



December 9, 2022

Delivered via email

To: Karl Schwing
District Director, San Diego Coast
California Coastal Commission

Re: W18a - Application A-6-ENC-20-0022, Marco and Nicole Hanlon, 100 & 104 Fifth Street, Encinitas

Honorable Commissioners,

The Surfrider Foundation is a nonprofit grassroots organization dedicated to the protection and enjoyment of our world's ocean, waves, and beaches through a powerful network. Thank you for the opportunity to comment on this project. We opposed this project in front of the Encinitas Planning Commission in March 2020 and appealed the project to the Coastal Commission in June 2020. We agree with the staff report as they addressed many of our concerns raised during opposition and appeal. We thank staff for developing the following Special Conditions:

- #1: Prohibits construction of a basement, as this is not consistent with Encinitas Land Use Plan Public Safety Policy 1.6.
- #1 and #8: Requires removal of portions of the private beach accessway.
- #3 and #10: Requires the application to waive the right to any future shoreline armoring, remove the structure if threatened, and record a deed restriction to codify these requirements.

We continue to raise issues concerning the following points that aren't currently addressed:

1. Determination of the Geologic Setback Line (GSL) ignored highly credible and site-specific retreat bluff retreat rate information and in its current location will not ensure a factor-of-safety over 75 years.
2. Unpermitted riprap in front of the property should be removed.
3. Determination on the presence of a southern retaining wall within the GSL must be considered.

1. Geologic Setback Line and Retreat Rate Calculations

We continue to disagree with the location of the proposed GSL, as the determination of its location ignored highly credible and site-specific retreat bluff retreat rate information as determined in 2015 by the United States Army Corps of Engineers (ACOE)¹.

The applicant used a historical bluff retreat rate of 0.3 feet per year, and claimed that this retreat rate is at the higher end of retreat rates observed for the Encinitas bluffs in previous studies (p 22, staff report). No matter what previous studies they may be using, they ignored the 2015 ACOE study which determined a bluff retreat rate at this location to be 1.0 ft per year, almost triple the applicant’s proposed retreat rate.

ACOE’s Environmental Impact Statement (EIS) for the 50 year Encinitas Solana Beach Coastal Storm Damage Reduction Project characterizes coastal bluff and shoreline morphology for the stretch of coast from North Encinitas to Del Mar. The study is highly credible because it is recent and site-specific; and it survived the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA) and Coastal Commission review process as well as being the basis to justify a 50-year project as represented to Congress.

ACOE’s study estimates erosion rates for five consecutive but geomorphically distinguishable areas, categorized as reaches:

Table 1.8-1 Study Area Reaches

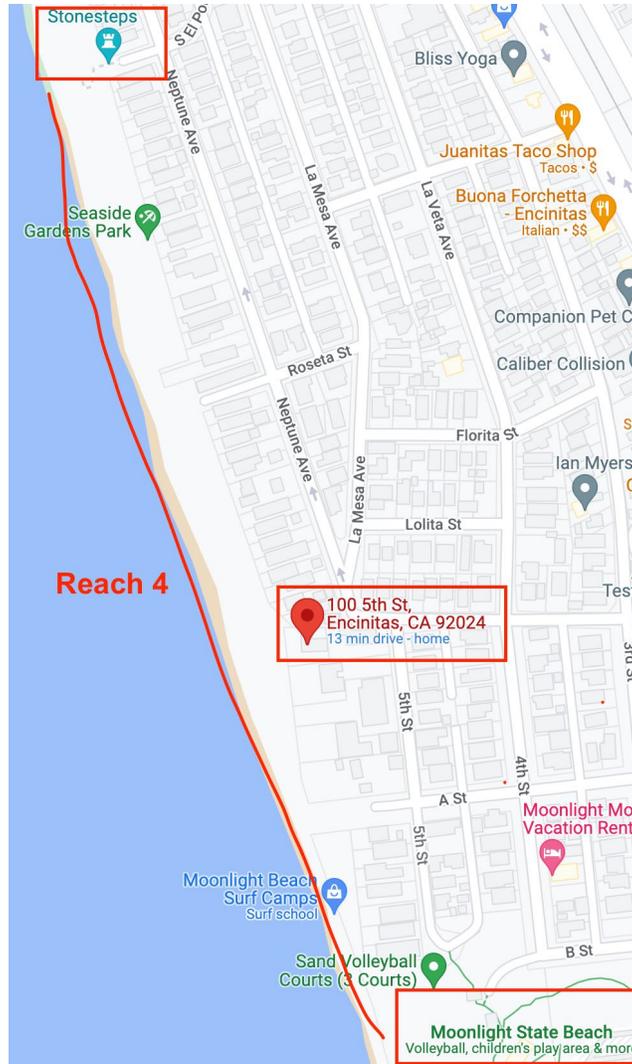
Reach	Range		Approx. Length (mi)
	From	To	
1	Encinitas City Limit	Beacon’s Beach	1.1
2	Beacon’s Beach	700 Block, Neptune Ave.	0.3
3	700 Block, Neptune Ave.	Stone Steps	0.5
4	Stone Steps	Moonlight Beach	0.5

Encinitas & Solana Beach Shoreline Study, Final Report (p 11)

‘Reach 4’ stretches from Stone Steps to Moonlight Beach and includes the relevant coastal stretch of property.

1

<https://www.spl.usace.army.mil/Missions/Civil-Works/Projects-Studies/Solana-Encinitas-Shoreline-Study/>



Reach 4 is described as vulnerable to future bluff failure:

“Along the entire reach, except for the southern portion of the reach immediately adjacent to Moonlight Beach, an approximate 2 to 4- foot notch exists at the base of the bluff where notch protection measures have not been instituted. The prevalent notch development coupled with the already over-steepened upper bluff zone is prone to future bluff failures, some of which could be catastrophic.” (page 9, Encinitas & Solana Beach Shoreline Study)

ACOE used a peer-reviewed and -approved method to determine an erosion rate of 1 foot per year in the area categorized as Reach 4 (Figure 7.2-1).

Table 7.2-1 Summary of Sea Cliff and Bluff-Top Erosion

Reach	Sea Cliff (ft/yr)	Bluff-Top (ft/yr)
1	0.3	0.2
2	0.4 - 0.5	0.3 - 0.5
3	1.2	1.2
4	1.1	1.0
5	0.05 - 0.6	0.2 - 0.6
6	0.2 - 1.0	0.15 - 1.0
7	Beach, no cliff or bluff	---
8	0.4 - 1.2	0.4 - 1.2
9	0.4 - 1.2	0.4 - 1.2

Encinitas & Solana Beach Shoreline Study Appendix C,
Geotechnical Engineering Appendix, (p C-37)

When multiplied over a 75 year time period and added to the applicant’s geotechnical report factor of safety setback (30 feet)², the resulting setback is 105 feet:

$$75 \text{ feet (bluff retreat over 75 years)} + 30 \text{ feet (safety factor)} = 105 \text{ foot setback}$$

We disagree with the Commission’s geologist’s findings that:

...”the Commission may accept the applicant’s analysis and a future bluff retreat projection of 30 feet in 75 years, due to the relatively high rate of historical bluff retreat (0.4 ft./yr.) assumed by TerraCosta, which greatly exceeds the historical bluff retreat rates in the project vicinity...

The Commission’s geologist also neglected to use the recent, highly credible, and site-specific retreat rate of 1 ft per year as determined by the ACOE:

“Dr. Street has independently evaluated future bluff retreat at the site using both the SCAPE equation and projections provided by the USGS CoSMoS cliff retreat model. Dr. Street’s analysis used observed historical retreat rates for unarmored bluffs in the project area but avoided the several non-conservative assumptions contained in the TerraCosta analysis. Based on this analysis, under scenarios assuming 6.6 – 7.1 feet of sea level rise by 2100, the coastal bluff at the site could retreat approximately 30 - 32 feet over the next 75 years. Given

² The 30 ft setback required to maintain a 1.5 safety factory was provided by the applicants. See p 23, staff report: “TerraCosta also performed a simple calculation assuming a bluff erosion rate of 0.4 ft./yr. over the next 75 years, yielding 30 feet of bluff retreat. The applicant’s analysis combines this long-term bluff retreat value with the setback needed to achieve a 1.5 factor of safety (static condition) to arrive at a GSL located approximately 60 - 70 feet (30-40 ft + 30 ft) landward of the bluff edge.”

the large uncertainties in projecting both future sea level rise and the erosion response of coastal bluffs, this projection is not significantly different than TerraCosta's, assuming an average future bluff retreat rate of 0.4 ft./yr. (page 24, staff report)

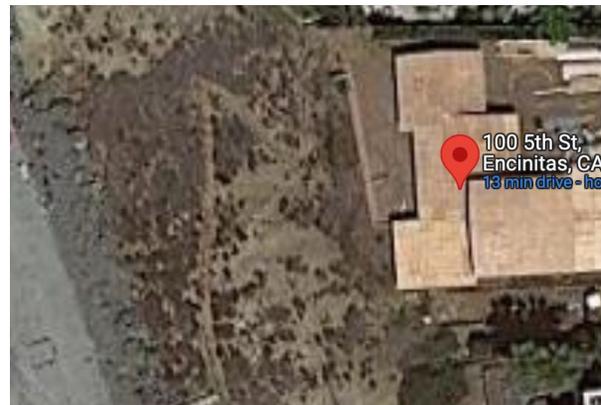
The GSL should be calculated using the ACOE's retreat rate and all proposed development should be located landward of that GSL.

2. Unpermitted Riprap Should Be Removed

We believe Special Condition 1(i) should be further strengthened to require removal of the unpermitted riprap. Currently it states:

"Any depiction of the rip rap revetment at the base of the bluff shall indicate that it is unpermitted." (page 8, staff report)

"The riprap appears, based on photographs, to have been placed between 1979 and 1989 (Exhibit 8). The riprap at the base of the bluff is on the adjacent parcel not owned by the applicant." (page 15, staff report)



Images from the Coastal Records project³ and Google Maps show the riprap is located directly in front of 100 5th St. While the staff report indicates this riprap is on an adjacent lot, it likely was placed by previous property owners thus is the responsibility of the project applicant. If necessary, a determination of the party that placed the riprap should be made by the enforcement division and the burden to remove it placed on that party. Surfrider Foundation San Diego Chapter will be reaching out within the community as well to try and locate the responsible party. Regardless of

³ <https://www.californiacoastline.org/cgi-bin/image.cgi?image=201312144&mode=sequential&flags=0&year=current>

who placed it there, the repair of the riprap other than to remove it as it erodes or moves, should be waived in the present permit.

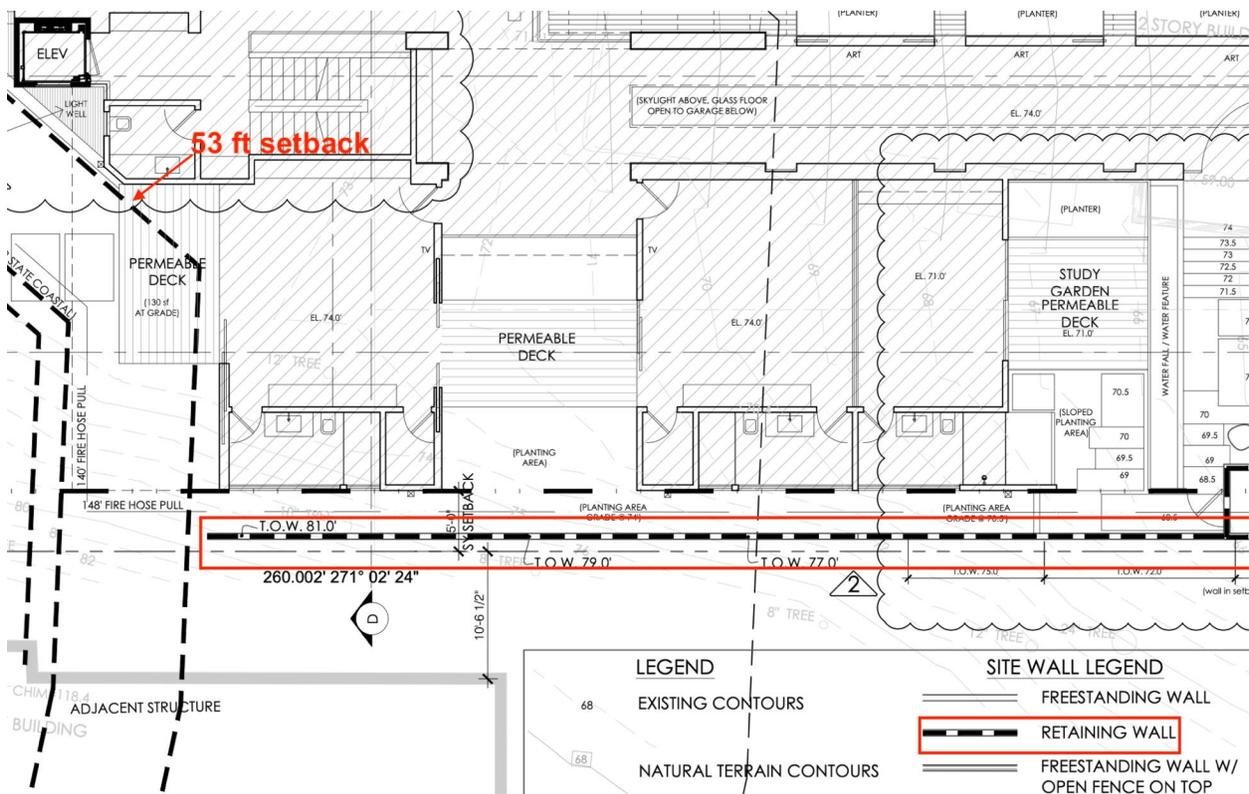
3. Presence of Retaining Wall Seaward of GSL

In addition, the retaining wall along the southern boundary of the subject property may be seaward of the GSL and could thus constitute a form of shoreline protection for new development. Coastal Act Section 30253 prohibits this wall and any development it is designed to protect:

New development shall do all of the following:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard

(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.



Attachment PC-9, page 182, showing southern retaining from March 19, 2020 Encinitas Planning Commission Meeting⁴

The new GSL is not indicated in these planning documents from 2020, but given that the southern retaining wall extends almost to the initial 53-ft setback, it will be seaward of the new GSL as determined by the Coastal Commission. The Exhibits provided by the Coastal Commission do not include the above drawing that was submitted to the Encinitas Planning Commission. If the southern retaining wall is removed from the plans or is not seaward of the final GSL under review by the Coastal Commission, then this comment may be disregarded. However, if the plans include the southern retaining wall seaward of the GSL then this comment should be considered and the exhibits updated to reflect removal of the retaining wall.

In conclusion, Surfrider recommends recalculating the GSL for this project using the latest peer-reviewed bluff erosion studies for the Encinitas bluffs, adding a condition to remove the riprap as it's an unpermitted, nonconforming shoreline protective device that exists at the site of a proposed new development, and removal of any retaining walls seaward of the GSL if they are still included in the project plans. Thank you for the opportunity to comment on this item.

Sincerely,

Kristin Brinner & Jim Jaffee
Residents of Solana Beach
Co-Leads of the Beach Preservation Committee
San Diego County Chapter, Surfrider Foundation

Mitch Silverstein
Policy Coordinator
San Diego County Chapter, Surfrider Foundation

https://encinitas.granicus.com/MetaViewer.php?view_id=7&clip_id=2103&meta_id=109533