

April 21, 2025

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C/O  
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Appointment: Thursday, April 17, 2025 @ 1115PM

Subject: Visual On-Site Evaluation (OSE) Report for the Subject Property Located  
at 1234 Oribia Road, Del Mar, CA

To Mr. Morgan,

In accordance with your request, we have inspected the structure located at the aforementioned address. The purpose of our inspection was to identify gross structural and geotechnical issues with regards to the existing structure and provide recommendations for repair of the structurally deficient members if present.

A professional engineer from our firm inspected this structure on April 17, 2025 and noted the following:

1. The subject property is a residential, single level structure, constructed on a slab on grade foundation system, and was originally built in 1964.
2. We reviewed historical aerial photographs of the subject property and surrounding area. The prior usage of the subject property was an undeveloped hillside.
3. The hillside was cut in order to accommodate the building pad of the residence.
4. According to the Geologic Map of the San Diego 30'x60' quadrangle, the underlying geologic formation is Torrey Sandstone - Tt
5. To the west of the residence is a soil vertical cut - ascending. The off-site property to the west is at a higher elevation than the subject property. The vertical cut exposed a competent sandstone. Erosional debris was noted at bottom of slope. The residence is approximately ten feet from the west vertical cut.
6. To the east of the residence is a soil vertical cut – descending. The vertical cut is approximately fifty feet from top of slope. The vertical cut exposed a sandstone. The sandstone has been failing in blocks. Vegetation growth was noted in the sandstone fractures.
7. The residence is approximately twenty feet from top of slope.

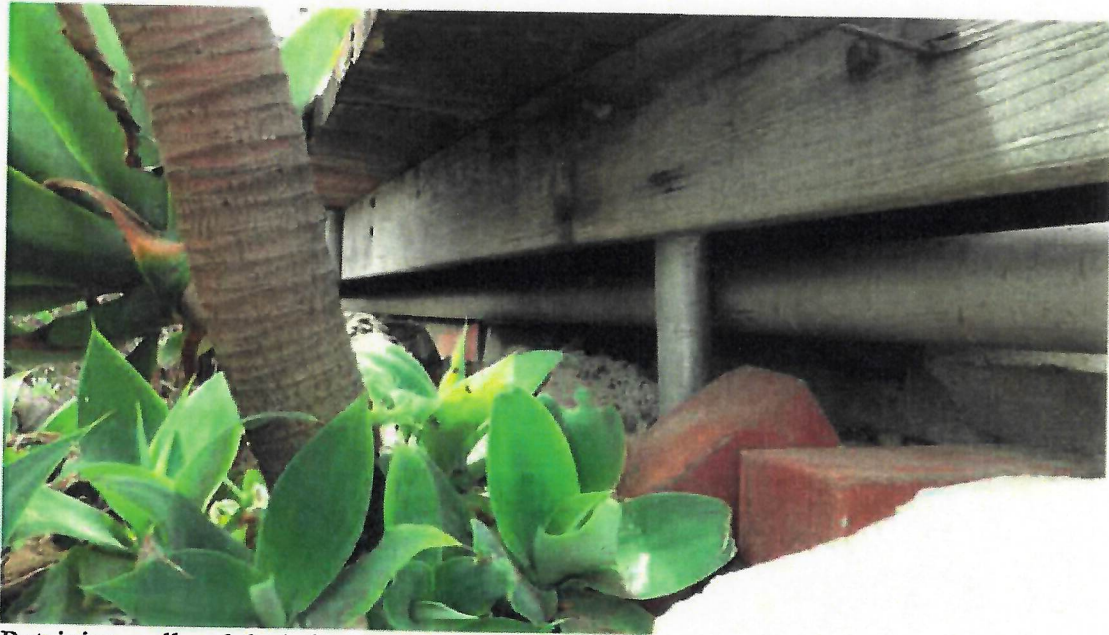
8. A wood deck was noted along the descending slope. The wood deck is substantially deteriorated and is a safety issue.
9. A poorly constructed French drain and water spigot was noted along the wood deck post.
10. Confined planters were noted adjacent to the residence.
11. A retaining wall system was noted at top of slope. The retaining wall consists of stacked, unreinforced blocks. The retaining wall is a safety issue.
12. The brick flatwork adjacent to the top of slope has rotated towards the direction of the slope.
13. We noted the following with regards to the interior of the residence:
  - a. Sections of the residence slab were exposed. Other sections were covered with floor coverings.
  - b. Minor cracks in the residence slab were noted. The exposed slab cracks had minimal vertical differential and maximum horizontal separation of  $\frac{1}{4}$ ".
  - c. The residence windows and doors appear to be relatively square and level.
  - d. No substantial interior drywall or plaster cracks were noted.
  - e. Minor deflection of the masonry fireplace was noted. No substantial crack in the masonry was noted.



Poorly constructed retaining wall



Poorly constructed retaining wall



Retaining wall and deck framing



Retaining wall



Retaining wall



Deck framing



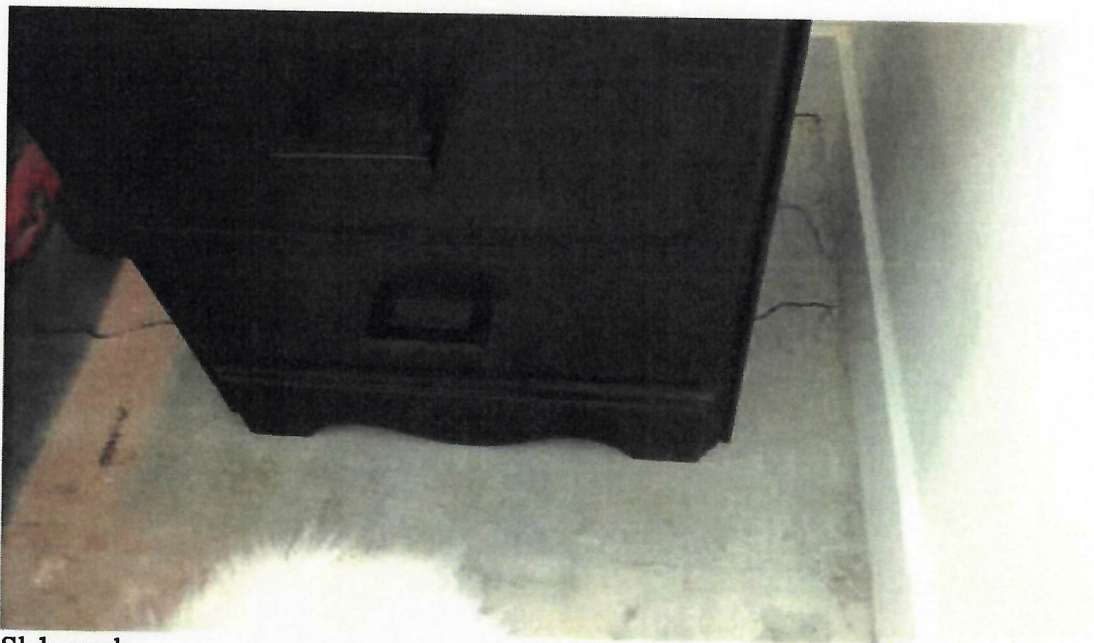
Deck framing



Poorly constructed French drain



Slab crack



Slab crack



Slab crack



Minor deformation of fireplace area



West slope – exposed sandstone



West side yard



West side yard vertical cut



Confined planter adjacent to residence



Lower level vertical cut

## Conclusions:

The rear yard wood deck and retaining wall are unsafe. The wood deck has deteriorated due to general aging and exposure. The retaining wall was poorly constructed.

The exposed soils from the vertical cuts is Torrey sandstone. The exposed sandstone appears competent. However, the sandstone is vertical and will be susceptible to erosion and surficial slope failures.

The west vertical cut is adjacent to the residence. The residence will be subject to erosional debris and runoff from the uphill neighbor. Due to the proximity of the vertical cut to the residence, periodic clearing of debris materials will be required.

The east vertical cut is a substantial distance away from the residence. We anticipate movement of these soils. However, we do not anticipate movement of the vertical cut to substantially affect the residence.

Nearly all slopes ultimately degrade by the natural processes of weathering and down slope transport. On most slopes this is a continuous, very slow process. We do not anticipate a large, rapid slope failure which is a public safety hazard.

The residence slab on grade foundation system has several cracks. We could not determine if the cracks continue through the footings.

Redirecting surface away from the slope and towards the bottom lower level bench will reduce future slope erosion and movement adjacent to the residence.

## Recommendations:

1. The exposed floor slab cracks shall be repaired in conformance with the following:
  - Floor slab cracks, 1/32-inch to 1/8-inch wide, shall be v-notched and repaired by pressure injection with engineered epoxy cement that is stronger than the existing concrete. Floor slab cracks less than 1/32-inch wide shall be surface sealed with epoxy cement.
  - Floor slab cracks more than 1/8-inch wide but less than 3/8-inch wide shall be repaired by rebar crack stitching, whereby 2-foot lengths of #5 rebar are placed in 1 inch wide and 1-1/2-inch deep slots saw cut or drilled across the crack at a spacing of 2 feet maximum along the alignment of the crack, and epoxy cemented in place. The remainder of the crack shall then be pressure injected or cavity filled with engineered epoxy cement that is stronger than the existing concrete.
  - Floor slab cracks more than 3/8-inch wide, or with a vertical crack displacement in excess of 1/8-inch, shall be repaired by saw cutting on either side of the crack for a minimum total width of 3 feet, and replacing the saw-cut section with a new slab section. The new slab section should be at least 6

inches thick and reinforced with #3 rebar spaced at 18 inches on center in two directions and placed at mid-height in the slab. The new slab section shall be doweled to the existing slab with #3 rebar spaced at 18 inches apart horizontally and extending at least 6 inches into the adjacent slab. New slab sections shall be underlain by 2 inches of clean sand over a 6-mil visqueen moisture barrier placed on grade.

2. The rear yard wood deck and retaining wall shall be removed and replaced in conformance with the City of San Diego standards.
3. The brick flatwork shall be removed, and the upper soils shall be compacted to greater than 95% of optimum density. New flatwork with an incorporated area drain system shall be installed.
4. A drainage system shall be designed and installed around the residence. The drainage system shall discharge water away from the residence, towards the lower level bench. An energy dissipitator (rip rap) shall be used to reduce erosion.
5. A biologist shall be consulted to determine the appropriate slope stabilizing vegetation for the subject property or if the existing vegetation is adequate. Slope vegetation shall be established and maintained.
6. Wet utility lines shall be checked for leaks and mitigated as necessary.
7. Irrigation around the structure shall be minimized.
8. If concrete flatwork is installed it shall conform to the following:

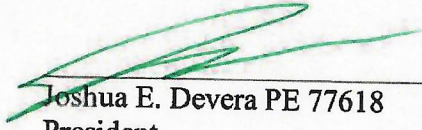
On grade exterior concrete slabs for walks and patios should have a thickness of four inches and should be reinforced with at least No. 3 reinforcing bars placed at 18 inches on center each way. Exterior slab reinforcement should be placed at approximately at mid-height of the slab. Reinforcement and control joints should be constructed in exterior concrete flatwork to reduce the potential for cracking and movement. Joints should be placed in exterior concrete flatwork to help control the location of shrinkage cracks. Spacing of control joints should be in accordance with the American Concrete Institute specifications. When slabs abut foundations they should be dowelled into the footings.

9. In general, site drainage shall be maintained/improved such that the grounds surrounding the structure slope a minimum of 5% positively away from the structure. Flatwork may be used in lieu of grading. No water shall be allowed to pond and infiltrate into the soils adjacent to the structure footings. Runoff shall be directed toward a public storm water collection system. Confined planters adjacent to the footings shall be removed or sealed to prevent water from entering the soils adjacent to the structure and damaging the structure foundation. All drain pipes and downspouts shall discharge to a minimum of five feet away from the structure.

Irrigation and vegetation within five feet of the structure shall be terminated.

The opportunity to prepare this report for you is greatly appreciated. If you have any questions or concerns, please feel free to contact our office at (619) 258-9000

Sincerely,

  
Joshua E. Devera PE 77618  
President

