



BLUFF EDGE DETERMINATIONS

Development on oceanfront properties are required to be sited a sufficient distance from the bluff edge to ensure stability. Provided below is guidance on required content and how to determine the bluff edge location.

Projects that Require a Bluff Edge Determination

New development (including accessory structures), major remodels, and additions on oceanfront or oceanfront bluff property

The Following Land Use Element Definitions Must Be Used to Determine the Bluff Edge Location

Oceanfront bluff edge or **coastal bluff edge** is defined as the upper termination of a bluff, cliff, or seacliff. In cases where the top edge of the bluff is rounded away from the face of the bluff, the bluff edge shall be defined as that point nearest the bluff face beyond which a downward gradient is maintained continuously to the base of the bluff. In a case where there is a step like feature at the top of the bluff, the landward edge of the topmost riser shall be considered the bluff edge. Bluff edges typically retreat over time as a result of erosional processes, landslides, development of gullies, or by grading (cut). In areas where fill has been placed near or over the bluff edge, the original bluff edge, even if buried beneath fill, shall be taken to be the bluff edge.

References from the California Coastal Commission

- [Geotechnical Review for 2647 Victoria Drive](#)

Minimum Content Requirements

- Identification of geologic hazards affecting the project site and necessary mitigation measures
- Statements that the project site is suitable for the project and that the development will be safe from geologic hazards for its economic life; project will not create or contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the reliance on existing or construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
- Slope stability analysis and estimates of the long-term average bluff retreat/erosion rate over the expected life of the development. The predicted bluff retreat shall be evaluated considering not only historical bluff retreat data, but also acceleration of bluff retreat made possible by continued and accelerated sea level rise, future increase in storm or El Niño events, and any known site-specific conditions. To assure stability, the development must maintain a minimum factor of safety against landsliding of 1.5 (static) or 1.2 (pseudostatic, $k=0.15$ or determined through analysis by the geotechnical engineer) for the economic life of the structure. Factor of safety should be identified for oceanfront and bluff top lots on a plan or cross section.
- Range of sea level rise scenarios, based on the best available science, which is currently the [2018 Sea-Level Rise Guidance](#), including the medium-high risk aversion scenario of approximately 6.6' in the erosion analysis.
- Wave uprush and impact report that considers a seasonally eroded beach combined with 75-year erosion, high tide conditions, combined with 75-year projections for sea level rise, storm waves from a 100-year event or a storm that compares to the 1982/83 El Niño event.