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December 21, 2022

[redacted]

Subject: 4402 Moraga Ave.
San Diego, California
Geologic Inspection

Dear [redacted]:

In accordance with our agreement I have completed a geologic inspection of the residential property located at 4402 Moraga Avenue, San Diego, California. The results of the inspection that included a floor level survey indicate that in some locations the floor elevations exceed commonly accepted standards of level. It is concluded that the cause of the elevation differentials is likely a combination of expansive subgrade soils that expand and contract with changes in moisture content and an artifact of the original construction. Inspection of the interior and exterior walls and foundations of the residence indicate that they are generally in good condition from a geotechnical standpoint with no evidence of significant soil related distress.

A review of geologic literature indicates that the property is not underlain by an active fault nor is there evidence of an ancient landslide underlying the property.

If you have any questions concerning the findings or conclusions of the report please contact me at your convenience.

Very truly yours,

Michael W. Hart
Engineering Geologist, CEG 706

1 cc addressee

GEOLOGIC INSPECTION
4402 MORAGA AVENUE
SAN DIEGO, CALIFORNIA

Purpose and Scope

In accordance with our agreement I have completed a geologic inspection of the subject residential property located at 4402 Moraga Avenue in San Diego, California. The purpose of this study is to: 1) describe the site's geologic characteristics and potential geologic hazards 2) perform visual observations of the residence for evidence of soil-related distress and 3) recommend mitigation measures if required. It is understood that the property is currently in escrow and that information relative to the site's susceptibility to potential geologic hazards is required. Accordingly, the scope of this study included a review of readily available geologic literature, and observations of the residence to determine if obvious evidence of soil-related distress was present.

Site Description

The site consists of a residential parcel on which a single-family residence has been constructed. The residence is a single level structure located on the west side of Moraga Avenue at its intersection with Geddes Drive (Figure 1). Flooring materials consist of laminate flooring in all rooms except for bathrooms that have tile flooring. Exterior improvements consist of concrete driveway, patios, and walkways in the sideyards.

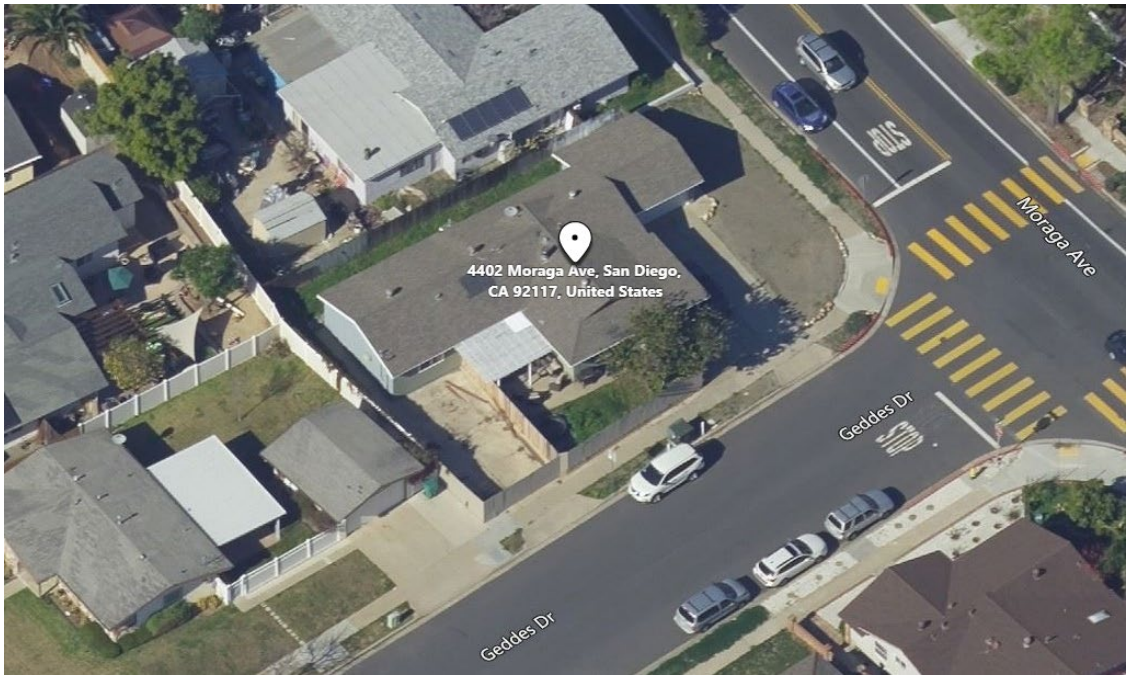

Figure 1. Oblique view to north of 4402 Moraga Avenue.

Results of Site Inspection

An inspection of the interior and exterior of the residence and appurtenances was made to determine if evidence of earth movement was present. The results of that inspection are as follows:

Interior: The flooring in the residence consists of of wood laminate in all rooms except the bathrooms that have tile flooring. Observation of the interior walls, ceilings, and floors indicate they are in good condition with no evidence of soil-related distress

Exterior Walls and Footings: The exterior stucco walls show no evidence of soil-related distress. Minor stucco cracks present on the north and south walls of the residence are judged to be unrelated to soil conditions and likely the result of normal stucco shrinkage during curing. Foundations are partially obscured by vegetation or soil. Where they could be observed, they exhibited no evidence of significant soil movement.

Patios and Walkways: The concrete patios in the backyard and sideyard are in satisfactory condition from a geotechnical standpoint with no significant soil-related distress. In addition, the concrete walk on the north side of the residence is in satisfactory condition as is the concrete-paved parking area on the south side of the residence.

Garage Slab: The garage slab was inspected and exhibits several minor cracks that have been patched are judged to be the result of either normal concrete shrinkage during curing or heave of expansive subgrade soils.

Drainage: The roof has not been fitted with rain gutters and roof water flows directly to the ground adjacent to the foundations. Roof gutters with downspouts that deliver water to the street are recommended to help control soil moisture near the foundations.

Results of Floor Level Survey

A floor level survey using a manometer was performed to determine the magnitude of reported deflections in the floor elevations. The results of the survey indicated that the maximum floor level deflection is 1.6 inches. The highest elevation occurs midway between the living room and kitchen. Inspection of the level data indicates that the highest elevations of the floor are concentrated in the east-central portion of the floor between the living room and the northern portion of the kitchen area. Floor elevation variations in individual rooms such as the bedrooms on the west side of the residence are generally within normal ranges of less than ½ inch.

The results of this inspection indicate that concrete hardscape areas and exterior stucco are generally in good condition with no evidence of significant soil movement resulting from the presence of expansive soils or settlement. The cracks in the garage floor are minor but may indicate the presence of expansive soils. Localized differential uplift of the sidewalk along Moraga Avenue also suggests that the surficial soils are locally moderately expansive. It is concluded, therefore, that the moderate floor elevation variations are likely a combination of the presence of expansive subgrade soils and an artifact of the original construction.

GEOLOGIC HAZARDS

Local Faulting:

According to mapping by Kennedy (1975) the site is not located on or adjacent to any known active or potentially active faults.

Landsliding and Slope Stability:

A review of topographic maps and landslide inventory maps indicates there is no geomorphic evidence to suggest the presence of ancient deep-seated landsliding on or adjacent to the site.

CONCLUSIONS AND RECOMMENDATIONS

1. It is recommended that roof gutters with downspouts that direct water to the street via a closed drainage pipe be installed to reduce the potential for soil moisture changes near the foundations.

2. The results of this inspection indicate that concrete hardscape areas and exterior stucco are generally in good condition with no evidence of significant soil movement resulting from the presence of expansive soils or settlement. The cracks in the garage floor are minor but may indicate the presence of expansive soils. Localized differential uplift of the sidewalk along Moraga Avenue also suggests that the surficial soils are locally moderately expansive. It is concluded, therefore, that the moderate floor elevation variations are likely a combination of the presence of expansive subgrade soils and an artifact of the original construction.

Limitations: This report has been prepared exclusively for the use of Client and is not intended to be relied upon by any other entities or persons. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside the control of this consultant. Therefore, this report is subject to review and should not be relied upon after a period of three years.