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11 August 2021
File No. 0201699-000

80-12 Industrial Center, LLC
415 Mission Street, 45th Floor
San Francisco, California 94105

Attention: Mr. Curtis Tubbs, Senior Vice President

Subject: Geotechnical Feasibility Assessment
300 Chadbourne Road
Fairfield, California 94533

Ladies and Gentlemen:

This letter presents Haley & Aldrich, Inc.'s (Haley & Aldrich's) geotechnical feasibility assessment from our geotechnical exploration of the subject property located at 300 Chadbourne Road in Fairfield, California. The subject property is occupied by a vacant retail structure, asphalt-paved parking lots and driveways, utilities, and relatively small areas of vacant land. The findings and recommendations are based on our recent geotechnical field exploration, a 1992 geotechnical report prepared by The Twining Laboratories, Inc. (Twining) for the now-vacant Walmart development, and on our previous geotechnical and environmental studies prepared both for the subject property and for the proposed Trammell Crow development located on the west side of Chadbourne Road between Low Court and Courage Drive (APN 0028-200-710), approximately 0.15 miles south of the subject property. The site location is shown on Figure 1 – Project Locus.

We understand that the proposed development is currently being conceptualized as depicted on "Conceptual Site Plan, Chadbourne Industrial Center, Fairfield, CA, Scheme 7," prepared by HPA Architecture and dated 14 July 2020. This plan depicts two warehouse structures with footprint areas of 103,400 and 225,400 square feet, as shown on Figure 2 – Site Plan. Outside of the proposed building footprints, nearly all of the remainder of the site is proposed to be occupied by driveways and parking lots, which include landscaped parking islands.

Based on the data sources described above, it is our opinion that the proposed project is geotechnically feasible for development. As are typical for similar projects in the area, the following primary geotechnical concerns include:

- the potential for seismic shaking at the site, which will be incorporated in the structural design of the building;
- seismic hazards including liquefaction which may be isolated or mitigated through ground improvement;
- relatively shallow groundwater on the order of 9 feet below ground surface (bgs); and

- the presence of compressible clays subject to settlement under new fills which may be addressed through proper foundation design.

A brief description of subsurface conditions and discussions of preliminary findings regarding the listed primary geotechnical issues are discussed in the remainder of this letter.

Subsurface Conditions

Subsurface conditions were explored by performing three cone penetration tests (CPTs, designated SCPT-1, CPT-2, and CPT-3) and two rotary wash borings (designated B-1 and B-2) on 30 July 2021. The locations of these explorations are shown on Figure 2 – Site Plan.

Based on the results of the subsurface investigation, subsurface conditions at the site typically consist of approximately 7 to 12 feet of silt, lean clay, and silty clay, underlain by soft to stiff lean clay and fat clay extending to a depth of approximately 52 to 57 feet bgs. This thick clay layer is underlain by interbedded strata consisting of dense to very dense silty sand and sandy silt, clay, and silty clay that extend to the maximum explored depth of approximately 100 feet bgs, based on interpretations of CPT data. Although the subsurface conditions are predominately composed of fine-grained soils, granular soils consisting of medium dense silty sand with gravel were encountered at boring B-1, within a depth range of approximately 7.5 to 23 feet bgs.

Much of the site is paved with asphalt concrete, and pavement sections measured at boring locations consisted of approximately 2½ to 3 inches of asphalt concrete overlying approximately 12 inches of aggregate base-type material.

Seismic Shaking

During a major earthquake, seismic shaking has the potential to occur at the site, as is typical throughout the Bay Area, and as experienced during the 2014 South Napa earthquake and the 1989 Loma Prieta event. Shaking during an earthquake can result in ground failure, such as that associated with soil liquefaction, lateral spreading, and cyclic densification. The estimated shaking is well anticipated within the design standards of the California Building Code and extraordinary mitigation measures are not anticipated.

Soil Liquefaction and Associated Hazards

We evaluated liquefaction potential at the site by performing analyses in accordance with the methodology presented in publications prepared by Idriss and Boulanger (2008). Based on our analyses, we conclude that the potential for on-site liquefaction to occur within the upper 50 feet bgs is generally low across most of the site, with the exception of a single boring. Potentially liquefiable soils have been identified between approximately 7.5 and 23 feet bgs in boring B-1, located at the northern end of the proposed Building 1 (see Figure 2). Our analyses indicate that approximately 2½ inches of liquefaction-

induced settlement may occur within this layer following the design seismic event. This level of hazard is common for the area.

If the estimated settlement exceeds the tolerance of the proposed structure, the risk may be mitigated through ground improvement. However, since we only encountered the liquefiable soils in one boring, we recommend that a supplemental geotechnical exploration including cone penetration tests be considered to better define the limits of the liquefiable soils and the potential need, if any, for localized ground improvement.

Groundwater Conditions

Groundwater levels were inferred from a total of four pore pressure dissipation tests at SCPT-1, CPT-2, and CPT-3 performed on 30 July 2021. The data indicate stabilized groundwater levels at the site ranging from about 12.3 to 14.9 feet bgs. The 1992 Twining report states that groundwater was typically located at depths of approximately 9 to 10 feet bgs at hollow-stem auger borings drilled between 30 September and 2 October 1992. A design groundwater elevation of 9 feet below the existing grade has been assumed. During construction, groundwater may be encountered in deeper excavations such as for utilities that may be addressed with sump pumps. It is our opinion that extensive construction dewatering will not be needed.

Consolidation Settlement

Settlement sensitive and compressible soils are present in the vicinity and at this site. The results of our laboratory testing to design design parameters and settlement analyses are underway. The proposed development may be supported on shallow, spread foundations. However, we preliminarily recommend that general fills be limited to no more than 3 feet to limit static settlements.

Limitations

The services provided here include professional opinions and judgments based on currently existing data. These services have been performed according to generally accepted geotechnical engineering practices that exist in the area at the time the report was written. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this report or in any opinion, documented or otherwise.

Closing

We appreciate the opportunity to provide our professional services to you on this project. If you have any questions or require any additional information, please do not hesitate to call.

Sincerely yours,
HALEY & ALDRICH, INC.



Micah Hintz, PE, GE (CA)
Project Manager, Geotechnical Engineer



Catherine H. Ellis, PE, GE (CA)
Senior Associate, Geotechnical Engineer

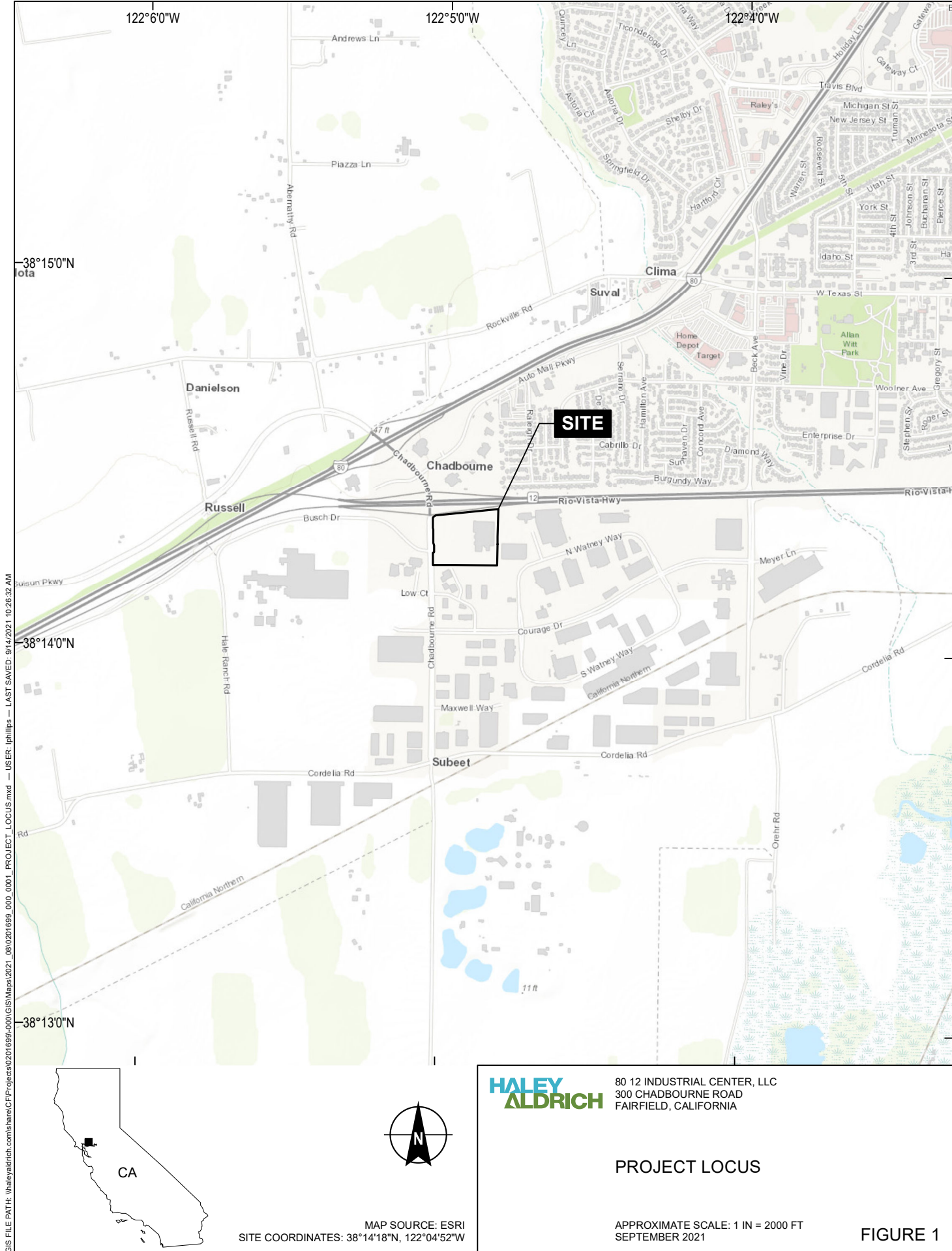


Attachments:

Figure 1 – Project Locus

Figure 2 – Site Plan

Reference: The Twining Laboratories, Inc., 1992, "Geotechnical Engineering Investigation, Proposed Wal-Mart Store, Fairfield, California, Project Number TL 492-0202-01."



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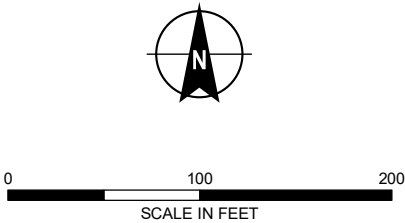


LEGEND

- SOIL BORING
- CONE PENETRATION TEST
- FIELD INFILTRATION TEST
- PREVIOUS HOLLOW STEM AUGER BORINGS
- PREVIOUS R-VALUE TEST LOCATION
- POTENTIAL OFFICE
- WAREHOUSE
- SITE BOUNDARY
- ASSESSOR PARCEL BOUNDARY

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- PREVIOUS EXPLORATION LOCATIONS DATA SOURCE: "TEST BORING AND R-VALUE LOCATIONS MAP," THE TWINING LABORATORIES, INC, 13 OCTOBER 1992
- ASSESSOR PARCEL DATA SOURCE: STATE OF CALIFORNIA AND DEPARTMENT OF FORESTRY AND FIRE PROTECTION (CAL FIRE)
- AERIAL IMAGERY SOURCE: NEARMAP, 9 JULY 2020



HALEY ALDRICH 80 12 INDUSTRIAL CENTER, LLC
300 CHADBOURNE ROAD
FAIRFIELD, CALIFORNIA

SITE PLAN

SEPTEMBER 2021

FIGURE 2