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APEGA Discipline Committee Order

Date: February 7, 2014 Case No.: 13-004-SO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT AND IN THE MATTER OF THE CONDUCT OF MR. SAO HOANG, P.ENG.

Editor's Note: *The PEG* publishes all APEGA Discipline Committee decisions that include findings against Members. Names and other identifying information are included unless the decision recommends otherwise. Decisions are published almost verbatim; they are reproductions of regulatory records and therefore subject to only minor editing.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Mr. Sao Hoang, P.Eng. with respect to the inspection of property at 56 Cimarron Estates Green in Okotoks, Alberta.

AGREED STATEMENT OF FACTS

As a result of the investigation, it is agreed by and between the Investigative Committee and Mr. Sao Hoang, P.Eng. that:

1. Mr. Sao Hoang, P.Eng. was a professional member of APEGA, and was thus bound by the APEGA Code of Ethics, at all relevant times.
2. Mr. Hoang is a principal of Bravura Holdings Inc. ("Bravura"), which held a valid Permit to Practice at all relevant times.
3. Al Randall ("the Complainant") is the owner of a unit ("the Unit") in a housing development at 56 Cimarron Estates Green, Okotoks, Alberta.
4. In May 2009, the Alberta New Home Warranty Program ("ANHWP") conducted an inspection of the Unit and issued a report stating that the Unit did not pass inspection because 1) the final clearance between the stucco cladding of the Unit and final grade was less than 200 mm, or approximately 8 inches, along the exterior west side and 2) the lot grading was insufficient such that there was either no slope or the slope away from the foundation was negative, resulting in no positive drainage of water away from the foundation wall.
5. Article 9.28.1.4 of the *Alberta Building Code* requires that stucco "shall not be less than 200 mm above finished ground level except when it is applied over concrete or masonry." This is to prevent water from the ground splashing onto the stucco and seeping behind it. The stucco on the Unit is not applied over concrete or masonry.
6. Appendix A of Bylaw 16-10 ("the Bylaw") of the Town of Okotoks, which applies to the Unit, requires that the front and rear lot gradient be a minimum grade of 2% to create positive drainage of water away from the foundation wall.
7. In September 2010, the Builder engaged Bravura to provide an opinion on a detail that had been implemented on twelve feet of the north (rear) wall of the unit in question for the purpose of protecting the framing portion of the home where the separation between the finished grade and the untreated lumber failed to meet the minimum 150 mm requirement as specified in ABC 9.15.4.6.
8. The sketch and associated details provided to Bravura Engineering by the builder indicated that the composition of the exterior stucco system included a liquid based water proof membrane. The plans also specified a sump assisted drainage tile system at the base of the north frost wall.
9. Mr. Hoang states that at the time, he was retained, the builder did not provide him with a copy of the report referenced in paragraph 4 above, nor did Mr. Hoang make any inquiries with respect to ANHWP's involvement.
10. On September 1, 2010, a Bravura staff member conducted a site visit of the Unit and observed that the Builder had installed a row of paving stones along the north foundation wall, and that the clearance between the top of the paving stones and the stucco cladding was approximately 4.5 inches along the north wall.
11. Following the September 1, 2010 site visit, Bravura issued an opinion to the Builder titled "Foundation Protection Review" dated September 9, 2010 ("the Opinion"), which was stamped by Sao Hoang. It recommended that the existing paving stones along the north foundation wall be removed and replaced with a 12" x 12" trench filled with 20-40 mm wash gravel that was separated from the grass area with pressure-treated wood board.
12. The Opinion made no mention of improving the grading of the lot, nor did it deal with drainage of water from the recommended trench.
13. The Opinion stated that if the above was carried out, this "will provide an adequate drainage of rain water in accordance with the requirements of the Alberta Building Code 2006."
14. The Builder carried out the remediation work recommended in the Opinion, including building a trench filled with rock along the north foundation wall with no drainage.

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15. On November 29, 2010, Bravura issued a letter (“the Letter of Acceptance”) to the Builder, stamped by Sao Hoang. Although Bravura had initially only been retained to inspect the north foundation wall, and not the west foundation wall, the Letter of Acceptance made reference to both the north and west foundation walls, and stated the following:

“This letter confirms the site review of the foundation wall protection at the above noted address.

On November 15, 2010, a site inspection was performed to review the installation of the foundation wall protection on the back of the house in accordance with the Bravura engineering Letter dated September 9, 2010.

The installation detail mentioned on the Bravura Eng letter stated above was also applied on the west wall of the house where the exterior concrete foundation wall is extended less than the minimum required distance above the finished ground level (Alberta Building Code 2006- Article 9.15.4.6).

Based on this review we consider that the foundation wall protection in the locations as stated above, has been installed in accordance with our specifications and will perform to the intent of the Alberta Building Code 2006.

Despite the Letter of Acceptance, the Unit did not conform with the requirements of the Alberta Building Code or the Bylaw in that 1) the clearance between the top of the washed rock and the stucco cladding of the Unit was considerably less than 200 mm in the remediated areas; and 2) there was not positive drainage away from the foundation on the west wall as the lot grading was unchanged and then newly built trench with no drainage now created a place for water to pool along the foundation.”

16. Despite the Letter of Acceptance, the Unit did not conform with the requirements of the Alberta Building Code or the Bylaw in that 1) the clearance between the top of the washed rock and the stucco cladding of the Unit was considerably less than 200 mm in the remediated areas; and 2) there was not positive drainage away from the foundation on the west wall as the lot grading was unchanged and then newly built trench with no drainage now created a place for water to pool along the foundation.

17. On March 16, 2011, Mr. Randall met with Mr. Hoang onsite at the Unit and outlined his concerns with regards to the violations of the Alberta Building Code and the Bylaw.

18. It was subsequently determined that the liquid based waterproof membrane specified on the information initially provided had not been installed on Mr. Randall’s unit.

19. In a letter dated May 16, 2011, Bravura retracted its Opinion and, by implication, the Letter of Acceptance.

20. Mr. Hoang subsequently admitted that he did not calculate the potential surface water collection within the trench nor did he have the necessary skill and formal training in surface water drainage to adequately deal with the issues at the Unit.

CONDUCT

In endorsing and issuing the Opinion and the Letter of Acceptance, Mr. Hoang failed to ensure that Mr. Randall’s residence, the Unit, complied with Article 9.28.1.4 of the *Alberta Building Code*, thereby exposing Mr. Randall to the risk of water damage from improper design or construction, contrary to Rule of Conduct #1 of the APEGA Code of Ethics.

In endorsing and issuing the Opinion, Mr. Hoang failed to interpret properly Article 9.28.1.4 of the *Alberta Building Code*

and the Bylaw, thereby demonstrating a lack of skill in the practice of the profession of engineering, contrary to Section 44(1)(d) of the *Engineering and Geoscience Professions Act* and a breach of Rule of Conduct #2 of the APEGA Code of Ethics.

ORDERS

On the recommendations of the Investigative Committee, and by agreement of Mr. SAO HOANG, P.Eng. with that recommendation, following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders that:

1. Mr. Hoang receive a letter of reprimand.
2. That Mr. Hoang sign an undertaking to refrain from engaging in professional practice that involves surface water drainage in any manner, without the supervision of a professional engineer experienced in the field, for a period of two years from the acceptance of this order.
3. That Mr. Hoang successfully complete, at his own cost, the Alberta Safety Codes Council course 100076 — Building, Groups A&B, Level 1, Introduction to the Alberta Building Code, ABC 2006 within 1 year of the acceptance of this order.
4. That Mr. Hoang successfully complete, at his own cost, the Alberta Safety Codes Council course 100097 — Building, Group A, Building Envelope within 2 years of the acceptance of this order.
5. That, should Mr. Hoang fail to successfully complete the required courses in the time specified, his membership in APEGA be suspended until such time as he does successfully complete the courses.
6. That details of this matter be published in *The PEG* magazine, with names.

Approved this 7th day of February, 2014

GERALD CARSON, P.ENG.
Case Manager