occupied space. Are you aware of other commercial buildings in Canada of similar design and construction? Are there problems with this kind of structure which need to be addressed by consultants?

ANSWER to Roundtable 3, Question 5A

In Toronto, the Bayview Village Mall and the Eglinton Square Mall are examples that both have open air parking lots over occupied space including banks, a public library and stores.

We do not have specific knowledge about these structures.

Roundtable 3, Question 6

6) Should the concept of a “provincial engineer” be adopted in Ontario?

ANSWER to Roundtable 3, Question 6

Provincial oversight existed in the past by way of Ministry of Labour and Fire Marshal review of drawings prior to the issuance of a permit but this has been eliminated and the responsibilities were left to the Building Departments. As the *Architects Act* and *Professional Engineers Act* govern the design, construction and alteration of buildings in Ontario there would have to be a Joint Professional Architect and Engineers Office, if provincial oversight is part of the solution being envisaged.

The OAA believes that more enforcement power for local municipalities will make a greater difference.

Since the Building Code is a Provincial Act administered by Municipalities, having the Province administer the Building Code directly in its delivery to the citizens of Ontario through Ontario District Offices may remove any inconsistencies or bias from this important process.

Roundtable 3, Question 7

7) In the past, engineers had specialties that were identified on their seals. Should the PEO, in the case of structural engineering at least, revert to that approach, including specific training and mandatory continuing professional education components for engineers practicing and holding themselves out to the public as “structural engineers”?

ANSWER to Roundtable 3, Question 7

Yes.

Roundtable 3, Question 8

8) Should Professional Engineers Ontario adopt a system of mandatory continuing education similar to other professions in the province and like other professional engineering licensing bodies in several other provinces?

ANSWER to Roundtable 3, Question 8

All professionals should have required mandatory continuing education that is monitored by their professional association. Continuing Education speaks to expertise and an ongoing commitment to professional development.

Roundtable 3, Question 9

9) Should PEO adopt guidelines for structural engineering practice and independent documented structural engineering review similar to those now published by APEGBC and which resulted from the inquiry into the Station Square collapse in Burnaby, B.C. in 1988?

ANSWER to Roundtable 3, Question 9

We are not qualified to offer an opinion. We do not have enough information and the issue falls within the mandate of the PEO.

Roundtable 3, Question 10

- 10) What is the general state of knowledge in the engineering profession of corrosion, and particularly what conditions affect the rate of corrosion of structural steel and what is the impact of corrosion on the anticipated life of a building's structural integrity? Is there continuing education in this area and, if not, should there be?**

ANSWER to Roundtable 3, Question 10

To the extent the question applies specifically to engineers, the question can only be answered by those familiar with the engineering profession. However, for Architects, corrosion (including rusting) is not a new consideration related to building design. Notwithstanding certain knowledge and experience has significantly increased over the years since the Elliot Lake Mall was first built. Improved measures for addressing corrosion / rusting of reinforcing steel in parking structures subject to water and road salt is a case in point.

We would expect that the issue of corrosion (or related phenomena that can result in deterioration) is generally recognized by design professionals as an issue that can impact a broad range of materials and building components. However, the extent of recognition and sophistication in addressing potential "corrosion" (e.g. oxidation, (rust) electrolytic action, galvanic action, solar deterioration, etc...) and mitigating the impact of

same will naturally vary with the area of practice and experience of the individual.

The potential for corrosion applies to many areas of building design and assembly. Corrosion in a variety of manifestations recognized as applicable to a building is addressed by the Building Code and many industry standards that are referenced in the Building Code. Resistance to Deterioration (including resistance to “corrosion”) is specifically addressed in Part 5, Environmental Separation in the current Building Code 2006 (Ontario) and Appendix A thereto. Refer to OBC 5.1.4.2 and Appendix A, A-5.1.4.2.

Those references link to a referenced standard, CSA S478, “Guideline on Durability in Buildings”. The guideline deals with principles that need to be considered and reflected in the design related to the service life and maintenance considerations for any building.

The “guideline” focuses on the building envelope and structural integrity. However, it is not prescriptive, and would be difficult to enforce recognizing it is a “guideline” and the principles would be applied differently according to the circumstances and the owner’s direction.

Further measures related to managing / preventing / mitigating the impact of corrosion from a variety of possible causes is found throughout the OBC and / or the referenced standards that the code relies upon. These would be prescriptive and enforceable.

It is generally recognized that the presence of water will promote rusting of steel and contributes to other deterioration mechanisms as well (e.g. rotting of wood). Keeping water out of the building is a fundamental code requirement and provisions for drying within the building envelope itself is acknowledged as a critical aspect.

Consideration of the components of a building envelope - the roof, walls, windows and floors on grade - is an inherent part of an Architect's design process. Issues and principles in respect of environmental control, isolation of varying materials and control of air, vapour or water are important elements in the design of building envelopes. The importance of these factors is recognized by Architects and Building Codes. Some of the mandatory professional development programs sponsored by the OAA and Pro Demnity Insurance Company address these concerns.

Roundtable 3, Question 11

- 11) Considering the information you have gleaned from the proceedings of the Elliot Lake Commission of Inquiry, can you provide your top five recommendations as to what should be done to ensure that a similar tragedy does not occur again in Ontario or Canada? If possible, identify the sort of buildings or occupancies which should be the highest priority?**

ANSWER to Roundtable 3, Question 11

Top Five Recommendations: These recommendations are in no specific order.

Top Five Recommendations – 1

- 1 More stringent enforcement that buildings, when originally constructed, comply both with codes and the documents that form the basis for the building permits.**

More stringent enforcement that buildings, when originally constructed, comply with codes and documents that form the basis for the building permits. This includes enforcement of correction of any original non-compliance even after an Occupancy Permit is issued. The City of Vancouver developed a system of enforcement that included negotiations with owners regarding time to make the required improvements and enforcement via permit systems for other required repairs, maintenance.

Buildings known to be developed for intended sale rather than occupancy by the original owner (i.e. condominiums) should be subject to more stringent code enforcement measures by the Municipality recognizing the disparity between the interests of the developer and the public purchasers. Developers in Ontario get around provisions of the *Architects Act* and *Professional Engineers Act* and Building Code when they own the building, even temporarily. When a Municipality or enforcement agency identifies a prevalent lack of understanding of the code the professional should be reported to his or professional association.

Top Five Recommendations – 2

2 Strengthen requirements that owners must maintain buildings.

- a. in a safe condition
- b. to meet the minimum code requirements (OBC to define if only to the code in place when built)
- c. to correct critical life safety items identified by Architects, Professional Engineers, municipal inspectors, or other agency reporting
- d. requiring permits and involvement of Architects and Professional Engineers for renovations, repairs or maintenance of life safety/code items.

Strengthened legislative and regulatory tools (OBCA, Building Codes) that require necessary upkeep to ensure that the minimum requirements inherent in the OBC are maintained throughout the occupancy of the building; supported by explicit obligations and tools to promote enforcement and action by the enforcement agency (the Municipality) when an owner does not comply with the obligations.

Comprehensive reports on the status of the critical building elements and life safety measures be required to be commissioned by existing owners and provided to prospective new owners at the time of every contemplated change in property ownership, and in no event at less than ten year intervals.

The required content of such reports respecting on-going status of the existing building should be defined in the OBCA. The completed reports to be filed with the Municipality and made available to the public, the assumption being there is no legitimate reason why a matter of public safety should not be available to a member of the public.

OCHA

Top Five Recommendations – 3

3 Strengthen the enforcement powers of and resources for the Building Authorities.

The Chief Building Official (CBO) and any Property Standards Officer (PSO) responsible for enforcement of the Building Code in Ontario (OBC) and / or maintenance of buildings under the *Ontario Building Code Act* (OBCA) must be independent of the City Administration respecting their actions and reports mandated under the OBC / OBCA related to matters of public safety / adherence with the minimum requirements applicable under the OBC / OBCA. As the alternative, the CBO / PSO should report directly to the Minister of Municipal Affairs and Housing on matters related to compliance with the OBC and / or maintenance issues related to safety of the public. The Ministry should have in place personnel and resources to support the CBO / PSO of the municipality in its enforcement of the OBCA / OBC as applicable. The Ministry must have the ability, obligation and a willingness to compel compliance by the owner and / or require the building to be vacated.

Where a municipality has insufficient expertise to assess any matter falling under the OBC or OBCA, it should be obliged to retain a Registered Code Agency as provided in the OBCA.

Where a CBO / PSO identifies or is made aware of a situation with an existing building that poses imminent danger to the public, it should

have both the obligation and authority to order the building to be vacated on an emergency basis or take any other measures it sees as necessary to protect the public. This obligation should have priority over any other considerations and the CBO / PSO should enjoy protection from actions by the owner or others whose interests are impacted by the decision of the CBO / PSO when taken in good faith.

OFF

Top Five Recommendations – 4

4 **Requirement that Architects and Professional Engineers report critical life safety items to the Chief Building Official.**

Requirement that Architects and Professional Engineers who observe, in the course of providing services, a deterioration or failure of a defined critical life safety item report to authorities having jurisdiction (Chief Building Official) as well as the client. Although professional judgment is inherent, legislative requirements for Architects, Professional Engineers and others to report must coincide with defined circumstances of what are the critical / life safety items such as structural soundness, sprinkler or fire alarm system malfunction. Requiring that any code infraction observed in an existing building be reported would be overwhelming and not achieve the desired results.

The reporting requirement should similarly apply to building officials and inspectors who observe in the course of inspections and as well, as is practical in legislation, for other non-regulated entities doing inspections or repair or maintenance.

It seems inappropriate to categorize when or in what buildings safety is more important; however, logic would suggest that the highest priority should be given to buildings catering to the public and those housing greater numbers of people such as Assembly occupancies,

high rise residential and commercial / retail spaces. In terms of building types from Building Code categories a priority based on general principles could be:

- i. Assembly, Care & Detention, Schools
- ii. Mercantile (e.g. shopping)
- iii. Residential – large (e.g. not single dwellings)
- iv. Office – large
- v. Industrial

Although safety should not be overlooked in any situation, applying the new requirements of maintenance, reporting etc. to private homes does not seem practical. The Building Code does not require General Review by Architects and Professional Engineers for dwellings and other ‘small buildings’. The *Architects Act* and *Professional Engineers Act* likewise do not mandate design by Architects and Professional Engineers for this same group of buildings.

Each situation in a prioritization list such as above should also apply a separate set of general priorities:

- a. where greater numbers of people are
- b. where greater likelihood of corrosion or failure exists e.g. salts, chemicals, loadings, and movement (structural issues).
- c. where lack of maintenance or difficulty to maintain has historically been observed.

Top Five Recommendations – 5

5 Public Safety and legislative authority and clarity for Building Officials.

The *Architects Act*, R.S.O. 1990, c. A. 26, s.11 and the *Professional Engineers Act*, R.S.O. 1990, c. P. 28, s.12 define which professional is required in for what type of building.

There used to be a Table in the Building Code 2006, Ontario Regulation 350/06, that clearly set out when an Architect or Architect and Professional Engineer were required for easy reference by Building Officials.

The Table was an accessible tool that brought all the legislation together for professionals and non-professionals alike. It made it possible for every Building Official, from large or small jurisdictions, to have an easy to use tool that conveyed the impact of multiple pieces of legislation on their work.

The Table was removed by Court Order when the PEO litigated against then proposed additional requirements in the Building Code Act for testing. The OAA were Intervenors. While the requirement for testing was removed and the professional status of Architects and Professional Engineers reinforced, the Table was removed. Since that time the PEO and OAA have released a joint statement to Chief Building Officials that contains the same information, however reintroducing the Table in the Code with the necessary enforcement language would facilitate a Building Official's work. The Reasons for Judgment are attached at Appendix 7.