



Hiring and Working with APEGBC Professionals

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Agenda

- **Introduction to APEGBC**
- **Quality Management By-Laws**
- **Organizational Quality Management**
- **Hiring Guide for Owners**
- **InfraGuide: Best Practices**
- **Notes from a Practicing APEGBC Member**



APEGBC

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- **Responsible for the licensing and conduct of professional engineers and professional geoscientists (APEGBC professionals).**
 - 28,000+ active members
 - 70 committees, working groups and Divisions
 - Close to 1000 volunteers
 - Council accountable to public through BC Ministry of Advanced Education
 - Proactive and Reactive management of issues

APEGBC

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- **Protect the public interest by regulating the practices of professional engineering and professional geoscience in the province.**

 - **Responsibilities and functions described in the *Engineers and Geoscientists Act (Act)* and the *Bylaws of the Association (Bylaws)*, which include a **Code of Ethics**.**

The Overarching Principle



To hold paramount the safety, health and welfare of the public, the protection of the environment and promote health and safety within the work place

Quality Management Requirements

- 1. Retention of Project Documentation**
- 2. Documented Checks of Engineering and Geoscience Work**
- 3. Use of the APEGBC Seal**
- 4. Direct Supervision**
- 5. Documented Field Reviews**
- 6. Documented Independent Review of Structural Designs**
- 7. Application of Relevant APEGBC Practice Guidelines**

Retention of Project Documentation

- Assist APEGBC professionals in holding public safety paramount and serving the public interest
- Provide for an orderly handoff of a project or work
- Resolve issues
- Meet legal and regulatory requirements
- Document decision making
- Defend claims
- Facilitate undertaking future work
- Make intellectual property readily retrievable for future solutions

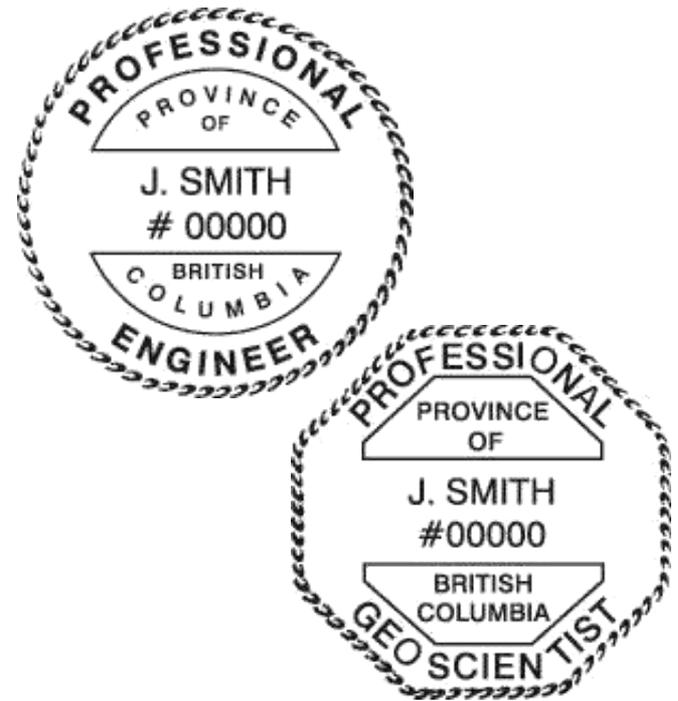
Documented Checks of Engineering and Geoscience Work

- ✓ **Confirm the work is complete**
- ✓ **Confirm that all input requirements have been met**
- ✓ **Ensure document is suitable for its intended purpose**
- ✓ **Provide a second set of eyes or a second look by the professional**



Use of Seal

- Authenticate engineering and geoscience documents prepared and delivered by APEGBC professionals in their professional capacity or under their direct supervision
- **A seal is a mark of reliance; it is not a mark of warranty**



Direct Supervision

- **Efficiency**
- **Convenience**
- **Another set of eyes**
- **Mentorship**



Field Reviews

- **Confirm that the work conforms to the concept or intent reflected in the documents prepared for work**
- **Help the APEGBC professional keep employer, client, owner and other relevant parties informed about the quality of work**



Documented Independent Review of Structural Design

- **APEGBC professionals, who undertake structural design, have a professional responsibility to complete their assignments so as to minimize risk to the public and the environment**
- **Virtually all structural designs, by their nature, present some risk to the public such that an independent review of the structural design is required**



Practice Guidelines

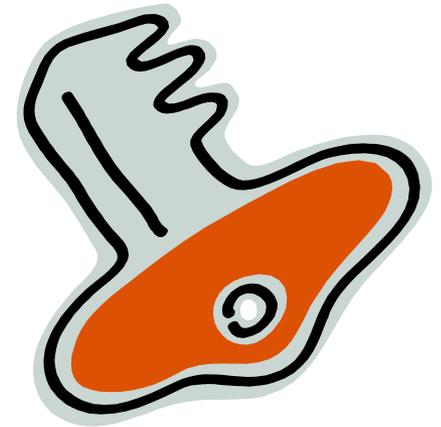
- Help APEGBC professionals fulfill their professional obligations when carrying out specific professional activities
- Establish common level of expectation for clients, employers, public at large, profession as a whole, government and other regulatory agencies



Quality Management - Professionals

ALL APEGBC PROFESSIONALS **MUST
COMPLY WITH THE 7 QUALITY
MANAGEMENT REQUIREMENTS.**

FAILURE TO DO SO IS IN **BREACH OF
THE ACT.**



- **Launched in 2012**
- **Based on the 7 Quality Management requirements**
- **Applies to organizations employing APEGBC professionals – small to large**
- **Improves practices at both the individual and organizational level**
- **Voluntary - Guidance NOT regulation**

Benefits:

- Supports the organization's professionals
- Demonstrates that the organization is a leader in its commitment to QM
- Organizations audited by APEGBC on a scheduled basis to ensure compliance

Quality Management - APEGBC

Reactive

- Investigation and Discipline
- Compliance

Proactive

- QM Guidelines
- Practice Guidelines
- Practice Advice
- Practice Reviews

QM - Proactive

- **Professional practice advice**
- **Quality Management Guidelines**
- **Professional Practice Guidelines**
- **Partnering with other associations and organizations**
- **Webinars and presentations**
- **Practice Reviews**



Practice Advice

- **Articles**
 - E-News
 - Innovation
- **Bulletins**
- **Phone, email, in-person**
- **FAQ's on website**
- **Liaising with authorities**



Practice Guidelines

➤ Practice Guideline Examples:

- Shop drawings
- Legislated Dam Safety Reviews in British Columbia
- Onsite Sewerage
- Sustainability

<https://apeg.bc.ca/Guidelines>



Partnering with Others

- **Government**
- **Engineering and Geoscience associations across Canada**
- **Engineers Canada**
- **Geoscientists Canada**
- **Securities Commission**
- **Association of BC Forest Professionals**
- **Architectural Institute of BC**
- **Association of Consulting Engineering of BC**

Webinars & Presentations

- **APEGBC CPD events**
- **Branch events**
- **OQM training sessions**
- **QM Guideline webinars**



Practice Review Background



23 April 1988 - Station Square

- Rooftop parking deck collapse (Burnaby)

August 88 – Closkey Commission Report

- Recommendation for a practice review process

1992 – Bylaw Implementation

Practice Review

The practice review process is intended and designed to be:

- An educational and professional development process
- A proactive quality assurance check



Practice Review - Applicability

- **Random**
- **Request by the Professional**
- **Referral from Registrar or Investigation Committee**
- **When Council has reason to believe the practice of a member is questionable**
- **Ordered by the Discipline Committee as a result of a discipline hearing with a guilty finding or Consent Order**
- **Mandatory for Limited Licensees after 5 years**

Practice Review Process



Practice Review Outcomes

Investigation

**Requires
Improvement**

Compliance



Commonly-Observed Practice Deficiencies

Based on OQM Audits and Practice Reviews Common Issues found:

- Misunderstandings of when to apply seal
- Unaware of Practice Guidelines
- Lack of filing systems
- Incorrect checking records

What Can APEGBC Do

- **Help you determine a person's status with the association via the searchable member directory available online**
- **Advise you on an APEGBC professional's disciplinary history**
- **Investigate complaints regarding an APEGBC professional's conduct, as provided in the *Act* and the *Bylaws***
- **Direct you to the APEGBC (DSP) Directory, which has been compiled on the basis of self-declarations provided by members. You can find the directory at, apeg.bc.ca/Member-Directories**

What APEGBC Cannot Do

- **Resolve issues with contractors on your behalf**
- **Resolve issues regarding your contract or negotiations**
- **Demand performance or action of an APEGBC professional on a specific project related activity**
- **Provide a review of engineering or geoscience technical recommendations by APEGBC professionals**
- **Obtain financial or other compensation for the client/homeowner/developer from an APEGBC member or licensee**

Before Starting Your Project

- 1. Get in contact with your building/permit and planning departments to determine whether your project requires the services of an APEGBC professional.**
- 2. Only consider hiring APEGBC professionals with the appropriate experience and training for your project; different types of engineering and geoscience can be very specialized.**

Before Starting Your Project

3. Use APEGBC's searchable member directory and the DSP directory to help determine whether you are dealing with a registered member of the Association, and also what kind of engineering or geoscience the person practices. You can find the directory at, apeg.bc.ca/Member-Directories.
4. The expertise of an APEGBC professional may benefit your project even if a Professional is not required by law.
5. Know your RESPONSIBILITIES as well as your RIGHTS

Understanding the Role of the Professional

- **While only a professional engineer or geoscientist can legally provide engineering or geoscience services, work may be performed by other members of the association, or by other individuals acting under the direct supervision of an APEGBC professional.**
- **The duties and obligations of the APEGBC professional should be established by a contract between the client and the APEGBC professional.**

Relationship between Client, Contractor and Professional



APEGBC will not be able to assist in situations where the APEGBC professional is not reporting directly to you (the client). For example, if you hired the contractor to build your house, and the contractor hires an APEGBC professional, it is not considered grounds for a complaint if the APEGBC professional stops work at the instruction of the contractor, as the APEGBC professional is reporting directly to your contractor, not you.

To maintain the most amount of control over your project, we recommend that you personally hire both the contractor and The APEGBC professional.

Selecting a Professional

- **APEGBC recommends professionals be assessed based on their qualifications, and not just price.**
- **The ACEC-BC has information on selecting a professional engineer on their website.**
- **Deciding on the parameters of your project, sooner, rather than later, can help you to avoid problems down the road, including disagreements with those you have hired.**

Selecting a Professional

- **Take notes and listen**
- **Ask for references and follow up**
- **Determine whether the APEGBC professional has undertaken similar work in the past**
- **Ask for a written proposal and a copy of the APEGBC professional's standard contract**
- **Ask about the costs associated with the project, such as, what could increase or decrease the costs?**
- **Ask about the fees for all phases of the project**
- **Request a copy of the APEGBC professional's Certificate of Professional Liability and Comprehensive Insurance**

Problems

- **Most problems between a client and an APEGBC professional arise from communication issues. The scope of services, the quality of services and the timeliness of those services can lead to misunderstandings. Below are points to guide you through project issues.**
- 1. Meet with the APEGBC professional to Discuss Problems**
 - 2. Peer Review**
 - 3. Dispute Resolution**

Complaints

APEGBC can investigate allegations of:

- **A breach of the *Act*, Bylaws or Code of Ethics**
- **Negligence or incompetence**
- **Fraud, deceit or misrepresentation**

APEGBC cannot force the APEGBC professional to take any particular action. Our mandate and role is limited to investigating conduct and where warranted, bringing disciplinary action against the professional.

**The complaint procedure on the APEGBC website,
apeg.bc.ca/Complaint.**

Contracts

The contract should include:

- ☑ Description of work to be carried out
- ☑ Description of compensation and the timing and method of payment
- ☑ Contact information
- ☑ Description of the procedures governing additional services (for example, requiring all work order changes to be in writing and initialled by both parties or by agreeing that work-order changes may be approved verbally with written follow-up confirmation)
- ☑ Description of the procedure to be used by either party to terminate the contract



InfraGuide: Best Practices

- **Encourages clients to view consultants as “trusted advisors”**
- **Jointly Developed Scope of Service: Once the scope of service is agreed upon, the consultant is requested to submit a fee proposal reflecting the agreed scope**
- **Extended Partnership: FN identifies a consulting firm, usually multi-disciplined, that they can call upon for a broad array of work**

Qualifications Based Selection

<https://www.youtube.com/watch?v=Q1yQTUn9HvU>

•Based on consideration of Life Cycle Costs

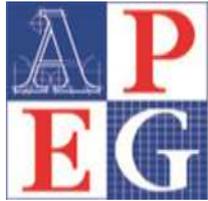
- Request for Qualifications
- Develop Terms of Reference
- Request Proposals from Shortlisted Consultants
- Rank Proposals
- Jointly Develop Scope
- Negotiate Fees

Notes from a Practicing APEGBC Member

- **Select Consultant:**
 - for the long-haul considering LCA (for capital planning as well as O&M)
 - based on QBS
 - who can do a wide variety of projects
 - Who can work with a wide variety of budgets from \$<0.5M-30M
- **RFP for each individual capital project unlikely**
- **Standard ToR can be developed for projects (can be done as a part of development of scope)**

Notes from a Practicing APEGBC Member

- **Stay aligned with the 5-yr Capital Plans**
- **Work with stakeholders (e.g. FNHAs)**
- **Be aware of hazards and risks facing the community**
- **Know the limitations of the consultants (<3% change in costs during construction)**
- **Keep Sustainability and LCA in mind**
- **Be aware of professional reliance model**



Professional Engineers
and Geoscientists of BC

Questions?

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