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## **BRIDGE INSPECTION AND MAINTENANCE (BIM) SYSTEM INSPECTOR CERTIFICATION PROCESS**

### **Background**

The integrity and effectiveness of the BIM system depend on the quality of inspection and inventory data provided by the inspector. Therefore, all inspections entered into the BIM system must have been performed and reviewed by certified inspectors. The system has definitions for two classes of inspector (class A and B) and the roles and qualification requirements for these classes of inspector are documented in the BIM Inspection Manual v3.1.

This document details the requirements for obtaining and maintaining inspector certification status, and supersedes any requirements detailed in the BIM Inspection Manual v. 3.1. This process is intended to be thorough, fair, and defensible.

### **Certification Process**

#### ***Class B Certification:***

In order to achieve Class B inspector certification status, a candidate must successfully complete the following:

- Minimum High School Diploma or equivalent
- Class B training course (>70% average score from exams. 5 day course)
- Inspect ~ 10 sites as practice
- 3 day Class B Field Course (recommendation of field trainer required) or an approved equivalent program developed by a Consultant for their own staff
- Mentorship program:
  - 20 sites inspected under guidance of a Class B inspector with a minimum of 5 years experience, or a Class A inspector.
  - All inspections reviewed by mentor.
  - Sites must include at least 3 in each of the following categories – culverts, standard timber stringer bridges, standard concrete girder bridge.
  - Mentor recommendation required.
- Class B certification exam (75% required).
- Inspect 3 assigned Class B test sites in one day (reviewed for acceptability by department Class A inspector).

## ***Class A Certification:***

In order to achieve Class A inspector certification status, a candidate must successfully complete the following:

- Civil Engineering Degree or Technical Diploma plus 2 years bridge related experience (or equivalent bridge related experience)
- Have a valid Class B certification status
- Class A training course (>70% average score from exams. 5 day course)
- Mentorship program:
  - 15 sites inspected under guidance of Class A mentor.
  - All inspections reviewed by mentor.
  - Sites must include at least 2 in each of the following categories – steel truss, steel girder, precast concrete, cast in place concrete.
  - Mentor recommendation required.
- Class A certification exam (75% required).
- Inspect 3 assigned Class A test sites in one day (reviewed for acceptability by department Class A inspector).

For both Class A and B certifications, the candidate is certified once these criteria have been met, until the next certification renewal date. Candidates that fail at any stage have the option to re-try that stage. A second failure at a given stage will require the process to be re-started with the training course.

## **Re-Certification Process**

Re-certification for certified inspectors requires active involvement in the BIM program and bridge engineering, and successful performance since the last re-certification. The status of all certified inspectors will be reviewed by department personnel (Bridge Preservation Specialist and Bridge Management Engineer in Technical Standards Branch) every 3 years, and decisions on re-certification will be rendered and activated by the certification renewal date. The first renewal date will be implemented for all inspectors in Oct. – Nov. 2012, with the next one at Apr. 1, 2015 (to align with future BIM Inspection contracts), and then every 3 years thereafter.

TSB staff will manage this process, with assistance from regional staff to assess successful inspector performance. Any inspectors who clearly meet the re-certification criteria will be re-certified until the next renewal date within the system (actual change made by TIMS personnel), following formal approval by the Director of Bridge Engineering in Technical Standards Branch. These inspectors will be notified by e-mail of their status renewal. Hard-copy certificates will be provided from the department, if requested.

Any inspectors who do not clearly meet re-certification criteria may be asked if they are still interested in retaining their certification status. If so, a panel comprised of three members of the department's BIM committee will be convened to review the inspector's status and render a documented recommendation on certification renewal to the Director of Bridge Engineering in TSB. If re-certification is approved, the candidate will be informed of his/her renewed status and the system will be updated. If certification is not granted, a remedial plan to re-obtain certification status may be developed and communicated to the candidate.

The re-certification criteria are:

- Sufficient activity in the system, measured by one of the following:
  - Performed at least an average rate of 1.5 inspections per month during previous 3 year period (Class A and Class B).
  - Active in management, design, or construction of bridges, and performed at least an average rate of 0.5 inspections per month during previous 3 year period (Class A).
  - More than 5 years of experience as a Class A, and reviewed an average of at least 2 inspections per month during the previous 3 year period (Class A).
- Attendance at any formal BIM training update sessions held by the department
- Any improvement plans identified based on observed performance issues have been completed.

Typical remedial plans will consist of 5 test sites to be reviewed by a certified Class A inspector. Additional training may be necessary in certain circumstances.

This process is effective as of **November 22, 2012**

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