

Building Officials Association of BC



Education Program Strategy

Document Control

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Author	Jo-Anne Roosen
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OWNER (Responsible for Approval of Issued Versions)			
Name	Role	Signature	Date
Jo-Anne Roosen	Director of Education		2017.03.31
Derek Townson	BOABC Executive Director		2017.03.31
Manjit Sohi	BOABC President		2017.03.31

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this training plan is to identify appropriate training strategies and establish procedures to plan, develop, implement and maintain the Building Officials Association of British Columbia, (BOABC) training and education program and curriculum.

In accordance with the BOABC 2014 Strategic Plan, it is the intention of BOABC that all training is planned activity; that learners receive training necessary to achieve development of skills, knowledge, abilities related to their job duties and individual growth in their own departments and the organization overall.

The training shall provide for the following:

1. To align with BOABC strategic priority and intent to improve service through in-house training and external training;
2. To establish within BOABC a defined and strategic procedure for identifying and allocation of funds for training and development;
3. To ensure responsibility for continuous building official development in order for BOABC to increase the knowledge, skills and abilities of building officials to meet both present and future needs of their departments and the organization;
4. To assist in the implementation of a program of career development to attract and retain building officials of superior ability and potential for development.

The training program will be implemented across the following learner groups:

A. New Entry Building Officials:

1. To orient them to entry level building official programs and policies.
2. To teach them the skills, knowledge and abilities necessary to safely and efficiently perform their jobs.

B. Current Building Officials:

1. To keep them up to date on policy, code and regulation changes.
2. To expand their knowledge and skills necessary for upward mobility.

C. Supervisory and Management Building Officials:

1. To provide them with supervisory, management and human relations skills so they can effectively work with the employees they supervise to accomplish business goals and objectives.
2. To provide continuous opportunity to update these skills.

D. All Building Officials:

1. To provide them with human relations skills so they can courteously and effectively serve the public, work harmoniously and efficiently with other employees.
2. To improve practices in their professional, technical, and clerical fields.
3. To enable them realize and provide opportunity for their own professional development
4. To address legal, safety, risk management and compliance issues.

Training will be accomplished through one or a combination of the following methods:

A. Technical Training:

Training for new or experienced building officials designed to provide minimum skills necessary to perform required duties of their current position.

B. Proficiency Training:

Training for existing building officials designed to correct an identified deficiency, or to provide additional knowledge which would improve performance in the current position.

C. Developmental Training:

Training for existing building officials designed to develop skills or provide knowledge which will enhance an employee's opportunity for promotion.

D. In-House Training:

Training received from BOABC trainers, including on line/e-learning and formal classroom instruction.

E. External Provider Training:

Training received from anyone other than BOABC personnel, including other Provincial agencies or organizations, private consultants or other recognized providers.

1.2 Scope

1.2.1 Planning Principles

Initial planning principles were considered to form the basis for this plan, multiple assumptions were made which the successful execution of this plan is dependent on. The applicability of the plan is predicated on:

1. Implementation of Schedule A-Performance Objectives per Administrative Agreement.
2. Adoption of Competency Based training model
3. Use of ADDIE instructional design system
4. The implementation of the BC Campus Report (2015) recommendations
5. Director of Education position role prioritized from BOABC operational demands
6. Reiterative design process for full training program implementation over course of 4 years from 2017-2021(Annually)
7. BOABC Executive support of program as stand-alone without post-secondary partnership.

1.2.2 Assumptions

1. BOABC Training plan is a live document
2. Adequate funding for training resources, subject matter experts and technology
3. Availability of existing subject matter experts and ability to recruit others
4. Successful RFP process for LMS selection and implementation
5. Learner centric and flexible learning delivery format

6. The National Occupation Training Standard is the baseline to further define competencies of Building Officials in BC. Gap analysis required.
7. Plumbing education responsibilities assumed on POABC dissolution

1.2.3 Constraints

Successful training is dependent on the availability of:

1. Access and availability of instructional designer for eLearning module design
2. Access to internal BOABC resources for validation and review of training materials
3. Availability of trainer resources for geographical f2f delivery
4. Adequate funding for LMS and support resources i.e. Instructors

1.2.4 Risks

1. Not for profit funding model
2. Demand overwhelms resource availability
3. Committee structure for oversight of education work
4. Internal communication risk to impact to program
5. External competition
6. Internal competing mandates impact education prioritization
7. Training program project plan submission date premature for analysis phase to be completed

These planning principles have been incorporated into an analysis of the strengths, weaknesses, opportunities and threats to the design and implementation of the BOABC education strategy, captured in the figure noted below. The SWOT Analysis is a “high-level” look at where BOABC can build on current successes and focus on implementing continuous improvement methods to address current weaknesses or threats.

SWOT -Building Officials Training Implementation

	Favorable	Unfavorable
Internal	<p>STRENGTHS</p> <ul style="list-style-type: none"> Existing Competency Based Occupation Training Standard (National) Rigorous defensible examinations Community of dedicated SMEs Education as Strat. Priority Existing curriculum for BC Training Legislative authority for oversight Executive support & leadership 4-year phased implementation 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> Availability of SMEs Reliance on volunteer committee participation as resource Financial and resource limitations Industry Competitors in education Ability to manage technology and delivery issues Local Gov't practice not supportive of training due to resource and cost issues Exam alignment issues
External	<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> Oversight authority for curriculum Leverage existing instructional and committee resources to focus on BOABC Education Potential to be leader in industry and best practice Move to tech. support processes. I.e. online exam proctoring. Cost recovery cycle increases opportunity for further program development Collaboration with BOINZ -L& D 	<p>THREATS</p> <ul style="list-style-type: none"> Scope of Practice change impacts to training design New Building Code/ amendments stressors to training resources Competing mandate of cost of training vs. nonprofit status Industry & Education competitors Leadership change, reprioritization of work Demand outstripping availability or ability to deliver

2.0 INSTRUCTIONAL ANALYSIS

2.1 Needs and Skills Analysis

The BC Campus report identified several issues to be addressed within a BOABC training program, they cited:

1. A low examination pass rate, raising the questions of whether or not the current training and examination development process is effective or misaligned, and whether or not instructional standards are appropriate
2. A lack of harmonization with content created by the BOABC and other training providers
3. A lack of harmonization with provincial and national content and curriculum
4. A lack of harmonization with provincial and national terminology and process
5. A change from a voluntary to mandatory qualification process
6. A lack of a defined minimum qualification standard of competence and proficiency by learning level
7. A lack of access to training and education by blended or online delivery (or other technology-mediated means)
8. A lack of a comprehensive or systemic approach to education and training

BC Campus authors recommended a competency based approach to training design and implementation and cited the requirement for an,

“entry-to-practice competency map with associated blocks, tasks and levels of proficiency that guide content development and training, assessment, examinations, professional development and credentialing...” They further concluded that,

“Defining a competency map that includes tasks and levels of proficiency is central to a solution that achieves the vision stated for the building inspection industry. A competency map consists of enabling competencies, or necessary skills and abilities, and professional technical competencies, or knowledge, for each level of proficiency. This approach results in identifying proficiency for qualification, distinguishes qualification from previous levels of certification, and provides clear direction for advancement in the profession.”

A competency based training framework is applicable in curriculum design of courses aimed at performance of specific tasks and for maintaining quality standards, especially in areas with weak or undefined accreditation systems. The process of deriving instructional objectives, learning objectives, learning experiences and evaluation to achieve specific core competencies ensures that the curriculum remains focused on the intended outcomes.

The BOABC will adopt and implement a competency based training program design as an approach to training that builds and enhances individual competencies in line with previously identified profiles of success. Current competencies for building officials have been defined within the National Occupational Training standard by ACBOA. Those standards will be applied and validated against British Columbia building official competencies, in order to design a competency framework for BC. This framework will include competency identification for entry level building officials to externally credentialed building official professional development.

Certification issues will be expanded to include demonstrated and formally acknowledged competency beyond meeting defined in-service time increments. Training delivery will extend beyond basic building code interpretation and application and will incorporate the other competencies that have been identified as required of professional building officials.

Preliminary analysis has resulted in the intention to benchmark BOABC education design and development with the Building Official Institute of New Zealand. While legislative requirements are unique to each location, the stated purpose of education programs are notably similar. For example, on their website, New Zealand addresses the implementation of a new Building Act and the stated expectations of that act with respect to building official qualifications.

“An outcome of the Building Act 2004 was the creation of Building Consent Authorities (BCAs) and the subsequent legislation relating to the formation of these bodies. A further requirement on the formation of the BCAs was for Building Surveyors/Building Control Officials (BCOs) working in a technical capacity to have a formal and appropriate qualification to undertake their role. This qualification regulation within the Building (Accreditation of Building Consent Authorities) Regulation 2006 has been the underpinning driving force for the Institute to take the lead in educating our sector.” <https://www.boinz.org.nz/Site/education/default.aspx>

Shared community practice with New Zealand and partner agencies of ACBOA will contribute to the ability for BOABC to lead best practice, nationally.

Building Official Professional Development Path



2.2 Program Implementation Issues and Recommendations

The BOABC has adapted its level one, two and three building code exams, courses and competencies from the National Occupational Training Standard. Subject matter expert(s) were contracted, or volunteered to validate and update instructor and student material for all three levels of the BC building code. For level 2 and 3, building code 5-day classroom training has been delivered at least once for each level in the past two years. Level one curriculum had only recently been reviewed and submitted as complete in summer of 2016. While still in the analysis phase of training design, issues have been identified that will require mitigation to implement this education strategy for BOABC going forward.

Program Implementation Issue	Mitigating Recommendation
Content previously confirmed as validated for BC Level One Building Code instruction has been determined to be erroneous and not reflective of the BCBC.	SME has been contracted to audit. Has completed 3/12 modules. SME will be accessible FT in June 2017
Records of training content previously delivered are not accessible	Record Mgmt. is a priority for BOABC Education and will be managed as part of program evaluation and training records.
Content for level 2 & 3 require validation before any program design.	Level SME to be recruited for validation. Education Committee purpose to be redesigned to working group.
BOABC current training practice reflects attitudinal culture which presumes that examinations are prioritized over and dictate training content.	Change Management re training program design implementation, move to collaboration of exam committee/training working group
Change in scope of practice brought in by the new Building Act will affect the design, delivery and implementation by the BOABC across education, examination and competencies. Currently the Executive of the BOABC have directed that Education program development is to remain aligned with pre-building act scope of practice	Accepted current scope of practice direction. Anticipation of future changes to be integrated pending further executive direction to 2021. Live issue at time of this document preparation. Can be revisited and will not adversely affect design as competency framework not yet started.
There is one subject matter expert scheduled to begin work in June to complete curriculum validation for Level One BCBC.	Resource allocation and management prioritized and managed with change in working group and committee work.

3.0 INSTRUCTIONAL METHODS

3.1 Training Methodology

The use of an adaptive or agile ADDIE model of instructional systems design (ISD) framework will be applied to BOABC training program development. ADDIE is an acronym referring to the major processes that comprise the ISD process of: analysis, design, development, implementation, and evaluation. There is a widely-shared understanding that when used in ISD models, these processes are considered to be sequential but also iterative. Molenda, Michael. "In search of the elusive ADDIE model." *Performance improvement* 42.5 (2003): 34-37.

BOABC Training Program Design Timeline –Phase One

Phase	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
Analysis					
Design					
Development					
Implementation					
Evaluation					

3.2 Training Learning Management System

It is anticipated that the use of a cloud based Learning Management system will best support the implementation and management of the training content of the BOABC. A shortlist of requirements to go to RFP has been drafted and the process is intended to commence Q3 of 2017. These web-based or software application benefits include:

1. Meet Regulatory Compliance.

When required to train, assess, and report for compliance purposes, an LMS can help you satisfy these legal and regulatory requirements and affords agile addition of new compliance standards to training.

2. Cost Savings

Training and teaching via an LMS reduces employee travel, optimizes training expenditure and usage, and minimizes facilities and instructor costs.

3. Consistency of Training.

Training and course delivery via an LMS is consistent since it is centralized. It delivers a consistent training and learning quality to all candidates by supplying a single source for content, course materials and instructions.

4. Tracking and Reporting.

LMSs allow the organization to easily generate training reports on an overall or user/student level basis. By utilizing an LMS for your eLearning courses and/or online training, you can easily track goal progress, knowledge gains, ROI.

5. Audit Proofing.

An LMS can record and report in detail and real time who took the training and how well they learned. This makes audit for ISO or other reasons more streamlined.

3.3 Testing and Evaluation

The design and implementation of the BOABC testing and evaluation of training will be informed by Kirkpatrick's four level evaluation model for training programs and Phillips fifth level of ROI. (Kirkpatrick, D.L. (1975).

In evaluating the effectiveness of training delivery, information will be sourced from the following areas:

- The outcomes of competency tests completed by trainees at the end of each module
- Feedback from trainees on confidence level at the end of each module
- Feedback from trainers on training problems or individuals with who have experienced learning difficulties

3.4 Metrics

For the purpose of BOABC education and training, the following metrics will be applied to assess the success and status of the training program.

- Total number of participants trained
- Total number of training hours
- Expenses spent on training travel
- Instructor/Facilitator travel expenses,
- Trainee travel expenses
- Expenses spent on training delivery
- Total number of courses offered
- Number of participants trained by course
- Time spent in delivery of courses
- Participant evaluation of course/module delivered

In addition to these basic training program metrics, the following Schedule A measures will also be included.

- Number and format (online, classroom) of BOABC training sessions offered
- Number of building officials who register for each training session
- Number of building officials who have obtained/not obtained qualification
- Number and nature of training-related issues raised by building officials and stakeholders
- Number and format (online, classroom) of BOABC-organized CPD activities
- Number of qualified building officials who register for each activity
- Number of qualified building officials who have obtained/not obtained required annual CPD points
- Number and nature of CPD-related issues raised by qualified building officials and stakeholders
- Annual survey of qualified building official learning needs and satisfaction with CPD activities, delivery and costs
- Number and format (online, classroom) of Code change seminars offered

- Number, topic and format (online, classroom) of Code education sessions offered
- Number of qualified building officials who register for each Code change seminar or Code education session
- Number of qualified building officials who have attended/not attended required Code change seminar
- Annual survey of qualified building official satisfaction with Code change seminars, delivery and costs
- Number of exams written at test sites and at building official workplaces
- Pass/fail rates for exams
- Change in pass/fail rates for exams compared to previous year, starting in 2017 with 2016 as baseline year
- Number and nature of exam-related issues raised by building officials and stakeholders

4.0 TRAINING IMPLEMENTATION

A preliminary training schedule consists of the key training program activities. The training schedule will continue to evolve as the project progresses and additional details become available. The Training Needs Assessment, Training Curriculum, and Content Development will be critical inputs to the creation of the detailed training schedule. A detailed project plan can be accessed here: [Project Plan](#)



BOABC Project
Plan Phase One.xls

4.1 Implementation Timeline-Phase One

TASK/DELIVERABLE	EST. START DATE	EST. END DATE
Competency Map Framework for BO BC Validation	2017.05.01	Q2 2018
BCBC Level 1-Online Design	2017.01.01	2017.09.01
BCBC Level 1-Online Beta	2017.09.01	2017.09.01 *
BCBC Level 1-F2F Design	2017.01.01	2017.09.01
BCBC Level 1-F2F Delivery (x3) Resource Confirmed	2017.06.30	2017.12.31
BCBC Level 2-Online Design	2017.10.01	Q1 2018
BCBC Level 2-F2F Design	2017.10.01	Q1 2018
BCBC Level 2-F2F Delivery (x3) Tentative Resource confirmed	2017.06.30	2017.12.31
BCBC Level 3-Online Design	Q2 2018	Q3 2018
BCBC Level 3-F2F Design	2017.03.01	2017.12.31
BCBC Level 3-f2f (x3) Delivery Resource Confirmed	2017.06.30	2017.12.31
BO Ethics Course Curriculum design Resource TBD	2017.07.01	2017.12.31
BO Bylaw Course Curriculum design Resource TBD	2017.08.01	2017.12.31
LMS RFP	2017.06.01	2017.09.01
LMS implementation	TBD	
Zone Coordinated Education	2017.07.01	2017.08.01
Education Working Group implementation	2017.05.01	
Internal Process Upgrade-Exam/Certification Application	2017.05.01	2017.06.30
Website Upgrade/Forum Mgmt.	2017.05.01	2017.06.30
Fall Education Conference	2017.08.01	2017.11.31
CPD/Webinar Activities	2017.07.01	Q1 2018
Training Cadre Identification & Development Train/trainer	2017.03.01	Q1 2018
Annual Education Project Plan Evaluation	2018.01.01	2018.01.30

* Online live delivery subject to LMS status.

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