



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA

IN THE MATTER OF THE *PROFESSIONAL GOVERNANCE ACT, S.B.C. 2018,*
CHAPTER 47 (the “*PGA*”)

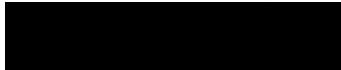
AND

IN THE MATTER OF ZHAO GUAN, P. ENG.

ENGINEERS AND GEOSCIENTISTS BC FILE NO. T19-068

CITATION

TO: Zhao Guan, P.Eng.



TAKE NOTICE that a Panel of the Discipline Committee of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, doing business as Engineers and Geoscientists BC, will meet on a date to be determined for the purpose of conducting a discipline hearing pursuant to the *PGA*. The *Engineers and Geoscientists Act*, R.S.B.C. 1996, c. 116 (the “*EGA*”) was repealed and replaced by the *PGA* on February 5, 2021. While allegations herein are made under the *EGA*, the proceeding against Zhao Guan, P.Eng. is brought under and in conformity with the *PGA*, so far as it may be done consistently with the *PGA*, and the procedure established by the *PGA* will be followed as far as it can be adapted in this proceeding.

AND TAKE NOTICE that the allegations against you are that:

1. You have demonstrated incompetence, negligence or unprofessional conduct by:
 - a. Failing to design a retaining wall between [REDACTED] and [REDACTED] in North Vancouver (the “Wall”) to the reasonable standard expected of a professional engineer by, among other things, signing and affixing your seal to the design drawings for the Wall, which:

- i. Were prepared by Tony Yam when you knew or ought to have known that Mr. Yam's registration with Engineers and Geoscientists BC had been cancelled at the material time, and/or when Mr. Yam was not under your direct supervision;
 - ii. Utilized an Australian standard for the design of the Wall without any evidence as to the appropriateness of this standard;
 - iii. Failed to consider the wall heights and lateral soil pressures to be taken into account in the Wall's design, which should have been known prior to issuing the initial design drawings for the Wall dated February 2, 2018; and
 - iv. Utilized design earth pressures in the updated modified design for the Wall, dated January 22, 2019, which are below typical standard levels.
- b. Failing to adequately check the initial design drawings for the Wall dated February 2, 2018, which were neither prepared by you nor prepared under your direct supervision, before signing and sealing them, and therefore, failing to identify serious errors with the initial design for the Wall, including:
 - i. The reinforcement for the Wall is placed on the wrong side;
 - ii. The dimension for the wall thickness on the "Retaining-Wall Schedule" is incorrectly noted as 8 inches or 10 inches;
 - iii. There are no dimensions for where the reinforcement should be placed;
 - iv. An erroneous strength (25 MPa) is noted in the drawings; and
 - v. An erroneous footing width of 5 feet is noted instead of the correct 8 feet.
- c. Failing to have an independent review of the initial design drawings for the Wall, dated February 2, 2018, completed prior to the Wall's construction.

- d. Failing to ensure proper installation of the Wall to the reasonable standard expected of a professional engineer by, among other things:
 - i. Failing to conduct sufficient field reviews to ensure that the Wall was being constructed in accordance with the initial design drawings for the Wall dated February 2, 2018;
 - ii. Relying on geotechnical field review services completed by Mr. Yam when you knew or ought to have known that Mr. Yam's registration with Engineers and Geoscientists BC had been cancelled at the material time and/or when Mr. Yam was not under your direct supervision;
 - iii. Failing to issue a stop work order and notify the appropriate authorities in order to ensure adequate site safety and minimize hazard to the neighbouring property (██████████) when problems with the construction of the Wall were identified in late August 2018; and
 - iv. Failing to record the dimensions used in the stability calculations and using a dimension which was in conflict with the drawings.
 - e. Failing to keep adequate records related to the Wall including, among other things:
 - i. Records of the concrete samples you requested following the concrete for the Wall being poured;
 - ii. The mathematical calculations for the design of the Wall;
 - iii. Your recommendation regarding the reinforcement for the Wall; and
 - iv. Documentation showing the process behind changes allegedly made to the Wall (as-built) which are reflected in a field review report dated August 20, 2018.
2. The conduct set out above at paragraphs 1(a) – (b) is contrary to s. 20(9) of the *EGA* which required that a member receiving a seal or stamp under this section must use it, with signature and date, to seal or stamp estimates, specifications, reports, documents, plans, or things that have been prepared and delivered by the member or licensee in the member or licensee's professional capacity or that have been prepared and delivered under the member or licensee's direct supervision.

3. The conduct set out above at paragraphs 1 (a) – (e) is contrary to Principle 1 of the Engineers and Geoscientists BC Code of Ethics, created pursuant to the *EGA* (the “Code of Ethics”), which required that members and licensees hold paramount the safety, health and welfare of the public, the protection of the environment and promote health and safety within the workplace.
4. The conduct set out above at paragraphs 1 (a) – (e) is contrary to Principle 3 of the Code of Ethics which required that members and licensees provide an opinion on a professional subject only when it is founded upon adequate knowledge and honest conviction.
5. The conduct set out above at paragraphs 1(d)(iii) is contrary to Principle 9 of the Code of Ethics which required that members and licensees report to their association or other appropriate agencies any hazardous, illegal or unethical professional decisions or practices by members, licenses or others.
6. The conduct set out above at paragraphs 1(c) – (e) is contrary to section 14(b) of the Engineers and Geoscientists BC Bylaws, created pursuant to the *EGA*, which required that members and licensees shall establish and maintain documented quality management processes for their practices, including, as a minimum:
 - (1) retention of complete project documentation which may include, but is not limited to, correspondence, investigations, surveys, reports, data, background information, assessments, designs, specifications, field reviews, testing information, quality assurance documentation, and other engineering and geoscience documents for a minimum period of 10 years;
 - (2) regular, documented checks of engineering and geoscience work using a written quality control process appropriate to the risk associated with the work.
 - (3) documented field reviews by, or under the direct supervision of, members or licensees, of their domestic projects during implementation or construction;
 - (4) documented independent review of structural designs prior to construction by members or licensees having appropriate experience in designing structures of a similar type and scale, and not involved in preparing the design. The reviewer shall examine representative samples of the structural assumptions, continuity of gravity and lateral load paths, stability and detailing. Where appropriate, the reviewer shall perform numerical calculations on a sample of gravity and lateral force resisting

elements necessary to satisfy any reviewer concerns. The extent of the review shall be determined by the reviewer based on the progressive findings of the review. This review and any follow up action must be completed before the documents are issued for construction.

The independent review of structural designs shall evaluate the construction documents to determine if the structural systems appear complete, consistent, and in general compliance with applicable codes. The structural review may be part of, but is not intended to replace, the regular checks required in 14(b)(2).

Independent review of each instance of repetitive designs of individual structural components is not required, but documented initial independent review and independent review at intervals is required to confirm the maintenance of design quality.

AND FURTHER TAKE NOTICE that you, Zhao Guan, P.Eng., have the right, at your own expense, to be represented by counsel at the inquiry by the Panel of the Discipline Committee pursuant to s. 79 of the *PGA*, and you or your counsel shall have the full right to cross-examine all witnesses called and to call evidence in defence and reply in answer to the allegations.

AND FURTHER TAKE NOTICE that, pursuant to s. 78 of the *PGA*, in the event you fail to attend or remain in attendance at a discipline hearing under s. 75 of the *PGA*, the Panel of the Discipline Committee may, if satisfied that you have been notified of the hearing, proceed with the hearing in your absence and make any order that the Panel of the Discipline Committee could have made in your presence.

DATED this 10 day of December 2021.

The Investigation Committee of the Association
of Professional Engineers and Geoscientists of
the Province of British Columbia

<original signed by>

Per: Peter Helland, P.Eng.
Chair, Investigation Committee