

March 8, 2022  
Project No. 211031001

Mr. Mike Hoolihan  
Williams Homes  
24911 Avenue Stanford  
Santa Clarita, California 91355

Subject: As-Built Geotechnical Observations  
24934 Old Stone Way (Lot 6)  
Stevenson Ranch, California

References: Ninyo & Moore, 2019, Geotechnical Evaluation, Julien Property, 24934 Old Stone Way, Stevenson Ranch, California, Claim No. 1257P-1, Project No. 211031001, dated December 20.

Ninyo & Moore, 2020, Response to County of Los Angeles Department of Public Works Comments, 24934 Old Stone Way (Lot 6), Stevenson Ranch, California, Claim Number 1257P-1, Project No. 211031001, dated March 5.

Waypoint Engineering, 2022, Foundation Repair – Record Set, 24934 Old Stone Way, Stevenson Ranch, California, Sheets S1.0 and S1.01, dated February 17.

Dear Mr. Hoolihan:

In accordance your request, we have prepared this letter summarizing our geotechnical evaluation and observations of foundation underpinning of the residence located at 24934 Old Stone Way in Stevenson Ranch, California.

## **BACKGROUND AND GEOTECHNICAL EVALUATION**

In early 2019, Ninyo & Moore was retained to evaluate reported distress at the subject property and prepare appropriate repair recommendations. Our geotechnical evaluation included a review of background geologic and construction documents, documentation of site conditions, performance of a floor level (manometer) survey, the drilling of two exploratory borings, laboratory testing of soils, and geotechnical analysis (Ninyo & Moore, 2019).

The distress at the subject residence generally included cracks in the interior walls and ceilings, out-of-aligned doors, cracks in the garage floor, and cracks in exterior stucco. A manometer survey indicated a relative elevation differential of approximately 3.5 inches across the floor of the residence from the relative high areas at the front of the residence in the family room to the relative low areas at the northeastern corner of the residence in the master bedroom.

Our document review and subsurface evaluation indicated that the site is underlain by fill ranging from approximately 10 to 40 feet in depth. The fill is underlain by colluvium and siltstone bedrock of the Pico Formation. The results of our borings and laboratory testing indicated moderate compressibility characteristics of the fill and low compressibility characteristics of the underlying colluvium and siltstone bedrock of the Pico Formation.

Based on our evaluation, we concluded that the distress in the residence was caused primarily by settlement of the fill underlying the site. We recommended that the foundation of the residence be underpinned/stabilized by installing push piles and/or helical piles below the perimeter footings. The push piles and/or helical piles were to extend through the fill and into the underlying competent colluvium and siltstone bedrock of the Pico Formation. Foundation repair plans were prepared by Waypoint Engineering (Waypoint Engineering, 2022).

## **FOUNDATION REPAIR OBSERVATION**


The foundation underpinning included the installation of sixty-six, 2 $\frac{7}{8}$ -inch-diameter galvanized steel push piles beneath the existing footings along the perimeter and interior of the residence. The underpinning also included installation of six, 2 $\frac{7}{8}$ -inch-diameter helical piles in the outdoor room area. The push piles were advanced to depths of approximately 7.5 to 59.5 feet below existing grades. The helical piles were advanced to depths of approximately 32.0 to 40.5 feet below existing grades. The push piles and helical piles were advanced until resistance was achieved utilizing a hydraulic drive motor. The foundation repair was performed by EagleLift.

The push piles and helical piles were installed during the period of January 31 through February 23, 2022. The installation was observed by representatives from our firm and the depths of the piles checked for adequate embedment. Based on our observations, the subsurface materials encountered by the push and helical piles were as anticipated in our referenced geotechnical evaluation report (Ninyo & Moore, 2019). Accordingly, the piles were extended to depths suitable for support of the structure as recommended in our geotechnical evaluation report.


Based on our observations, it is our opinion that the installation of the push and helical piles was performed in general accordance with the project plans and the recommendations presented in our referenced geotechnical evaluation report dated December 20, 2019, and our supplemental letter dated March 5, 2020.

We appreciate the opportunity to be of service on this project.

Respectfully submitted,  
**NINYO & MOORE**

  
Scott M. Johnson, CEG  
Principal Geologist



  
Daniel Chu, PhD, PE, GE  
Chief Geotechnical Engineer



BHT/SMJ/DBC/mlc