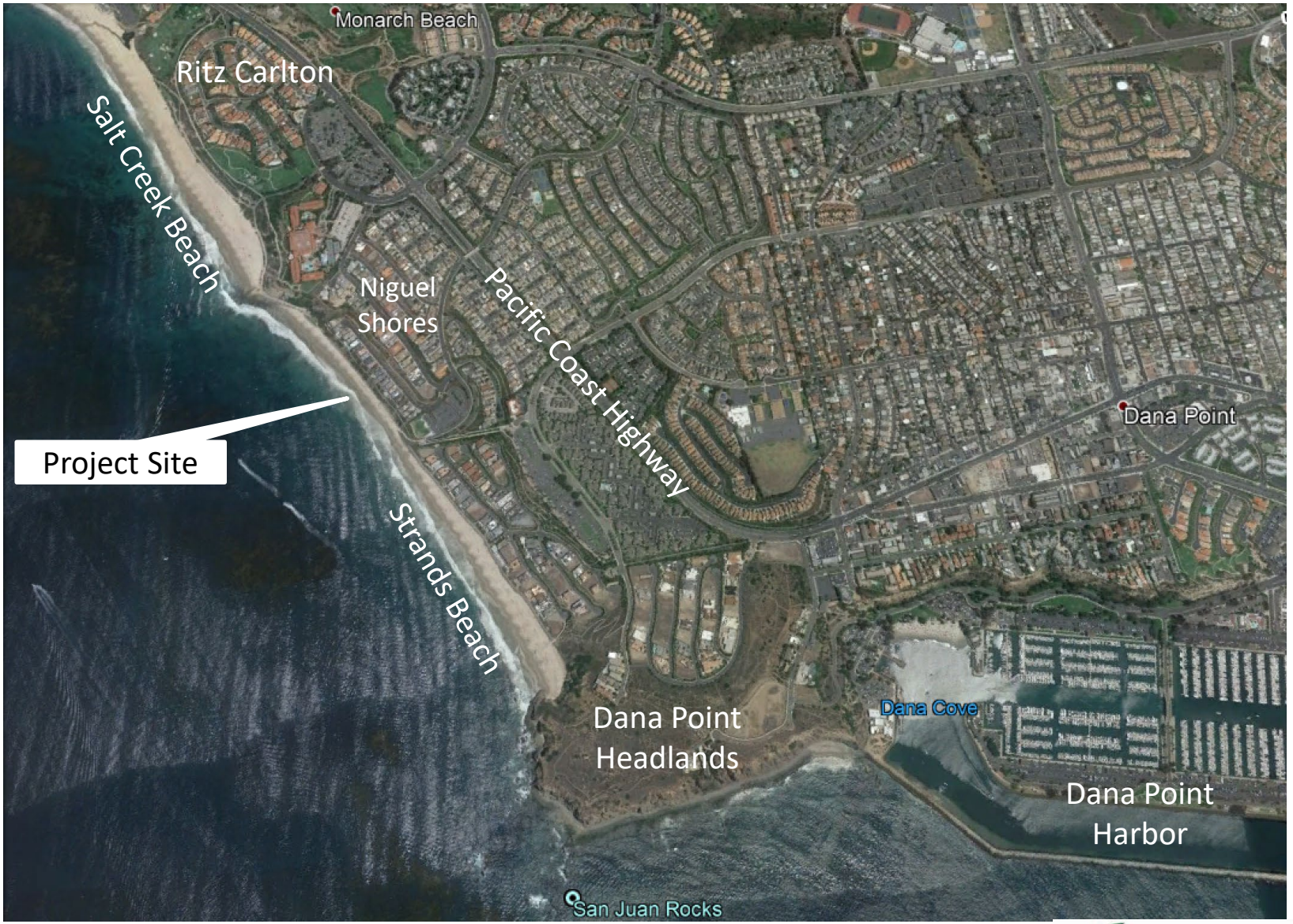
Niguel Shores
Rock Revetment Repair & Maintenance Project

OCparks

Project Location



Project Limits

Existing Revetment and Beach Conditions

Entire length of shoreline armored since the 1960's, with upgraded revetments located up and down coast of the project site

Existing Revetment and Beach Conditions

Typical Summer Beach Profile

Dynamic beach environment with significant changes in shoreline profile between summer and winter

Typical Winter Beach Profile

Beach generally in a state of equilibrium with existing revetment - no evident long-term trends of shoreline erosion or accretion

Project History

- **1968/1969** – Subdivision grading and infrastructure with landslide stabilization system constructed on private property, landslide stabilization system consisting of:

  1) Engineered buttress

  2) Sand drain

  3) Rock revetment

- **1971** – Developer conveys to the County beach parcel with revetment, parking areas, beach access paths and land for what later became Salt Creek Beach Regional Park

  - Beach parcel conveyed with pre-coastal revetment & agreement to maintain the revetment and slope improvements

- **1989** – following litigation related to 1983/1984 storm damage, County & Association entered into Agreement and Covenant (running with the land) obligating County to maintain the revetment

Coastal Development Permit Review Summary

- **1977-1998** – Coastal Commission takes various permit actions to address landslide damage and County requests to maintain and repair revetment (EME-134, P-80-7056, 5-86-109, 1998 Exemption)
- **2011/2012** – County applies to reconstruct the revetment and Coastal Commission denies permit 5-11-053, finding:
  - Revetment must be located as far landward as feasible
  - Revetment must be designed sufficiently high to avoid overtopping
  - Revetment design must incorporate a public walkway to mitigate adverse impacts to public access
- **2020** – County applies to reconstruct the revetment with Coastal Commission required public walkway; Coastal Commission denies permit 5-19-0288 due primarily to loss of beach area from larger reconstructed revetment footprint.

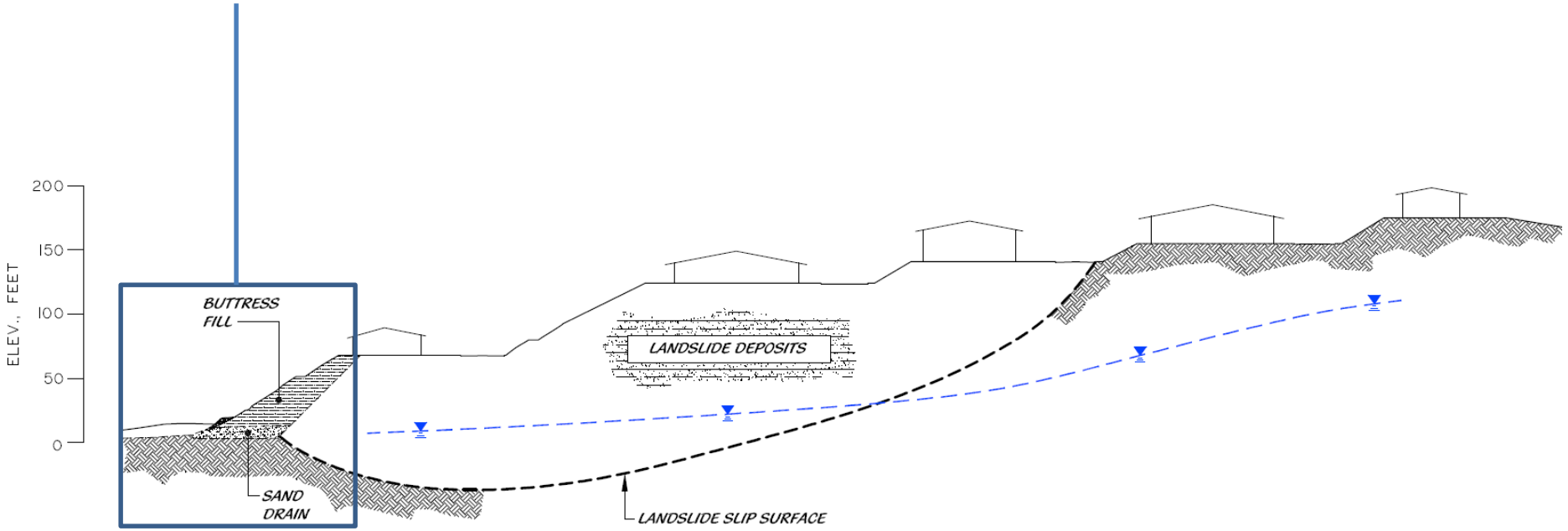
Geologic Conditions and Hazards

Pre-Coastal revetment necessary to protect existing development from extensive landslide hazard

Geologic Conditions and Hazards

Geologic Conditions and Hazards

Landslide stabilization system must remain intact to prevent failure during and after construction:



TYPICAL CROSS SECTION - NIGUEL SHORES

SCALE: 1"=100' (HORIZ. & VERT.)

Geologic Conditions and Hazards

Landslide stabilization system must remain intact to prevent failure during and after construction:

1) Engineered buttress

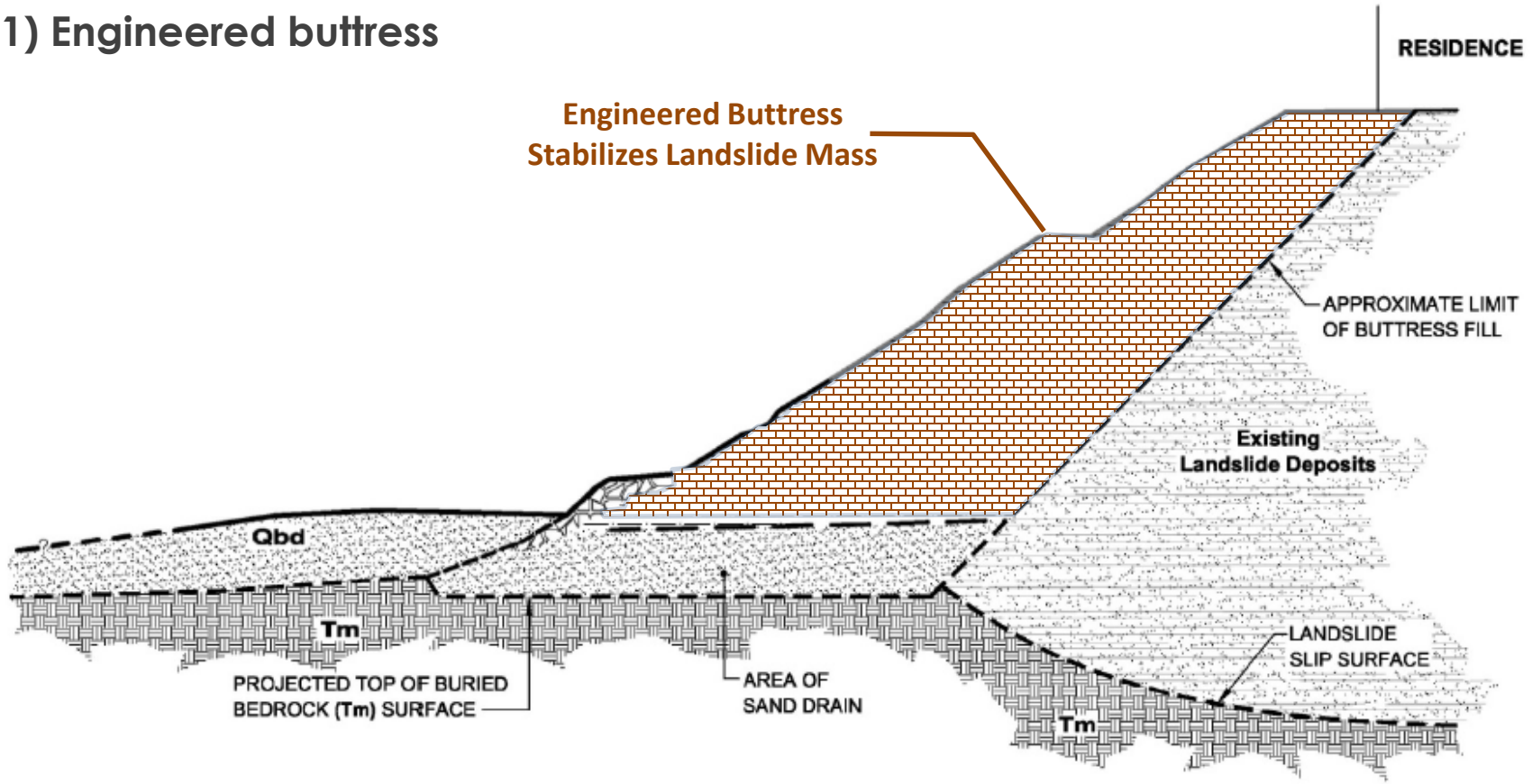


Figure 10

Geologic Conditions and Hazards

Landslide stabilization system must remain intact to prevent failure during and after construction:

1) Engineered buttress
2) Sand Drain

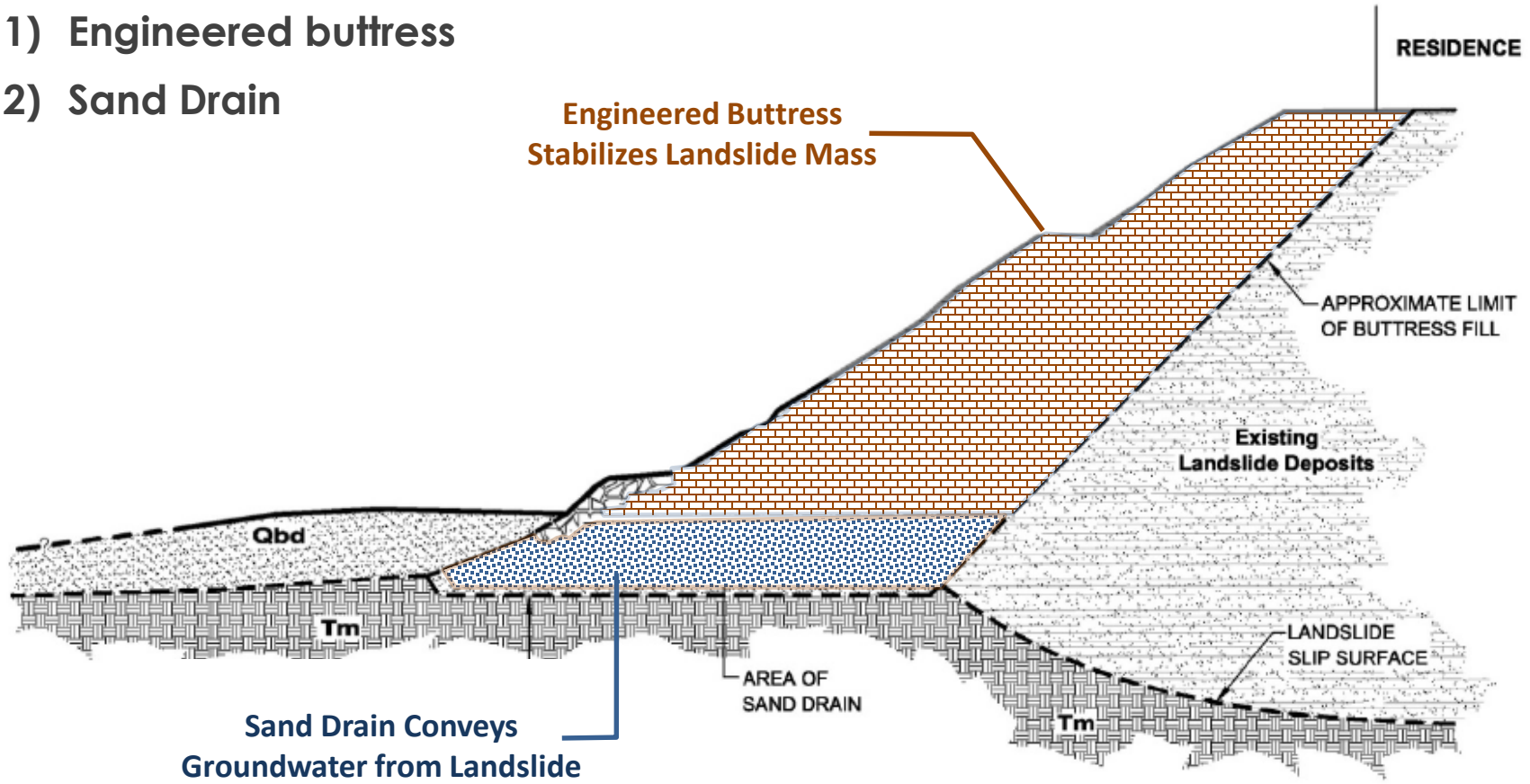


Figure 10

Geologic Conditions and Hazards

Landslide stabilization system must remain intact to prevent failure during and after construction:

1) Engineered Buttress
2) Sand Drain
3) Rock Revetment

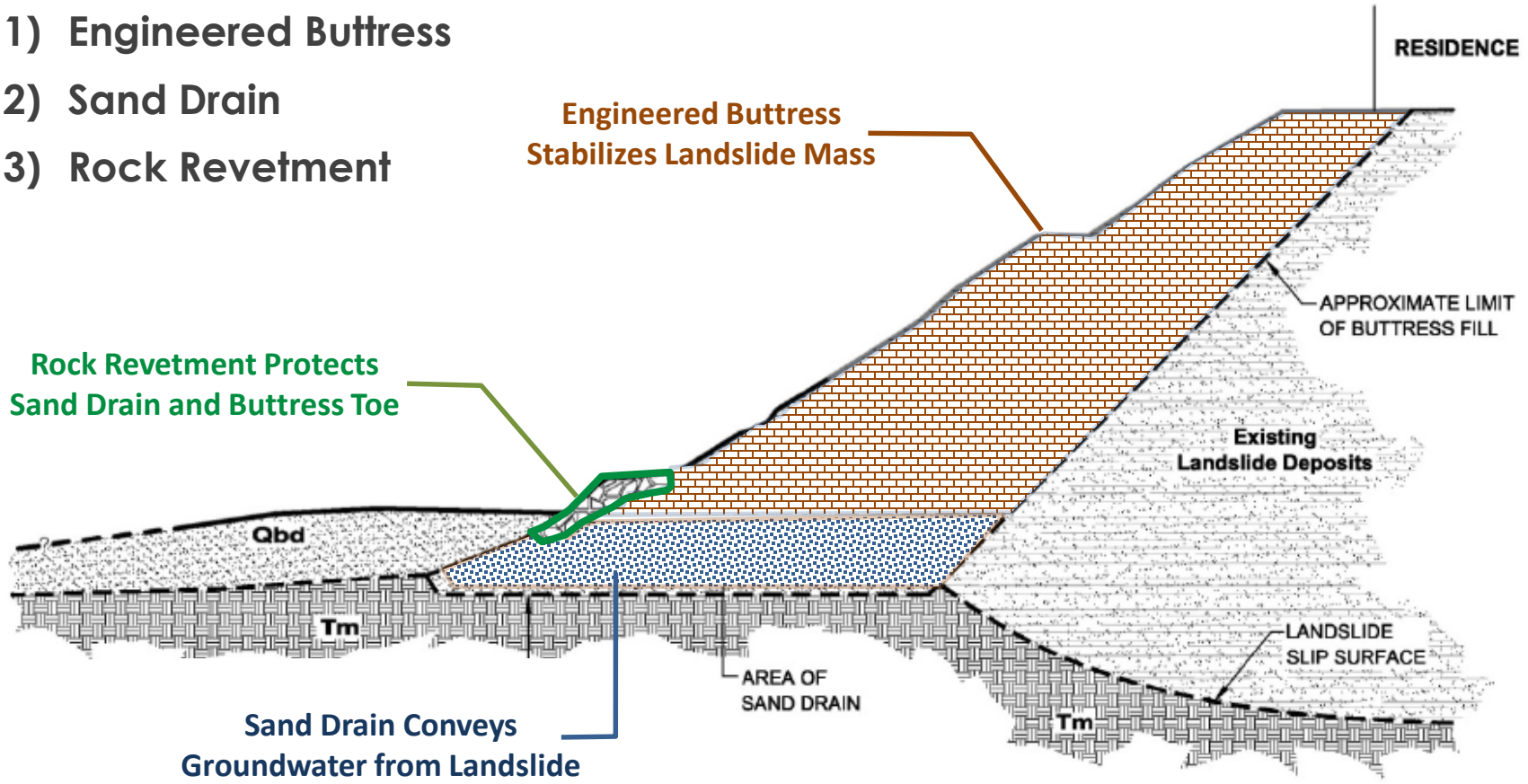
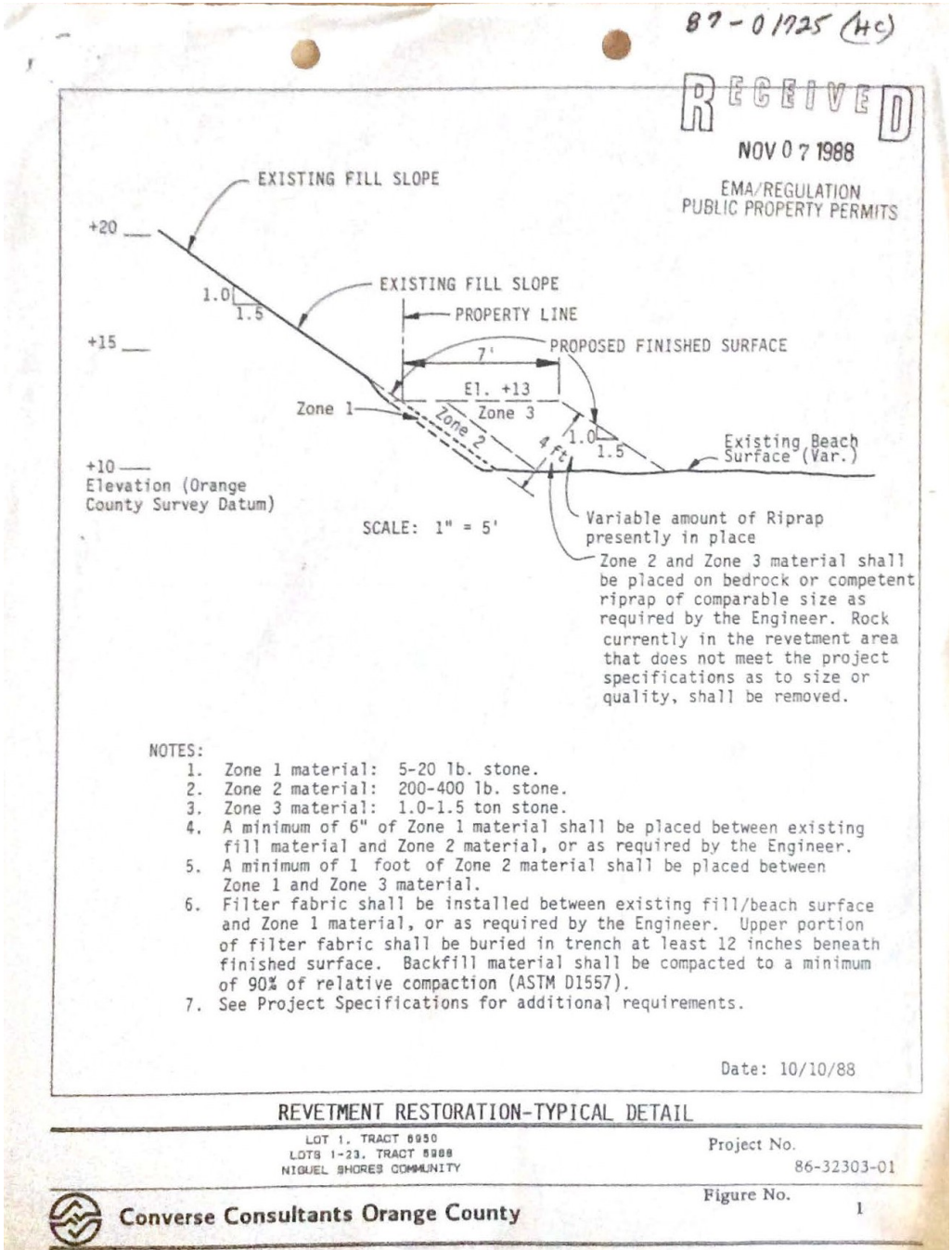


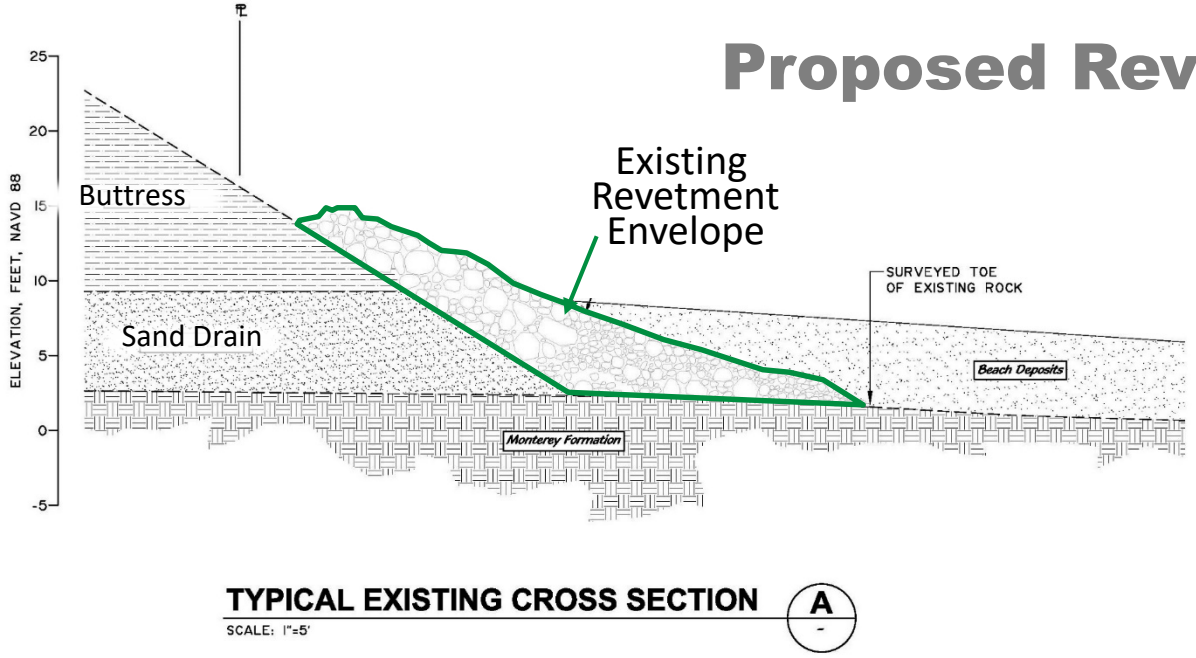
Figure 10

1988 Revetment Repair



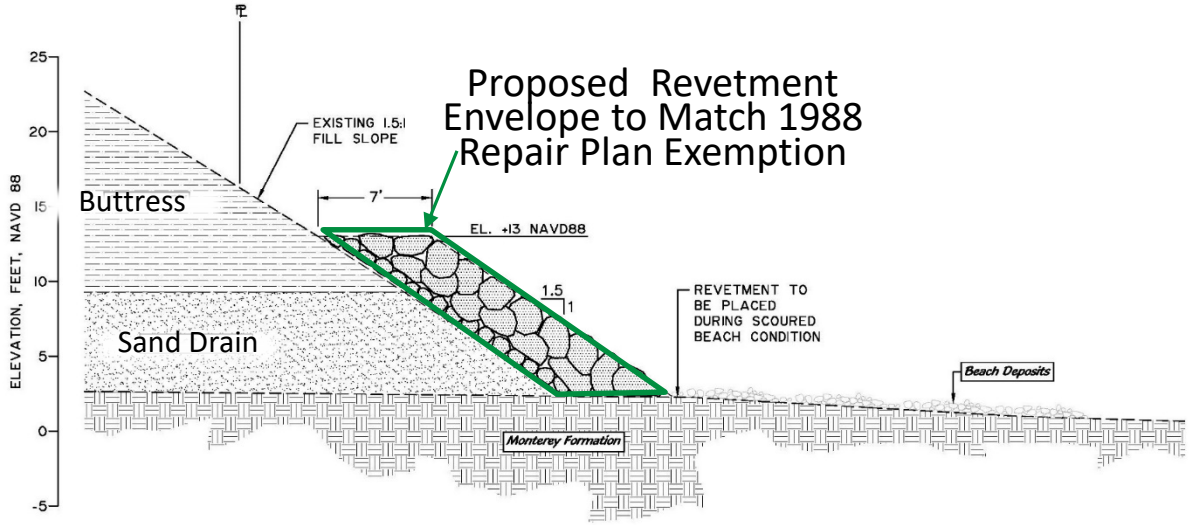
1988 Coastal Commission Exemption allowed for repair of rock revetment, including removal of stone not meeting project specifications and placement of 1.0 to 1.5-ton and smaller stones throughout what remained of the revetment.

Proposed Revetment Repair



TYPICAL EXISTING CROSS SECTION A

SCALE: 1"=5'



TYPICAL PROPOSED CROSS SECTION A

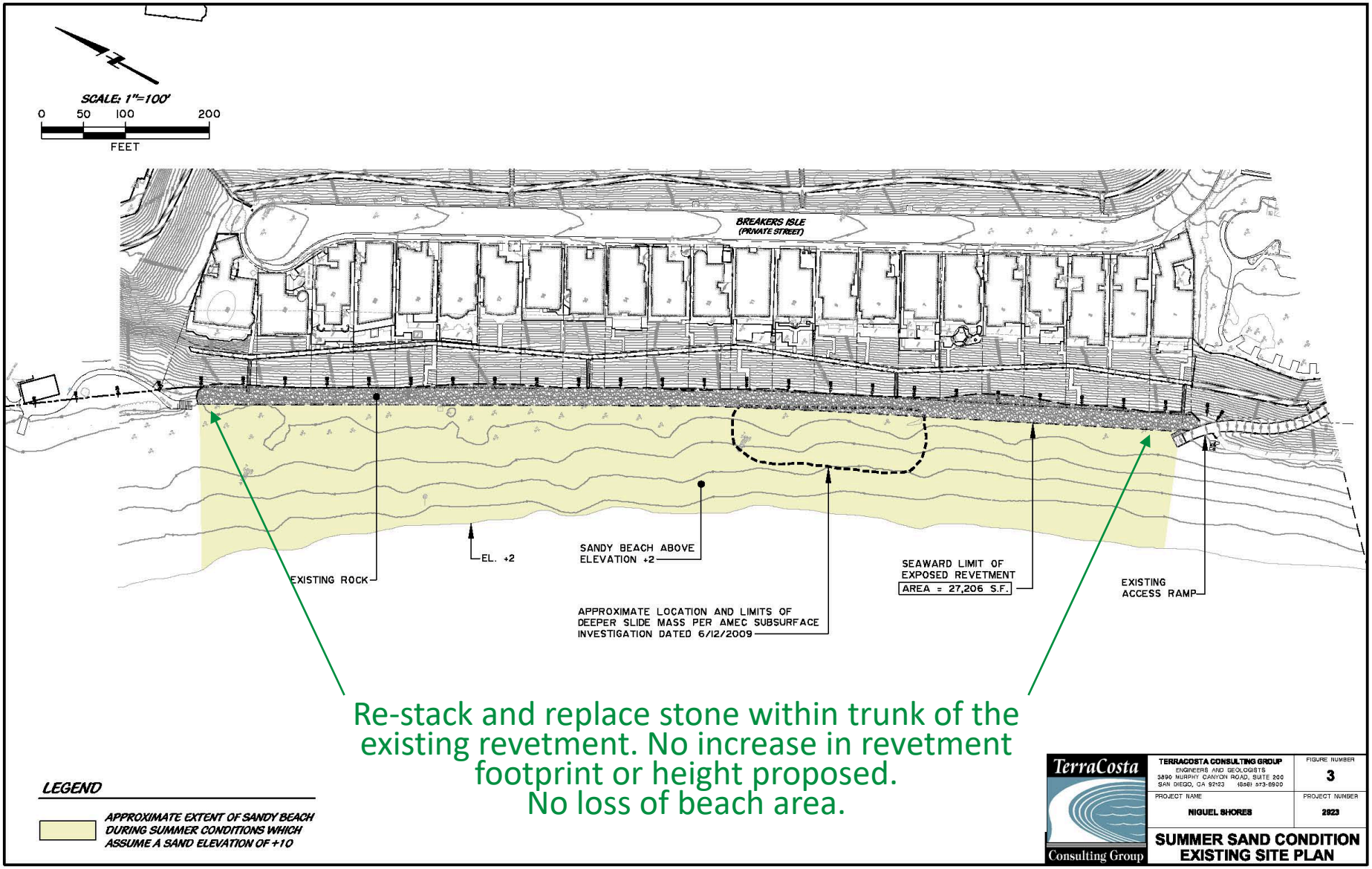
SCALE: 1"=5'

Proposed repair plan would reestablish 1988 revetment envelope by restacking displaced stone and adding 1.0 to 1.5-ton stones to cover exposed areas of buttress fill.

No more than 1000 tons of rock to be added.

No increase in revetment footprint or height.

Public Access and Recreation



Re-stack and replace stone within trunk of the existing revetment. No increase in revetment footprint or height proposed.
No loss of beach area.

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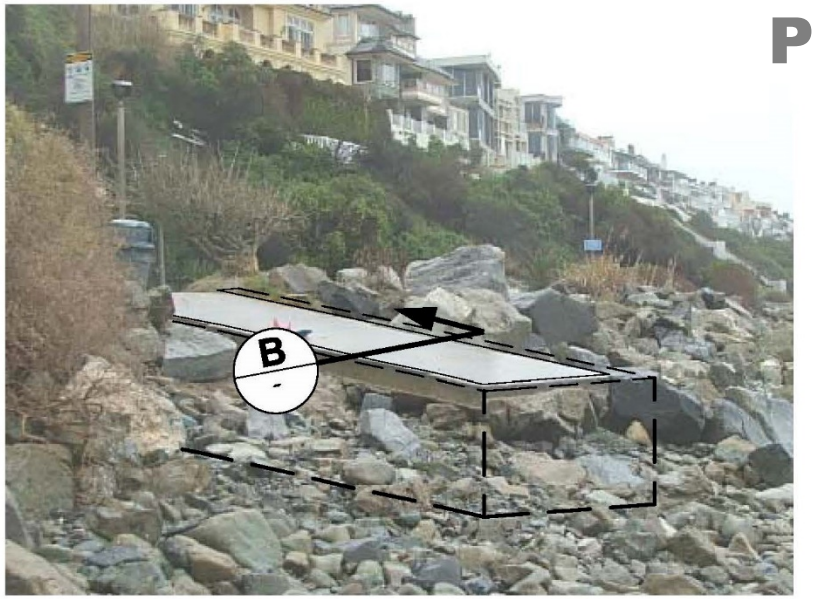
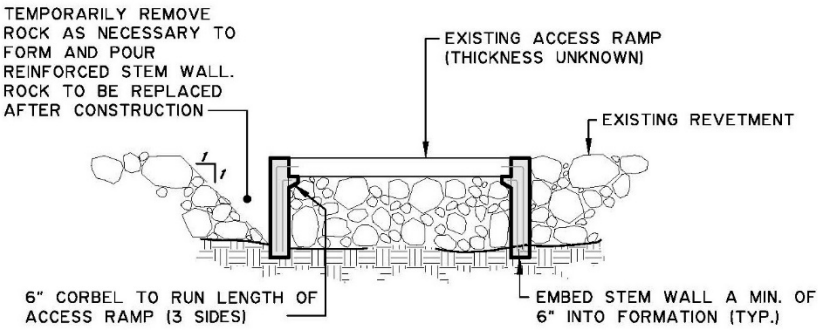
Proposed Revetment Repair



EXISTING SOUTH ACCESS RAMP-
NORTH RAMP AND NORTH STAIRS SIMILAR

Proposed repair plan also includes repair/stabilization of the north and south access ramps, and north stairs.

PHOTO 1-EXISTING NORTHERLY ACCESS STAIR



TYPICAL CROSS SECTION
THRU NORTH & SOUTH ACCESS RAMPS B -
SCALE: 1"=5'

PHOTO 2-DETAIL OF STAIR FOOTING
NTS

Next Steps

- OC Parks submittal of new coastal development permit application to Coastal Commission
- Coastal Commission Staff review of application for filing and analysis for consistency with the Coastal Act.
- Coastal Commission Staff Report Preparation and Public Hearing.

Submit Questions or Comments To:

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