BEFORE THE
BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS
DEPARTMENT OF CONSUMER AFFAIRS
STATE OF CALIFORNIA

In the Matter of the Accusation Against:	)	
	)	
ERWIN JEREMIAH O'TOOLE	)	Case No. 1243-A
331 Moultrie Street	)	
San Francisco, CA 94110	)	OAH No. 2021010826
	)	
Civil Engineer License, No. C 80734,	)	
	)	
Respondent.	)	
	)	

DECISION

Pursuant to Government Code section 11517, the Board for Professional Engineers, Land Surveyors, and Geologists of the State of California hereby adopts the attached Proposed Decision of the Administrative Law Judge as its Decision in the above-entitled matter.

In adopting this Proposed Decision as its Decision, the Board for Professional Engineers, Land Surveyors, and Geologists has made the following technical or other minor changes pursuant to Government Code section 11517(c)(2)(C):

Reference to "former" in the title "enforcement program manager Tiffany Criswell" on Page 8, Paragraph 30 is removed

This Decision shall become effective on *October 21, 2021*.

IT IS SO ORDERED *September 16, 2021*.

Original Signed

BOARD FOR PROFESSIONAL ENGINEERS,
LAND SURVEYORS, AND GEOLOGISTS
Department of Consumer Affairs
State of California

BEFORE THE
BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS
DEPARTMENT OF CONSUMER AFFAIRS
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In the Matter of the Accusation Against:

ERWIN JEREMIAH O'TOOLE,

Civil Engineer License No. C 80734

Respondent.

Agency Case No. 1243-A

OAH No. 2021010826

PROPOSED DECISION

Administrative Law Judge Holly M. Baldwin, State of California, Office of Administrative Hearings, heard this matter on May 26-27 and June 30, 2021, by videoconference.

Deputy Attorney General Susana A. Gonzales represented complainant Richard B. Moore, PLS, Executive Officer of the Board for Professional Engineers, Land Surveyors, and Geologists, Department of Consumer Affairs.

Attorney Jacob G. Reinhardt represented respondent Erwin Jeremiah O'Toole, who was present.

The record closed and the matter was submitted for decision on June 30, 2021.

FACTUAL FINDINGS

1. On December 31, 2020, complainant Richard B. Moore, PLS, Executive Officer of the Board for Professional Engineers, Land Surveyors, and Geologists (Board), Department of Consumer Affairs, issued an accusation against respondent Erwin Jeremiah O'Toole. The accusation alleges cause for discipline for negligence and/or incompetence and for failure to use a written contract, in connection with a residential construction project in San Francisco. Respondent filed a notice of defense, and this hearing followed.

License History, Education, and Professional Experience

2. On December 21, 2012, the Board issued Civil Engineer License Number C 80734 to respondent. The license was in full force and effect during all times relevant to the charges in this matter and will expire on March 31, 2023, unless renewed. Respondent has no prior history of license discipline, apart from the citation described below in Factual Findings 34 through 36.

3. Respondent received an undergraduate degree in civil engineering from the National University of Ireland, Galway, in 2002. He then received additional training while working for a construction firm in Dublin. In the following years, respondent worked in Australia as a project manager for large civil engineering firms on projects such as sewers, high rises, residential buildings, and mines; and in Ireland on highway and urban infill projects.

4. Respondent moved to the United States in 2007, and has worked since then for Granite Excavation and Demolition (Granite) in the San Francisco Bay Area. Respondent began work at Granite as an engineer and estimator. He currently manages Granite.

5. Respondent also does engineering design work for his own firm. He works in San Francisco, San Jose, the East Bay, and the Peninsula. Respondent specializes in shoring and excavation engineering for dense urban infill space, including support structures for adjacent properties while excavation work is ongoing. He has prepared about 10 shoring designs in the last year, mostly in San Francisco.

San Francisco Project

6. Washington Wong purchased a residential property at 634 45th Avenue (Wong property), in the Outer Richmond neighborhood of San Francisco. The property is on a slope. The lot is about 25 feet wide and about 73 to 78 feet deep. Wong planned to demolish the existing small house on the property and build a new three-story house with a basement. The project required excavating the site's sloping terrain, and shoring and underpinning the site boundaries to maintain slope stability and site safety, and to prevent adjacent buildings from ground sliding and settling.

7. The uphill property next door at 632 45th Avenue (Kwan property) was owned by the Kwan family.

8. The downhill property next door on the other side of the Wong property is 638 45th Avenue (downhill property).

9. The existing buildings on all three properties were very close to the lot boundaries, sometimes referred to as a "zero lot line" situation.

10. Wong, the owner of the Wong property, was affiliated with or employed by W. Wong Construction Co. Inc. (Wong Construction), a licensed contracting business owned by his father Walter W.L. Wong (Walter Wong). Walter Wong was the Responsible Managing Officer, Chief Executive Officer, and President of Wong Construction. Wong Construction was the general contractor for the project. Washington Wong, the property owner, does not himself have a contractor's license, nor is he listed as one of the personnel of record for Wong Construction.

11. Frank Tzong-Hwai Lee, a licensed civil engineer with Frank Lee & Associates Geotechnical Consultants, provided geotechnical engineering for the project. On March 4, 2015, Lee prepared a soil and foundation investigation report (soil report), which described soil conditions at the site and found it suitable for Wong's proposed development.

12. In late July or early August 2015, Wong hired respondent to provide engineering services for the project, specifically to design temporary shoring and underpinning to allow for excavation of the Wong property and support the adjoining properties during excavation and construction.

13. The agreement between Wong and respondent was not in writing.

14. In August 2015, respondent prepared sets of engineering drawings for temporary shoring at the Wong property and underpinning at the Kwan property. Respondent also prepared underpinning and shoring calculations to support his designs for the Wong and Kwan properties.

Underpinning is support underneath an existing adjacent structure to keep it in place during excavation. On the side of the project that bordered the uphill Kwan property, respondent's drawings called for installation of six underpinning piers

underneath the Kwan home. The underpinning piers were labeled on the drawings as numbers 3 through 8 (each numeral has a hexagonal box drawn around it). These are hand-dug pits 16 or 17 feet deep that were then filled with concrete to form piers.

Shoring is a method of temporarily buttressing the sides of an excavation site to keep soil from caving in, before pouring concrete for a permanent foundation. Respondent's drawings called for temporary shoring using nine soldier beams, along with lagging boards. The soldier beams are steel beams drilled 30 feet into the ground, to act as vertical support elements, with concrete being poured around the beams after they are placed. The lagging boards are timber boards installed horizontally across the soldier beams. The soldier beams were labeled on respondent's drawings as numbers 1 and 2 and 9 through 15 (the numerals appear inside hexagonal boxes). Soldier beams 1 and 2 were on the border with the Kwan property, at the front of the lot. Soldier beams 9 through 15 were at the rear of the Wong property excavation and on the border with the downhill property.

15. On a date not established by the record, Wong reached an agreement with the Kwans to allow contractors to access their property and install the underpinning specified in respondent's drawings. Wong sent respondent a draft of such an agreement, but respondent was not involved in preparing or negotiating the agreement with the Kwans.

16. The San Francisco Department of Building Inspection (DBI) issued separate construction permits for the work on the Wong property and the underpinning work at the Kwan property.

17. On October 20, 2015, respondent sent Wong an invoice for $3,000 for his shoring design work.

18. In late October 2015, the excavation, shoring, and underpinning work began on the project.

19. At some point after work began on the project, there was evidence of damage to the Kwan property, such as enlarged cracks in the exterior stucco walls and in concrete walkways.

20. In approximately March 2016, Luke Kwan (the son of the Kwan property owners) filed a complaint with the DBI regarding this damage. The DBI issued a notice of violation and required Wong Construction to provide an evaluation of site conditions by a professional engineer. Wong Construction hired Lee to prepare this report, which was co-authored by Lee and Rick Haltenhoff, a certified engineering geologist, on March 15, 2016. The report, entitled "reconnaissance of existing conditions," stated that they observed cracks in the stucco and concrete hardscape at the Kwan property, which appeared to be old cracks with weathered edges that had been previously patched and painted. The report stated: "We did not observe and are unaware of any structural damage to the house at 632 45th Avenue [Kwan property]. We believe the cracks re-opened on the structure due to transitory vibrations which may or may not have been due to the current construction." Kwan was not reassured, and hired an independent engineer to evaluate the property's condition and possible causes of damage.

21. Michel S. Khoury, a licensed civil engineer and geotechnical engineer, of CAL Engineering Int. Co. (CEICO), was hired by Kwan. Khoury performed an inspection of the Kwan property and issued an engineering inspection report on April 15, 2016. Khoury opined that the house was subjected to downhill movement and cracks due to improperly shored adjacent excavation. Khoury attributed the Kwan property damage to improper shoring at the site boundary prior to excavation work; improper

mitigation of foundation sill plates during excavation; and improper use of heavy vibrating and crawling equipment during construction.

22. On May 2, 2016, Kwan filed a complaint with the Board regarding Lee.

23. On June 6, 2016, licensed civil engineer Richard Robertson of Odell/Robertson Consulting, Inc. prepared a report in connection with Kwan's insurance claim regarding damages to the Kwan property. Robertson noted that pre-construction photos showed existing cracks in stucco and concrete walkways. Robertson concluded that the adjacent construction caused the following damage to the Kwan home due to ground settlement: enlargement of pre-existing cracks in exterior stucco, concrete walkways, and concrete steps; a minor vertical gap opening where the front landing abuts the front door threshold; and a gap and rainwater leakage at the bottom of a front entryway window. Robertson found that other items of damage listed by the Kwans were not caused by the Wong construction.

24. The Board opened an investigation into Lee's work on the project after receiving Kwan's complaint, and retained licensed civil engineer Wayne H. Kalayjian as an expert consultant. Kalayjian issued a report regarding Lee's work on July 28, 2017. Based on Kalayjian's opinions, the Board issued an accusation against Lee (Case No. 2016-05-150), alleging that Lee committed negligence and/or incompetence in his work on the project. Lee signed a stipulated settlement and disciplinary order, in which he admitted all the allegations and charges against him. The Board adopted the stipulated settlement in a decision effective September 13, 2019, revoked Lee's license, stayed the revocation, and placed Lee on probation for five years.

25. On a date not established by the record, the DBI allowed Wong Construction to resume construction on the project.

26. Construction work on the Wong property was completed in late 2017. As part of the process for closing out the construction permits for the Wong and Kwan properties, respondent prepared three special inspection and final compliance reports in December 2017.

27. On December 16, 2017, respondent sent Wong an invoice for $1,050 for his special inspections.

The Board's Investigation, Record Requests, and Citation

28. The Board opened an investigation into respondent's work on the project after Kalayjian's report about Lee recommended that the Board also review respondent's work on the project.

29. Daniel Quanchi, enforcement analyst for the Board, wrote an investigative report dated September 28, 2020, and testified at hearing.

30. On June 7, 2018, former enforcement program manager Tiffany Criswell sent respondent a letter to his address on Oak Street in San Francisco, informing him that the Board was investigating allegations that he failed to meet the standard of care in his work on the project. The letter requested a response, including copies of all documents related to the project, by July 3, 2018. The Board received no response.

31. On July 16, 2018, Criswell sent respondent a second letter, to his recently updated address of record on Moultrie Street in San Francisco, enclosing a copy of the June 7, 2018 letter, and giving him an extension of time to August 16, 2018 to respond due to the recent address change. The Board received no response.

32. Quanchi was assigned to this investigation in November 2018. On November 6, 2018, Quanchi sent respondent a third letter to the Moultrie Street

address by both regular and certified mail. He enclosed the prior letters, requested a response by November 21, 2018, and noted that failure to respond was cause for disciplinary action. The Board received no response.

33. On November 28, 2018, Quanchi sent respondent a fourth letter to the Moultrie Street address, noting that no response had yet been received, and providing a corrected citation to the statute authorizing disciplinary action for failure to respond. The Board received no response.

34. The Board issued Citation Order 10720-L to respondent on December 10, 2018, for failing to respond to the Board's written requests, in violation of Business and Professions Code section 6775.2, subdivision (a). The citation ordered respondent to pay an administrative fine of $500 and to respond to the Board's information request within 30 days after the citation became final.

35. Respondent appealed the citation. An informal citation conference was held by telephone on April 29, 2019, between respondent and the Board's citation coordinator. Later that same day, respondent provided the citation coordinator with documents from his electronic file for the project by email. Those documents were later forwarded to Quanchi.

36. On May 7, 2019, the Board issued an Informal Conference Decision and Modified Citation Order 10720-L, noting that it had received the requested documents from respondent, and reducing the amount of the administrative fine to $150. Respondent paid the fine.

37. It appears that no further action was taken on the Board's investigation until March 12, 2020, when Quanchi forwarded the documents received from

respondent to the Board's expert consultant, Kalayjian, for review. Quanchi did not have follow-up communications with respondent or request additional documents.

38. Based on Kalayjian's opinions, Quanchi referred the matter to the Attorney General's office. The accusation was issued on December 31, 2020.

Allegations of Negligence and Incompetence

COMPLAINANT'S EXPERT WITNESS: KALAYJIAN

39. Complainant alleges that respondent was negligent and/or incompetent in his work on the project, based on Kalayjian's opinions. Kalayjian issued a report on April 28, 2020 regarding respondent's work on the project, and testified at hearing. His opinions were based on a review of documents. He did not visit the project site.

40. Kalayjian has been a licensed civil engineer in California since 1986. He is also a licensed civil engineer in Arizona, a licensed structural engineer in Massachusetts, a certified fraud examiner, and an instructor at the University of Southern California. Kalayjian received a bachelor's degree in civil engineering and geology from Tufts University in 1981; a master's degree in structural and earthquake engineering from Stanford University in 1984; and a master's degree in engineering management from the Massachusetts Institute of Technology in 1996. Kalayjian worked as a professional engineer for 16 or 17 years, on foundation, structural, and civil engineering projects around the world. He then spent 17 years working on investigations, forensics, and technical matters at Pricewaterhouse Coopers and Deloitte. For the past three years, he has been the managing director of Secretariat Advisors, serving as an expert in construction cases. Kalayjian has served as an industry expert for the Board since 2007, including about 10 cases from San Francisco or the Peninsula, with about five cases focusing on foundation engineering.

Test Boring and Reliance on Lee's Soil Report

41. Kalayjian opined that respondent was negligent because his foundation design was based upon a single test boring by Lee, which Kalayjian found insufficient. Test boring is drilling into the earth for a cylindrical sample of the soil conditions. Lee's report indicated that he made one test boring, located in the middle of the Wong property. Kalayjian explained that test boring is especially important in San Francisco due to the risk of soil liquefaction during seismic activity. Kalayjian stated there is no industry standard for the minimum number of test borings needed, but that in his opinion there should be a minimum of three test borings for a project. In Kalayjian's opinion, a prudent engineer would have requested more data than a single test boring. Kalayjian would have performed three test borings, one at the front of the site near the street, one in the middle of the site, and one toward the back of the site.

42. Kalayjian conceded that the process of hand-digging the pits for the underpinning piers provides additional opportunities to observe the soil conditions on site, and that if the contractor observed new or different soil conditions during the digging, it should be reported to respondent, the shoring engineer. Kalayjian also conceded that in photographs taken during excavation, the soil appears homogenous across the site.

Advanced Reconnaissance

43. Kalayjian opined that respondent performed insufficient advanced reconnaissance of site conditions before creating his designs. Kalayjian believed that respondent visited the site only once before preparing his drawings, which he found should have alerted respondent to the fragile foundation at the Kwan property and other key features such as the location of utility lines, but that such information was

not reflected on respondent's drawings and calculations. Kalayjian expected to see more notes and details about the site on respondent's drawings.

Kalayjian opined that for a site such as the Wong property, multiple site visits were needed. Kalayjian found that respondent did not use the care ordinarily exercised by licensed engineers in like cases and was thus negligent. It is a sloping site in an area of San Francisco that is subject to moderate liquefaction. The soil characteristics, when combined with urban congestion and the difficulties of shoehorning a new building in between two older buildings with old and fragile foundations, mean that advance reconnaissance is particularly important.

Drawings

44. Kalayjian opined that respondent's foundation drawings had multiple deficiencies. Overall, it was his opinion that a construction contractor could not use these drawings to build Wong's project. Kalayjian opined that the items set forth below demonstrated both negligence (lack of ordinary care) and incompetence (lack of knowledge and ability). Kalayjian stated that his opinions were independently formed, but were corroborated by Khoury's April 2016 report.

(a) The drawings reviewed by Kalayjian, which were produced by respondent to the Board in April 2019, were stamped with respondent's seal but not signed. Kalayjian explained that drawings are not considered final or officially accepted by a city for permits without both the seal and signature of the engineer.

(b) Kalayjian opined that respondent's drawings were disjointed in layout, confusing to read, and difficult to decipher, even by an experienced engineer.

(c) Kalayjian opined that respondent's drawings were generic and showed little attention to actual site conditions.

(d) Kalayjian opined that respondent's drawings did not verify existing grades or conditions of existing buildings.

(e) Kalayjian opined that underpinning piers 3 through 8 seemed impractical or impossible to install. This was because the piers were to be installed on the Kwan property but he did not see any evidence that an agreement had been reached with the neighbors to grant permission for that work. Even if approved, Kalayjian found that the piers seemed difficult to install. Kalayjian conceded that the underpinning piers had actually been built by the contractor on the project. (Kalayjian believed that respondent's scope of work on the project included assistance with the agreement between Wong and the Kwans for underpinning work, but the evidence at hearing established that respondent was not involved in the agreement.)

(f) Kalayjian opined that respondent's drawings provided overall guidance that was rudimentary and insufficient for the earthwork and construction contractors to follow.

(g) Kalayjian opined that respondent's drawings provided rudimentary, insufficient, and impractical protection measures to adjacent structures at neighboring properties. Kalayjian conceded that soldier beams and lagging are a conventional shoring method. His critique was with the presentation of these items on the drawings.

Calculations

45. Kalayjian opined that respondent performed rudimentary and insufficient foundation calculations. Kalayjian opined that the items set forth below demonstrated

both negligence and incompetence. Kalayjian stated that his opinions were independently formed, but were corroborated by Khoury's April 2016 report.

(a) Kalayjian opined that respondent's calculations were based upon assumptions that were not field-verified and therefore may not be accurate. For example, under the heading "design soil parameters" the calculations stated values for the active and passive pressures in pounds per cubic foot (PCF), but did not state what these values are based on or how the calculations relate to the drawings. Kalayjian conceded it is common for foundation engineers to rely on baseline data from others and then to field verify the information.

(b) Kalayjian found respondent's calculations incomplete and difficult to decipher, and they had no key plan. He opined that the calculations should be keyed to specific parts of the drawings.

(c) Kalayjian opined that the calculations contained rudimentary, insufficient, and incoherent engineering design for the underpinning of the Kwan property.

(d) Kalayjian opined that respondent's calculations did not address the underpinning requirements along the other perimeter lines of the Wong property (such as the house on the downhill property and along the street side).

(e) Kalayjian opined that the calculations for the Wong property contained a questionable shoring design that was completely reliant on computer software. He found that respondent's handwritten calculations were insufficiently explained and questioned whether the computer-drawn lagging model was based on good data.

(f) Kalayjian opined that the calculations contained a generic analysis for lagging around Wong's construction site that was copied and pasted from a reference manual.

(g) Kalayjian opined that the calculations did not include the design of structural connections for piers, shoring, underpinning, or lagging.

Special Inspection Reports and Compliance Reports

46. Kalayjian found that respondent prepared two special inspection reports in April and September 2015, based on notations listed in respondent's December 16, 2017 invoice for special inspection letters. (The notations were the numbers 2015.09.18.7387, 2015.04.08.3139, and 2015.09.18.7383.) Kalayjian did not find any April and September 2015 special inspection reports in the file and faulted respondent for not indicating what he did during these visits. The evidence established that respondent did not perform special inspections in April or September 2015. The numbers that Kalayjian interpreted as being dates are actually the permit numbers issued by the DBI. (See Factual Finding 72.)

47. Kalayjian noted that respondent prepared three "special inspection final compliance reports" related to the project on December 7, 2017. These were on single sheets of paper, stating respondent had performed special inspections for items of shoring, underpinning, and tieback pull tests at the Kwan and Wong properties. Each report stated, underneath the list of inspected items: "Based upon inspections performed and my substantiating reports, it is my professional judgment that, to the best of my knowledge, the inspected work was performed in accordance with the approved plans, specifications and applicable workman provisions of the San Francisco Building Code."

Kalayjian found respondent's special inspection final compliance reports were insufficiently descriptive, not stating what respondent did on site or how he determined the items met with his approval. Kalayjian also faulted respondent for not describing any of his procedures or including any supporting materials, such as photographs, field notes, analysis, work papers, discussions, correspondence, or calculations to support his inspection reports. Kalayjian opined that this demonstrated negligence and incompetence.

Opinions Regarding Damage to Kwan Property

48. For each area in which Kalayjian found that respondent was negligent or incompetent, Kalayjian opined in his report that the issue "assumed heightened relevance given the subsequent structural damage that occurred at Kwan's house once Wong began construction." Kalayjian's opinions in his report about damage to the Kwan property were based on photographs furnished by Kwan and Khoury's April 2016 report. Prior to hearing, Kalayjian also reviewed the June 2016 Robertson report, which he found corroborated the information in Kwan's complaint and Khoury's report.

Kalayjian testified that many factors could contribute to damage such as that seen at the Kwan property, such as soil movement, flawed shoring and underpinning, old and fragile existing foundations, and vibrations from construction using heavy equipment. Kalayjian opined that in his experience, a major cause of such damage is flawed shoring and underpinning. He believes that Lee, Wong Construction, and respondent all may have contributed to the damage.

Lack of Written Contract

49. Kalayjian opined that having a written contract in all cases is good common sense. It is his practice to have a written contract with any type of client.

Kalayjian searched online but was not able to find information showing that Wong Construction is a licensed contractor, thus he found that the statutory exception for agreements with licensed contractors did not apply. (As set forth in Factual Finding 10, information was presented at hearing establishing that Wong Construction is in fact a licensed contractor, but that Wong himself is not.)

RESPONDENT'S EXPERT WITNESS: ITALIANO

50. Sal P. Italiano testified as an expert witness for respondent, and wrote a report dated May 19, 2021. His opinions were based on a review of documents and photographs. He did not visit the project site.

51. Italiano has been a licensed civil engineer in California since 1981. He received a bachelor's degree in civil engineering from Manhattan College in 1977. Italiano has over 40 years of experience working as an engineer in the San Francisco Bay Area. Since 1993, Italiano has been the president of SPI Consulting Engineers, Inc., a construction firm providing engineering services and specializing in the design of excavation shoring and underpinning systems, permanent retaining walls, and foundation micropile systems. In the past five years, he has worked on 50 to 75 such projects in San Francisco and elsewhere. Italiano's company worked with respondent's company (Granite) on a project at Rincon Hill in San Francisco in 2012. Italiano and respondent are currently competitors as shoring engineers. Italiano had no prior association with Lee or with Wong Construction.

52. In Italiano's opinion, respondent's shoring and underpinning designs met the goals of protecting the properties and workers during excavation and construction. Italiano found no basis to conclude that respondent was negligent or incompetent in his work on the project.

Test Boring and Reliance on Lee's Soil Report

53. Italiano opined that respondent was not negligent in relying on a single test boring when designing the shoring and underpinning system. Italiano is familiar with the soil in the part of San Francisco where the project is located. It is within a half-mile of the coast and is underlain by sand. He would not expect to see much variation in the soil at this site. Italiano opined that for a lot the size of the Wong property, a single test boring was sufficient to determine the soil characteristics.

In addition, there were logistical barriers to performing additional test borings at this site. Test boring is performed with a drill rig, which is generally mounted on a small truck or Jeep. Italiano reviewed the diagram from Lee's report that showed the location of the test boring, which was in the middle of the Wong property and in front of the small existing house. The existing house was built very close to the left and right lot boundaries. It would not have been possible to bring a boring rig into the rear of the property prior to demolishing the existing structure.

Advanced Reconnaissance

54. Italiano agreed that advanced reconnaissance of the site is important for understanding conditions that will affect the shoring design. As part of his own work, he would start by viewing photos from Google Earth, then visit the site to view the "lay of the land" and existing structures. Italiano noted that ideally, the shoring engineer would gain interior access to inspect adjacent structures, but that in practice it is often difficult to obtain such access to residential properties, and that even obtaining interior access does not guarantee the ability to view the foundation. Italiano also noted that the underpinning system for the Kwan property is created by hand-digging pits next to the existing foundation, which affords the opportunity to view the

foundation and make any necessary adjustments to the design. Even with advanced reconnaissance, some things cannot be observed until breaking ground. For this reason, it is common for a shoring engineer to include a note on the drawings that the contractor should "verify in field" (VIF). Italiano noted that respondent's drawings did include such VIF notations, for example, showing the slope at the Kwan property but noting that it should be verified in the field. Overall, Italiano opined that respondent was not negligent in performing his advanced reconnaissance.

Drawings

55. Italiano opined as set forth below that respondent's drawings for the temporary shoring and underpinning designs did not demonstrate negligence or incompetence, and were up to the standards of the profession for work in this geographic area.

(a) In practice, review copies are often sent out unsigned, and that this does not bear on the performance of the design. Italiano conceded, however, that interim or review copies should contain a notation or watermark.

(b) Italiano did not agree that respondent's drawings were disjointed in layout, confusing to read, or difficult to decipher. He found that in the hands of a skilled subcontractor, respondent's drawings provided adequate information and were easy to follow.

(c) Nor did Italiano agree that respondent's drawings were generic and showed little attention to actual site conditions. The information germane to shoring and underpinning installation is existing grade, bottom of excavation, and the bottom of existing foundations. All of this information is found on respondent's drawings.

(d) Regarding whether the drawings verified existing grades or conditions of existing buildings, Italiano stated that existing grades in zero-lot-line San Francisco construction are often impossible to verify. Using a VIF notation on the drawing is an accepted method of getting information for the shoring engineer to make any needed adjustments. Italiano disagreed that verifying the condition of existing buildings is the responsibility of the shoring designer, but he agreed it is important, noting that often the developer brings in a forensic investigation firm prior to beginning the work to document existing conditions and distribute the information to all parties.

(e) Italiano opined that the hand-dug underpinning piers under the Kwan property were neither impractical nor impossible to install. Italiano noted that he had a long history of successfully installing such underpinning systems in the San Francisco Bay Area.

(f) Italiano opined that respondent's drawings provided overall guidance that was typical and could be followed by someone familiar with underpinning work. He noted that drawings are intended to be read and understood by the specialty subcontractors performing the excavation, shoring, and underpinning work. Ryan Engineering was the subcontractor doing that work on the project, and it is an excavation contractor. The only item Italiano found missing from respondent's drawings was a notation in roman numerals to show the sequence for installing underpinning piers 3 through 8, but the procedures for installing the hand-dug underpinning system were discussed in the notes section of the drawings. Italiano noted that if more detail was needed, the contractor could inquire using an RFI (request for information), which is a standard procedure.

(g) Italiano opined that respondent's shoring and underpinning designs were appropriate for this site and provided adequate protection for the adjacent properties.

Calculations

56. Italiano opined that respondent's temporary shoring and underpinning calculations did not demonstrate negligence or incompetence.

(a) Italiano disagreed with Kalayjian's opinion regarding reliance on assumptions without field verification. Italiano noted that site conditions cannot always be fully known prior to starting work, and using a VIF notation is an accepted method of getting information germane to the design. The underlying data used by respondent to make his shoring and underpinning calculations was provided by Lee, the geotechnical engineer and structural engineer of record, which Italiano found to be appropriate.

(b) Italiano disagreed that a key plan was needed for this project. He explained that key plans are often used on sites with large areas or where many different systems are used. Here, the small site with only two shoring methodologies did not warrant a key plan. Italiano opined that respondent provided sufficient information to allow construction to proceed safely in the hands of a skilled contractor.

(c) Italiano disagreed with Kalayjian's opinion that the calculations provided insufficient engineering design for the underpinning of the Kwan property. Italiano opined that the underpinning piers were appropriately designed, and they performed their intended purpose of supporting the Kwan property during excavation.

(d) Italiano noted that respondent's underpinning design extended to the required lengths of the new basement area, and there was no need for additional underpinning along the other perimeter lines of the Wong property, contrary to Kalayjian's opinion.

(e) Italiano noted that the underpinning calculations were written by hand, with no reliance on computer software. Respondent used a computer aided design program to produce diagrams for the soldier beam shoring design. Italiano opined that respondent's shoring design was not "completely reliant on computer software," contrary to Kalayjian's opinion.

(f) Italiano disagreed with Kalayjian's opinion that respondent's lagging calculations were "generic." Italiano opined that respondent's use of the wood board lagging design was in accordance with accepted industry standards for shoring engineers. He explained that the lagging calculations used by respondent were developed by John Hom of SOHA Engineers, an engineer working in San Francisco. Hom developed the analysis when overwhelming empirical data showed that 3x12 lagging boards spanning eight feet were adequate for shoring installations. Italiano explained that lagging design changes little between projects. Italiano uses the same lagging calculations used by respondent on every project, and he opined that every shoring designer in the San Francisco Bay Area does so. Italiano has successfully used this same lagging design guideline for excavations up to 60 feet deep.

(g) Regarding Kalayjian's opinion that the calculations did not include design of structural connections, Italiano noted that underpinning installations typically do

not have connections, although he has been using dowels recently in his own work.[1] More generally, he explained that in practice the shoring design does not show details for connections that are industry standards for construction. Italiano found no deficiency in respondent's calculations in this respect.

Special Inspection Reports and Compliance Reports

57. Italiano's report did not offer an opinion regarding respondent's special inspection and compliance reports. At hearing, Italiano was shown respondent's special inspection final compliance reports, and opined that the language used is typical for documents intended to close out construction permits.

Opinions Regarding Damage to Kwan Property

58. Italiano stated he was surprised by photographs of the Kwan property, which showed that the house had no foundation, just a redwood timber sill on sandy soil. He found that was surprisingly lacking even for the standards of the day (the Kwan house dates from approximately the 1920s). If that wood sill was not upgraded, over time it may rot and spread out problems over the structure.

59. Italiano disagreed with the Kalayjian's opinion and the conclusions of the Khoury report regarding causes of damage, noting that there was no baseline pre-construction report to document existing conditions at the Kwan property, and opining that many assertions in Khoury's report demonstrate a lack of understanding

[1] Respondent's underpinning drawings included specifications for such dowels.

of shoring and underpinning construction. Italiano also noted that Lee's March 2016 report indicated some damage was pre-existing.

60. Italiano opined that some movement is expected and tolerated during construction, and the purpose of shoring design is to provide lateral support so that movement is held to a tolerable minimum. Italiano reviewed and discussed survey data from Frederick T. Seher & Associates, Inc., professional land surveyors, consisting of photographs, a plat map of the project site showing survey points, and a spreadsheet of measurement data for the survey points, dated April 15, 2020. Italiano explained that the survey data showed how much the Kwan house moved during construction. Monitor points were placed on the Kwan property (and elsewhere around the project site)[2] on November 4, 2015, and the surveyors took follow-up measurements of the monitor points on March 13, 2020. Monitor point number 720 placed on the exterior wall of the Kwan house showed a small amount of movement in three directions: movement toward the excavation was 0.82 inches, movement toward the street was 0.72 inches, and vertical settlement was 0.44 inches. Italiano opined that three-quarters to one inch of deflection into the excavation area would be reasonable, and found the amount of such movement here was within that limit. Italiano also referred to Lee's soil report, which estimated that settlement should not exceed one inch. Italiano concluded that the survey data showed respondent's underpinning system performed well, because the Kwan house moved less than an inch in each direction.

[2] This is consistent with General Note number 10 on respondent's drawings, which called for the contractor to monitor the shoring and underpinning system and adjacent improvements during construction for indications of movement.

61. Italiano opined that without more data, it was difficult to discern who was responsible for any damage to the Kwan property, as between the shoring engineer, geotechnical engineer and structural engineer of record, and the general contractor and subcontractors performing the work.

TESTIMONY OF RESPONDENT REGARDING HIS WORK ON THE PROJECT

62. Respondent testified in a candid and forthright manner, consistent with one who is telling the truth.

Agreement to Provide Engineering Services

63. Respondent was first contacted about this project by Ryan Engineering, the specialty subcontractor that did the excavation work and executed respondent's shoring and underpinning designs. Ryan Engineering suggested respondent to Wong.

64. On July 31, 2015, Wong contacted respondent and asked him to design the shoring and underpinning for the project.

65. Respondent first went to the project site in early August 2015 to take a look. He subsequently agreed to do the shoring and underpinning design.

66. In his communications with Washington Wong, respondent believed that Wong was acting on behalf of the general contractor, Wong Construction. Respondent had no prior knowledge of Washington Wong, Walter Wong, or Wong Construction.

67. Respondent did not have a written contract with Wong. Respondent agrees that it is good practice to have a written contract, but he believed that one was not needed for this project because he thought Wong was a contractor.

68. Respondent delivered the completed plans to the Wong Construction office on 13th Street in San Francisco. Respondent sent his invoices to Wong personally by email. Respondent stated he received a 1099 from Wong Construction, although he did not provide documentary evidence of this. He typically does not receive a 1099 when his agreement is with a homeowner rather than the contractor.

Test Boring and Reliance on Lee's Soil Report

69. Respondent believes that for this site, one test boring was sufficient. This lot is smaller than most of the projects respondent has worked on in San Francisco. For sites of a similar size, respondent has usually seen one test boring performed, or sometimes two. He noted that a boring drill would not have fit through the existing structure on the Wong property in order to do additional boring at the rear of the lot. Lee's soil report reflected that the test boring was 22 feet deep, with no groundwater encountered and fairly homogeneous soil consistency. Respondent visited the project site during the excavation and shoring work, and did not observe soil conditions that varied from Lee's soil report. The soil observations made while digging underpinning pits were consistent with data from the test boring. Respondent's drawings instructed the contractor to contact him if unexpected conditions were observed during the underpinning and shoring work, so that he could make any needed modifications.

Advanced Reconnaissance

70. Respondent made four site visits in August 2015 before drawing his plans. He lived only two or three miles away from the project site at that time. During these advance site visits, respondent observed the outside of existing structures for cracks, leaning walls, or roof sagging; cracks in the sidewalks; dry rot in fence posts; and the location of utilities. He took photographs of the existing conditions.

Respondent was not granted access to either the Kwan property or the downhill property, so he made his observations from the Wong property. While respondent was on the Wong property, he could observe the condition of the footing at the Kwan house. Respondent observed that a portion of the structure had a foundation and a portion did not, that the timber sill plate was rotten, and that the footing in some areas was loose brick.

71. Respondent performed other reconnaissance activities from his office, including a review of information from the Nearmap aerial imagery service and San Francisco GIS (geographical information system) maps, and of the permit history.

Drawings

72. At hearing, respondent provided signed copies of his drawings. These copies also contained "approved" stamps from the DBI and handwritten permit numbers (these permit numbers correspond to the numbers on respondent's special inspection final compliance reports and invoice). The signed copies of respondent's drawings were reviewed by Italiano. When respondent produced documents to the Board in April 2019, he provided all the documents he had in his electronic file for the project. Respondent did not have signed copies of his drawings at that time. The signed copies were hard copies provided to the DBI and Wong. Respondent later obtained scanned copies of the signed drawings from Wong.

73. Respondent believed his drawings provided sufficient guidance for an experienced shoring contractor. When respondent prepared drawings for this project, he knew that Ryan Engineering was the shoring subcontractor. The intended audience for respondent's drawings was the shoring subcontractor and general contractor; he did not believe they would have problems understanding his drawings. Respondent

also explained that if any questions arose during implementation of his designs, the contractor could send him RFI. He received no RFIs on this project. Respondent also communicated with the contractors during the project's implementation and they expressed no confusion about his design.

74. Respondent's drawings specified that the contractor performing the shoring and underpinning work shall have a minimum of five years of experience in the construction of tiebacks and piers similar to those for this project. Respondent explained that he made this specification because the shoring and underpinning work is difficult to perform and requires skills that may not normally be available in the marketplace for other types of foundation work.

75. Respondent does not believe his drawings were generic, or that they showed little attention to actual site conditions. He included many specific notes.

76. Respondent verified the conditions of the site and existing neighboring buildings and reflected information on his drawings.

For example, respondent listed grades on the drawings with notes that the contractor shall verify existing grades and planned bottom of excavation shown. Respondent stated that he obtained grade information from the architectural plans and verified it in the field by measuring, and then put that information on the plans.

Respondent's drawings also included a note that the geotechnical engineer shall verify soil strata during soldier beam and underpinning installation and notify the shoring engineer (respondent) if field conditions are different from those described in the geotechnical report.

Respondent's drawings also noted the need for care with adjacent properties. The underpinning drawings included a note about the Kwan house: "Existing footing may be brick and poor structural quality." Another note read: "Alternate: demolish brick in sequence and pour pits to underside of [existing] sill plate. Shoring engineer to verify in field!!!"

Respondent's drawings called for the contractor to monitor the shoring and underpinning systems and adjacent structures for signs of movement or loss of ground.

77. Respondent explained that his design called for underpinning piers on the Kwan property because there was not enough room between the existing structure and the lot line to install soldier beams (as was done on other sides of the excavation), and because using a drill up against an existing structure such as the Kwan house could cause excessive vibrations. In his experience, hand-dug pits cause the least amount of settlement and movement. For these reasons, he determined that hand-dug underpinning pits were more appropriate under the Kwan property.

Respondent did not believe that his design for underpinning piers was impractical or impossible to install. He notes that such underpinning is expensive and difficult, but not impractical, and is the best solution for this type of zero-lot-line construction on sandy soil with old existing structures. He was not involved in negotiating the agreement with the neighboring property owners, but was told such an agreement was in place.

Calculations

78. Respondent obtained the data for his calculations (such as the active and passive forces in the design soil parameters) from Lee's geotechnical soil report. This is

typical. Respondent noted that the data from Lee's report was consistent with his knowledge of the project area.

79. Respondent's process for preparing the calculations was to inspect the site, review the soil report, talk to the contractors, prepare rough hand calculations, put them in the report, and check the calculations.

80. Respondent used a computer program (CivilTech Software) to assist in a portion of the design for the steel soldier beams. The references are cited on the calculations document. It is standard in the industry to use such software. Respondent also did a hand calculation check on the software's calculations.

81. Respondent explained that the lagging calculations he used are standard, and use conservative values for allowable stress. Respondent has used these lagging calculations in every project he has performed, because they all use the same type of lagging. This lagging design has been used by shoring engineers in San Francisco up to a depth of 60 feet. He also noted that his calculations and drawings specified the type and grade of timber to be used for the lagging boards.

82. Respondent's calculations did not show structural connections, but specifications for the connections of the large structural members were shown on the drawings.

Special Inspection Reports and Compliance Reports

83. Respondent made four to six visits to the project site during excavation and shoring work. While on site, respondent spoke with workers including the site foreman for Wong Construction, Paul Alayaay, and Jim Ryan. Respondent took photographs during these site visits, and made some notes. When respondent visited

the project site during implementation, he observed that the shoring and underpinning work was being done according to his plans. Respondent also visited the site before writing his special inspection reports in December 2017.

84. Respondent's plans call for special inspection of specific items of the shoring design, in compliance with the San Francisco Building Code. These items required inspections in order to close out the building permits. Some of the items (such as concrete and reinforcing steel) were inspected by A1 Inspection Services, which specializes in those areas.

85. At some point after his April 2019 production of documents to the Board, respondent obtained copies of nine summary reports from A1 Inspection Services. The summary reports contained information and observations from inspections performed while the construction was ongoing, and provided the support for the final affidavits prepared by A1 Inspection Services at the end of the project. For example, Summary Report #1 contained information from the inspections performed by technician Steve Ormando on several dates in November 2015 while the concrete was being poured.

86. Respondent's special inspection compliance reports, in which he approved the work performed, were based on his observations from site visits over the duration of the project, and the reports from A1 Inspection Services and Lee.

Damage to Kwan Property

87. Respondent acknowledges that the Kwan property experienced enlargement of cracks during construction. However, he opined that his underpinning design served its function and he does not believe that it contributed to the damage. When measured years later, movement of the Kwan property was less than an inch. Respondent explained that increases to stucco cracking such as that seen at the Kwan

property is not unexpected in a zero-lot-line project on dune sand, where there is substantial earthwork performed next to a property that is not well-maintained. His role as the shoring engineer is to protect and mitigate. He found that the shoring and underpinning performed as expected and movements were within tolerances.

Respondent also noted that through the underpinning work performed on the project, the Kwan property was improved by the addition of a new sill plate and bolting on that side. In a seismic event, he opined that the concrete piers will remain in place and the Kwan house is attached to the concrete.

It is respondent's understanding that Wong and Kwan ultimately reached a settlement and that the damage to the Kwan property was repaired.

ULTIMATE FINDINGS REGARDING NEGLIGENCE AND INCOMPETENCE

88. Both expert witnesses are well-qualified engineers who offered credible testimony at hearing. However, the opinions of Italiano and testimony of respondent are found to be more persuasive than the opinions of Kalayjian, as to the issue of whether respondent acted within the standard of care for professional engineers or displayed a lack of knowledge or ability in discharging the obligations of a professional engineer. Kalayjian is well-qualified but his practice as an engineer has not been focused on the San Francisco Bay Area or on shoring engineering specifically. Italiano demonstrated a better understanding of the local conditions, and is a specialist in the design of excavation shoring and underpinning systems. In addition, the opinions of Kalayjian were based on incorrect or incomplete information in several respects (for example, number of site visits, involvement in the neighbor agreement, signatures on drawings, and number of special inspections). Complainant has not

established by clear and convincing evidence that respondent departed from the standard of care or lacked knowledge or ability in performing his work on the project.

Respondent's Additional Evidence

BOARD'S INFORMATION REQUESTS

89. Respondent moved from Oak Street to Moultrie Street in February 2018. He does not remember when he updated his address of record with the Board.

90. Respondent received the November 6, 2018 certified letter at his Moultrie Street address, and stated that this was the first he heard of the Board's inquiry. Respondent did not have a clear explanation for why he did not respond promptly to that letter, although he does recall that he took a long vacation to Ireland at the end of that year. He acknowledges the importance of responding to the Board's information requests.

91. Respondent contacted the Board after receiving the December 2018 citation.

92. Respondent's April 2019 production of documents to the Board included everything he had in his electronic project file at that time. In his April 2019 email to the citation coordinator, he offered to provide more information if needed, but he never heard anything else until receiving the accusation.

OTHER MATTERS

93. Respondent was not involved in negotiating or preparing the lateral tie-back agreement with the Kwans. He sent a copy of a draft agreement to the Board because it was in his email file, sent to him by Wong. The existence or absence of such

an agreement did not affect his work. Respondent could have designed underpinning without an agreement in place, but he would have had to stipulate that the neighboring property owner needed to agree to allow the design to be built.

94. Respondent has continued to do shoring and excavation engineering since preparing plans for this project in August 2015. There have been no other Board investigations against him. He has never been the subject of a civil lawsuit regarding his engineering work.

95. Respondent has made some changes in his engineering practice as a result of this matter. Respondent now always uses a written contract.

Respondent keeps an electronic file for each project, and he aims to scan and upload all documents to Google Suite online. It still typically takes a while to get signed, stamped permit copies back from the DBI. Respondent now tries to make sure that whoever picks up the permit copies scans those documents and provides them to the project team.

This matter has also highlighted for respondent the need to be aware of the relationships between all parties going into a project, and he holds pre-construction conferences with all parties and stakeholders to eliminate any ambiguities.

RESPONDENT'S ADDITIONAL WITNESSES

96. Calvin Hom[3] has been a licensed civil engineer since 2011. He received a bachelor's degree from San Francisco State University in civil and environmental

[3] Respondent stated that Calvin Hom is no relation to John Hom, described in Factual Finding 56(f).

engineering, and a master's degree in civil and environmental engineering from the University of California, Davis. Hom has known respondent for more than 10 years, since they worked together on a project for which Hom was the project engineer for structural design and respondent did the shoring. Hom is currently a senior project manager for a real estate development firm. He has worked with respondent on many projects over the past seven years, describing respondent as the firm's "go-to shoring engineer." Hom has used respondent as a shoring engineer for about 10 projects in San Francisco, including residential and mixed-use condominiums. Hom finds that respondent's shoring designs are very good, and he is confident in respondent's abilities as an engineer. He noted that the community of shoring engineers in San Francisco is small. Hom has recommended respondent many times to others because he trusts him to do a good job.

97. Oisin Heneghan is an engineer and attorney. He received an undergraduate engineering degree and a law degree from the National University of Ireland, and a master's degree in civil engineering from Stanford University. He is a licensed attorney in New York and is provisionally licensed by the California State Bar. Heneghan currently is a senior vice president with Trammell Crow Company, a large real estate developer. Heneghan has known respondent for more than 10 years, since they worked on a project together in San Francisco, for which Heneghan was the project manager and respondent was doing shoring and excavation work. Heneghan has worked with respondent for shoring design on every one of Heneghan's projects since then, about 10 projects. Heneghan stated that there are only a few engineers with shoring expertise in San Francisco, and he considers respondent to be the best. Heneghan considers respondent to be a "world-class engineer" and has recommended him to others multiple times.

Costs

98. The Board has incurred a total of $10,336.15 in costs to investigate and prosecute this accusation, including $2,709.90 in expert costs and $7,626.25 in attorney's fees. These costs are supported by certifications that describe the tasks performed, time spent on each task, and method of calculating the cost, in compliance with the requirements of California Code of Regulations, title 1, section 1042. In the absence of any evidence to the contrary, these costs are found to be reasonable.

LEGAL CONCLUSIONS

1. In this proceeding regarding license discipline for a professional engineer, the burden of proof is on complainant to establish the charging allegations by clear and convincing evidence to a reasonable certainty. (*San Benito Foods v. Veneman* (1996) 50 Cal.App.4th 1889, 1893-1894.) Clear and convincing evidence "requires a finding of high probability. The evidence must be so clear as to leave no substantial doubt. It must be sufficiently strong to command the unhesitating assent of every reasonable mind." (*Copp v. Paxton* (1996) 45 Cal.App.4th 829, 846, citations omitted.) It is respondent's burden to show mitigation and rehabilitation by a preponderance of the evidence. (Evid. Code, §§ 115, 500.)

First Cause for Discipline: Negligence and/or Incompetence

2. The Board may discipline a professional engineer who commits negligence or incompetence in his practice. (Bus. & Prof. Code, § 6775, subd. (c).)

Negligence is defined as "the failure of a licensee, in the practice of professional engineering or land surveying, to use the care ordinarily exercised in like cases by duly

licensed professional engineers and land surveyors in good standing." (Cal. Code Regs., tit. 16, § 404, subd. (dd).)

Incompetence is defined as "the lack of knowledge or ability in discharging professional obligations as a professional engineer or land surveyor." (Cal. Code Regs., tit. 16, § 404, subd. (u).)

Complainant has not demonstrated by clear and convincing evidence that respondent committed negligence or incompetence in his work on the project. (Factual Finding 88.) Accordingly, cause for discipline does not exist under Business and Professions Code section 6775, subdivision (c).

Second Cause for Discipline: Failure to Use a Written Contract

3. The Board may discipline a professional engineer who violates the laws governing the practice of professional engineering. (Bus. & Prof. Code, § 6775, subd. (h).) Business and Professions Code section 6749, subdivision (a), requires a professional engineer to use a written contract when contracting to provide professional engineering services to a client. There is an exception for professional engineering services rendered to a licensed contractor. (Bus & Prof. Code, § 6749, subd. (b)(4)(D).)

Respondent did not have a written contract for his work on this project. (Factual Finding 13.) It appears that there was not a clear distinction between Wong acting as a property owner and as an affiliate or employee of Wong Construction, the licensed contracting company owned by his father. (Factual Findings 6, 10, 66, 68.) However, the evidence established that respondent's unwritten agreement was with Wong, rather than with Wong Construction, and that Wong is not himself a licensed contractor or an officer or personnel of record for the company. (Factual Findings 10,

12, 17, 27, 64, 68.) Respondent has not established that the statutory exception for agreements with licensed contractors applies to this matter. Accordingly, cause for discipline exists under Business and Professions Code sections 6749, subdivision (a), and 6775, subdivision (h).

Determination of Discipline

4. Cause for discipline having been established for respondent's failure to use a written contract, the question is the appropriate level of discipline. Protection of the public is the Board's highest priority in exercising its licensing, regulatory, and disciplinary functions. (Bus. & Prof. Code, § 6710.1.) The Board has established guidelines for license discipline orders. (Cal. Code Regs., tit. 16, § 419.) The minimum disciplinary order is reproval, and the maximum disciplinary order is license revocation.

The Board alleged that the citation described in Factual Findings 34 through 36 should be considered in determining the degree of discipline. Respondent should have been more diligent in responding promptly to the Board's information requests. However, he did ultimately provide the requested information, cooperated with the Board's investigation, and paid the reduced fine. The citation issued in connection with this investigation, which is respondent's only prior license discipline, does not establish that there is a need to increase the level of discipline in order to protect the public.

Respondent failed to establish that the statutory exception for unwritten contracts with licensed contractors applies to his agreement with Wong. However, the evidence suggests that the role of Wong may have been understandably ambiguous. Respondent acknowledges that using a written contract is a good practice, and has changed his practice so that he now uses a written contract in all cases.

Upon consideration of the record as a whole, it is determined that a public reproval is sufficient to protect the public.

Costs

5. Business and Professions Code section 125.3 provides that a licensee found to have committed a violation of the licensing laws may be ordered to pay a sum not to exceed the reasonable costs of the investigation and enforcement of the case. Respondent violated a provision of the laws governing professional engineers, as set forth in Legal Conclusion 3. As set forth in Factual Finding 98, the Board incurred $10,336.15 in reasonable costs for the investigation and enforcement of this matter.

6. In *Zuckerman v. State Board of Chiropractic Examiners* (2002) 29 Cal.4th 32, 45, the California Supreme Court set forth standards for determining whether costs should be assessed in the particular circumstances of each case, to ensure that licensees with potentially meritorious claims are not deterred from exercising their right to an administrative hearing. Those standards include whether the licensee has been successful at hearing in getting the charges dismissed or reduced, the licensee's good faith belief in the merits of his or her position, whether the licensee has raised a colorable challenge to the proposed discipline, the financial ability of the licensee to pay, and whether the scope of the investigation was appropriate to the alleged misconduct. In this matter, respondent demonstrated a good faith belief in his position, and used the hearing process to obtain a dismissal of the most serious charge against him (negligence and incompetence), and a reduction in the severity of the discipline imposed. In light of these matters, it is appropriate to significantly reduce the costs assessed against respondent, to $2,000.

ORDER

1. Civil Engineer License Number C 80734, issued to respondent Erwin Jeremiah O'Toole, is hereby publicly reproved.

2. Respondent shall pay $2,000 to the Board for Professional Engineers, Land Surveyors, and Geologists for its costs of investigation and enforcement.

DATE: 07/28/2021

Original Signed

HOLLY M. BALDWIN
Administrative Law Judge
Office of Administrative Hearings

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BEFORE THE
BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS
DEPARTMENT OF CONSUMER AFFAIRS
STATE OF CALIFORNIA

In the Matter of the Accusation Against: **ERWIN JEREMIAH O'TOOLE** **331 Moultrie Street** **San Francisco, CA 94110** **Civil Engineer License No. C 80734** Respondent.	Case No. 1243-A **ACCUSATION**

PARTIES

1. Richard B. Moore, PLS (Complainant) brings this Accusation solely in his official capacity as the Executive Officer of the Board for Professional Engineers, Land Surveyors, and Geologists, Department of Consumer Affairs.

2. On or about December 21, 2012, the Board for Professional Engineers, Land Surveyors, and Geologists issued Civil Engineer License Number C 80734 to Erwin Jeremiah O'Toole (Respondent). The Civil Engineer License was in full force and effect at all times relevant to the charges brought in this Accusation and will expire on March 31, 2021, unless renewed.

JURISDICTION

3. This Accusation is brought before the Board for Professional Engineers, Land Surveyors, and Geologists (Board), Department of Consumer Affairs, under the authority of the following laws. All section references are to the Business and Professions Code (Code) unless otherwise indicated.

4. Section 118, subdivision (b), of the Code provides that the suspension/expiration/surrender/cancellation of a license shall not deprive the Board/Registrar/Director of jurisdiction to proceed with a disciplinary action during the period within which the license may be renewed, restored, reissued or reinstated.

STATUTORY PROVISIONS

5. Section 6749 of the Code provides, in pertinent part:

> (a) A professional engineer shall use a written contract when contracting to provide professional engineering services to a client pursuant to this chapter. The written contract shall be executed by the professional engineer and the client or the client's representative prior to the professional engineer commencing work, unless the client knowingly states in writing that work may be commenced before the contract is executed. The written contract shall include, but not be limited to, all of the following:
>
> (1) A description of the services to be provided to the client by the professional engineer.
>
> (2) A description of any basis of compensation applicable to the contract, and the method of payment agreed upon by the parties.
>
> (3) The name, address, and license or certificate number of the professional engineer, and the name and address of the client.
>
> (4) A description of the procedure that the professional engineer and the client will use to accommodate additional services.
>
> (5) A description of the procedure to be used by both parties to terminate the contract.

6. Section 6775 of the Code states, in pertinent part, that:

> [T]he board may publicly reprove, suspend for a period not to exceed two years, or revoke the certificate of any professional engineer licensed under this chapter on any of the following grounds:
>
> . . .
>
> (c) Any negligence or incompetence in his or her practice.

. . .

(h) A violation of any provision of this chapter or any other law relating to or involving the practice of professional engineering.

REGULATORY PROVISIONS

7. Section 419 of the Title 16, California Code of Regulations states, in pertinent part that:

For violations of Business and Professions Code sections 6775 and/or 8780 which result in an order issued in accordance with Chapters 4.5 and 5 of Part 1 of Division 3 of Title 2 of the Government Code against a professional engineering and/or a professional land surveying license, the following provisions shall apply to disciplinary orders contained in decisions of the Board:

(a) The minimum disciplinary order shall be reproval. The maximum disciplinary order shall be revocation of the license.

(b) If warranted by extenuating and/or mitigating factors in the matter, the disciplinary order may be stayed by an express condition that the respondent comply with probationary conditions. The minimum time period in which the respondent shall have to comply with the conditions shall be two years. For purposes of this section, this time period shall be known as the period of probation.

8. Section 404 of the Title 16, California Code of Regulations states:

For the purpose of the rules and regulations contained in this chapter, the following terms are defined. No definition contained herein authorizes the practice of engineering as defined in the Professional Engineers Act.

(u) For the sole purpose of investigating complaints and making findings thereon under Sections 6775 and 8780 of the Code, 'incompetence' as used in Sections 6775 and 8780 of the Code is defined as the lack of knowledge or ability in discharging professional obligations as a professional engineer or land surveyor.

. . .

(dd) For the sole purpose of investigating complaints and making findings thereon under Sections 6775 and 8780 of the Code, 'negligence' as used in Sections 6775 and 8780 of the Code is defined as the failure of a licensee, in the practice of professional engineering or land surveying, to use the care ordinarily exercised in like cases by duly licensed professional engineers and land surveyors in good standing.

COST RECOVERY

9. Section 125.3 of the Code provides, in pertinent part, that the Board may request the administrative law judge to direct a licensee found to have committed a violation or violations of the licensing act to pay a sum not to exceed the reasonable costs of the investigation and enforcement of the case, with failure of the licensee to comply subjecting the license to not being

renewed or reinstated. If a case settles, recovery of investigation and enforcement costs may be included in a stipulated settlement.

FACTUAL ALLEGATIONS

10. In approximately 2012, WW purchased a property in San Francisco, California. WW planned to demolish the existing one-story structure, build a three-story home with a basement, and re-grade the new structure (San Francisco Project). WW's plan required excavating the site's sloping terrain and then shoring and underpinning the site's boundaries in order to maintain slope stability, site safety, and prevent adjacent buildings from ground sliding and settling.

11. In approximately April of 2015, WW hired Respondent to provide foundational engineering calculations and plans for the project, including underpinning, temporary shoring, and observations. WW also hired Respondent to assist in preparing WW's "tie-back agreement" with his neighbor, LK, and to perform special inspections at the site. Respondent did not enter into a written contract with WW for any of the work he performed for WW.

12. WW began to excavate, underpin, and shore the San Francisco Project in fall of 2015. Shortly thereafter, there was evidence of damage to LK's property (WW's neighbor). LK reported the issues to the San Francisco Building Department, and the Department required WW to have an evaluation performed by a licensed professional. LK was not satisfied with the report produced by WW, and he hired his own licensed professional, MK, to perform an inspection. MK's findings were dramatically different from the findings of WW's licensed professional. MK attributed the damage to LK's property to three main factors at the San Francisco Project, including improper shoring, which was based on Respondent's engineering plan.

13. The Board's expert opined that Respondent demonstrated negligence and incompetence in his civil engineering practice with respect to the San Francisco Project, as discussed in further detail in paragraph 14 and each of its subparts, below.

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FIRST CAUSE FOR DISCIPLINE
(Negligence and/or Incompetence)

14. Respondent has subjected his civil engineering license to disciplinary action under Code section 6775, subdivision (c), in that Respondent was negligent and/or incompetent in his practice at the San Francisco Project as follows:

a. Respondent's foundation design was based upon a single, insufficient and exploratory test boring by another engineer.

b. Respondent performed insufficient advanced reconnaissance in creating his design.

c. Respondent's foundation drawings contained several deficiencies, as follows: (1) the drawings were sealed but not signed; (2) they were disjointed in lay-out, confusing to read, and difficult to decipher; (3) were generic and showed little attention to actual site conditions; (4) did not verify existing grades or conditions of existing buildings; (5) specified engineered Piers 3 to 8 (under LK's house), that seemed impractical or impossible to install; (6) provided overall guidance that was rudimentary and insufficient for the earthwork and construction contractors to follow; and (7) provided rudimentary, insufficient, and impractical protection measures to adjacent structures at neighboring properties.

d. Respondent performed rudimentary and insufficient foundation calculations. Specifically, Respondent's calculations were: (1) based upon assumptions that were not field-verified; (2) incomplete, difficult to decipher, and had no key plan; (3) contained rudimentary, insufficient, and incoherent engineering design for the underpinning at MK's house; (4) did not address the underpinning requirements along the other perimeter lines of WW's property; (5) contained a questionable shoring design that was completely reliant on computer software; (6) contained a generic analysis for lagging around WW's construction site that was copied and pasted from a manual; and (7) did not include design of structural connections for piers, shoring, underpinning, or lagging.

e. Respondent prepared two special inspection reports and three compliance reports related to the San Francisco Project. Respondent did not describe any of his procedures or include

any photographs, field notes, analysis, work papers, discussions, correspondence, or calculations to support his three inspections in April 2015, September 2015, or December 2017.

SECOND CAUSE FOR DISCIPLINE
(Failure to Use a Written Contract)

15. Respondent's has subjected his civil engineering license to disciplinary action under Code sections 6775, subdivision (h) and 6749, subdivision (a), in that Respondent did not use a written contract when contracting to provide professional engineering services to a client. The circumstances of Respondent's conduct are set forth above in paragraphs 10 through 13, above.

DISCIPLINARY CONSIDERATIONS

16. In determining the degree of discipline, if any, to impose on Respondent's Civil Engineer License, Complainant further alleges that on or about December 10, 2018, the Board issued Respondent Citation Order 10720-L, for violating Code section 8780.2, when he failed to respond to the Board's requests for information and documents related to the San Francisco Project. Citation Order 10720-L contained an order to provide a written response related to the investigation and included an order to pay an administrative fine. Respondent appealed the citation, and the Board modified the citation on May 7, 2019, following an informal conference. Respondent paid the reduced fine and provided the Board with the requested documents.

PRAYER

WHEREFORE, Complainant requests that a hearing be held on the matters alleged in this Accusation, and that following the hearing, the Board for Professional Engineers, Land Surveyors, and Geologists issue a decision:

1. Revoking or suspending Civil Engineer License Number C 80734, issued to Erwin Jeremiah O'Toole;

2. Ordering Erwin Jeremiah O'Toole to pay the Board for Professional Engineers, Land Surveyors, and Geologists the reasonable costs of the investigation and enforcement of this case, pursuant to Business and Professions Code section 125.3; and,

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3. Taking such other and further action as deemed necessary and proper.

DATED: 12/31/2020

Original Signed

RICHARD B. MOORE, PLS
Executive Officer
Board for Professional Engineers, Land Surveyors, and Geologists
Department of Consumer Affairs
State of California
Complainant

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