

IN THE MATTER OF THE *PROFESSIONAL GOVERNANCE ACT*,

S.B.C. 2018, CHAPTER 47

AND

IN THE MATTER OF JOHANN G. DUERICHEN, P.ENG.

File No. T19-039 and T21-035

CONSENT ORDER

Background

1. On December 2, 2020, the Discipline Committee of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, doing business as Engineers and Geoscientists BC (“EGBC”), issued a Notice of Inquiry to Johann G. Duerichen, P.Eng. (“Mr. Duerichen”), pursuant to s. 32 of the *Engineers and Geoscientists Act*, R.S.B.C. 1996, c. 116 (the “EGA”).
2. The disciplinary proceeding initiated by the Notice of Inquiry (the “First Proceeding”) concerns Mr. Duerichen’s engineering work on two projects:
 - a. the construction of a residence in the City of Revelstoke (the “Revelstoke Project”); and
 - b. the construction of a building for a new retail store in the Town of Smithers (the “Smithers Project”).
3. On December 16, 2020 a Panel of the EGBC Discipline Committee made an interim order in the First Proceeding (the “Interim Order”) restricting Mr. Duerichen’s scope of practice pursuant to section 31(7) of the EGA. In particular, the Interim Order prohibited Mr. Duerichen from practicing structural engineering subject to enumerated exceptions.
4. On February 5, 2021, the EGA was repealed and replaced by the *Professional Governance Act*, S.B.C. 2018, c. 47 (the “PGA”).
5. On December 3, 2021, the Investigation Committee of EGBC issued a Citation to Mr. Duerichen pursuant to section 66(1)(d) of the PGA thereby initiating a second disciplinary proceeding (the “Second Proceeding”).
6. The Second Proceeding relates to Mr. Duerichen’s engineering work on two projects:

- a. the construction of an exit door canopy for an arena in the Village of Burns Lake (the “Burns Lake Project”); and
 - b. the construction of a storage building in the District of Vanderhoof (the “Vanderhoof Project”).
7. EGBC and Mr. Duerichen wish to resolve the First Proceeding and the Second Proceeding by consent in order to avoid the need for disciplinary hearings.
8. This Consent Order is made pursuant to section 73(2) of the PGA.

Admissions in Relation to the First Proceeding

9. Mr. Duerichen admits that:
 - a. he demonstrated unprofessional conduct and failed to comply with section 14(b)(4) of EGBC’s Bylaws when, in the course of carrying out the Smithers Project, he failed to ensure that documented independent reviews were conducted of his structural design by a member having appropriate experience in designing structures of a similar type and scale, and who was not involved in preparing the designs.
 - b. he demonstrated unprofessional conduct and failed to comply with section 14(b)(4) of EGBC’s Bylaws when, in the course of carrying out the Revelstoke Project, he failed to ensure that documented independent reviews were conducted of his structural design by a member having appropriate experience in designing structures of a similar type and scale, and who was not involved in preparing the design.
 - c. he demonstrated unprofessional conduct when, in the course of carrying out the Smithers Project, he undertook and accepted responsibility for structural, geotechnical and electrical engineering components of the project by:
 - i. signing and sealing design drawings; and
 - ii. signing and sealing the structural, geotechnical and electrical components of the Schedule B, thereby providing his assurance that the structural, geotechnical and electrical designs complied with the BC Building Code and that he would conduct field reviews,

when he was not qualified by training or experience to do so;

- d. he demonstrated unprofessional conduct when, in the course of carrying out the Smithers Project he signed and sealed Schedule C-Bs providing his assurance that he had conducted field reviews in relation to the structural and geotechnical components of the project, when he was not qualified by training or experience to conduct field reviews in relation to these components.
- e. he demonstrated unprofessional conduct by signing and sealing the Schedule C-Bs thereby providing his assurance that he had conducted field reviews in relation to the electrical, mechanical and plumbing components of the Smithers Project in circumstances where he had not conducted or directly supervised documented field reviews of these components.
- f. he demonstrated unprofessional conduct by failing to ensure that an appropriately qualified professional conducted field reviews of the electrical, plumbing, mechanical and architectural components of the Smithers Project after he had signed and sealed the Schedule B undertaking to perform field reviews of these components of the Smithers Project.
- g. he demonstrated unprofessional conduct by signing and sealing Schedule C-Bs providing his assurance that he had conducted field reviews in relation to the structural and geotechnical components of the Smithers Project in circumstances where he had not conducted or directly supervised adequate field reviews, particulars of which are:
 - i. he did not verify conformance with design intent;
 - ii. he did not document specific information about the structure;
 - iii. he did not produce field review documentation regarding rebar size and spacing;
 - iv. he did not produce field review documentation confirming wall stud grades, sizes or spacing;
 - v. he did not produce field review documentation confirming shear wall sheathing grades, nail size or spacing;
 - vi. he signed and sealed a report, dated September 10, 2018, that stated roof truss hold-downs were installed, but he provided no documentation of the actual anchors that were installed and their capacities and no documentation confirming that hold-downs were

acceptable for the uplift load shown on truss shop drawings; and

- vii. he signed and sealed a report, dated September 14, 2018, that stated roof truss bracing was completed in accordance with truss design drawings despite the fact that the truss design drawings did not specify bracing sizes or connections.
- h. he demonstrated unprofessional conduct when, in the course of the Smithers Project, he:
 - i. did not document structural calculations;
 - ii. did not document seismic load calculations;
 - iii. performed inadequate calculations related to lateral load analysis;
 - iv. did not perform adequate subsurface investigation, or obtain acceptable existing information, in order to ensure that the soil met the minimum soil bearing capacity specified on the design drawings;
 - v. made no calculations regarding the required diameter and depth of a lampstandard base; and
 - vi. signed and sealed structural design drawings that demonstrated deficiencies, including:
 - 1. a connection, shown in Detail C on Sheet A4, that has insufficient strength to transfer the eccentric load from the lower roof beams to the columns;
 - 2. no specified mechanism for force transfer around roof diaphragm openings as required by the British Columbia Building Code;
 - 3. no indication of snow build-up loads;
 - 4. shear walls without the drag struts necessary to distribute shear loads to the shear resisting portions of the walls;
 - 5. a structural system that is inadequate to stabilize the mezzanine in relation to lateral loads;
 - 6. inadequate shear walls; and
 - 7. an inadequate lateral load resisting system.

- i. he demonstrated unprofessional conduct when, in the course of the Revelstoke Project, he:
 - a. did not perform seismic load calculations;
 - b. did not perform adequate calculations for the foundation design;
 - c. did not review truss shop drawings to ensure they conformed with design requirements; and
 - d. failed to address a warning in the truss shop drawings to account for uplift due to non-wind load.

Admissions in Relation to the Second Proceeding

10. Mr. Duerichen admits that:

- a. in or about February 2021, in relation to the Vanderhoof Project, he committed professional misconduct by:
 - i. violating the Interim Order by engaging in the practice of structural engineering, particulars of which are that he signed and sealed a Schedule C-B for the Vanderhoof Project, thereby giving his assurance to the authority having jurisdiction that the structural components of the Vanderhoof Project substantially complied with the applicable requirements of the British Columbia Building Code, and with the plans and supporting documents submitted in support of the application for the building permit; and
 - ii. back-dating the Schedule C-B to December 12, 2020, despite the fact that he did not conduct any field reviews or provide other engineering services in relation to the Vanderhoof Project on or around that date;
- b. in or about February 2021, in relation to the Burns Lake Project, he committed professional misconduct by:
 - i. violating the Interim Order by engaging in the practice of structural engineering, particulars of which are that he signed and sealed a Schedule C-B for the Burns Lake Project, thereby giving his assurance to the authority having jurisdiction that the structural components of the Burns Lake Project substantially complied with the applicable requirements of the British Columbia Building Code, and with the plans and supporting documents submitted in support of the application for the building permit; and

- ii. back-dating the Schedule C-B to December 10, 2020, despite the fact that he did not conduct any field reviews or provide other engineering services in relation to the Burns Lake Project on or around that date; and
 - c. he committed professional misconduct by back-dating the Schedule C-Bs described above in paragraphs 10a and 10b for the purpose of avoiding the effect of the Interim Order.
- 11. The admissions made in this Consent Order are made for the purposes of the First Proceeding and the Second Proceeding, and not for the purposes of any other proceeding.

Disposition

- 12. Mr. Duerichen's registration in EGBC is cancelled as of the date of this Order (the "Cancellation Date").
- 13. Mr. Duerichen may not re-apply for registration with EGBC for a period of two years from the Cancellation Date.
- 14. If Mr. Duerichen wishes to re-apply for registration with EGBC, he must first:
 - a. provide written notice to EGBC that he has completed and passed the Engineers and Geoscientists BC Professional Practice Examination, at his own expense; and
 - b. provide written notice to EGBC that he has completed the Professional Engineering and Geoscience in BC Online Seminar, at his own expense.
- 15. Further, if Mr. Duerichen wishes to re-apply for registration with EGBC, he must comply with the requirements of the EGBC Credentials Committee and all EGBC bylaws, policies and guidelines respecting registration and competency, including as contained in the EGBC *Competency Assessment Guide*.
- 16. Should Mr. Duerichen successfully re-apply for registration in EGBC, any engineering work undertaken thereafter by Mr. Duerichen must be subject to direct supervision by a professional engineer who is a registrant of Engineers and Geoscientists BC (the "Supervising Professional"), and who is approved in writing and in advance by the Registrar of Engineers and Geoscientists BC. The Supervising Professional shall provide "direct supervision" as that term is defined in the Quality Management Guides – Guide to the Standard for Direct Supervision (Version 2.0 – February 17, 2021), in respect of all engineering work performed by Mr. Duerichen as follows:

- a. the direct supervision must continue for a minimum of nine months from the date the Supervising Professional is approved by the EGBC Registrar (the "Direct Supervision Period");
 - b. the costs of the direct supervision, if any, shall be borne by Mr. Duerichen; and
 - c. following the Direct Supervision Period, Mr. Duerichen shall obtain an opinion from the Supervising Professional that Mr. Duerichen is competent to undertake engineering work and provide that opinion to the Registrar of Engineers and Geoscientists BC. If the opinion of the Supervising Professional is that Mr. Duerichen requires further direct supervision, the Direct Supervision Period shall continue for a period of an additional six months.
17. Within six months of the conclusion of the Direct Supervision Period, Mr. Duerichen shall undergo a Practice Review, at his own cost, the precise timing of which will be determined by the Practice Review Committee.
 18. Mr. Duerichen shall pay \$5,000 toward EGBC's legal costs contemporaneous with the execution of this Consent Order.

Consequences of the Consent Order

19. The full text or a summary of this Consent Order will be published by EGBC in print and electronic publications including on the EGBC website.
20. This Consent Order has the same force and effect as an Order made under section 75 of the PGA.
21. Mr. Duerichen agrees that he has received independent legal advice regarding this Consent Order.
22. EGBC and Mr. Duerichen agree that this Consent Order may be executed in counterparts and delivered as an electronic document.

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This Consent Order is approved and accepted by Mr. Duerichen and the members of the Discipline Resolution Panel this 28 day of March, 2022.

<original signed by>

Johann G. Duerichen, P.Eng.

Douglas Hobenshield

Witness Name

<original signed by>

Witness Signature

<original signed by>

Frank Denton, P.Eng., FEC, FGC
Member, Discipline Resolution Panel

<original signed by>

Chris Arthur, P.Eng.
Member, Discipline Resolution Panel

<original signed by>

Pierre Gallant, Retired Architect AIBC
Member, Discipline Resolution Panel