

Coastal Cliff and Dune Erosion Projection Without Armoring - North Carmel Beach

1 ft of SLR (2045 - 2060)



2 ft of SLR (2060-2080)



4 ft of SLR (2080-2100+)



Projected Bluff Crest Position Across Sea Level Rise Elevations

Most Likely	Best	Worst Case
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Notes: Erosion distances represent projected long-term time-averaged trends in erosion without coastal armoring. Future erosion distances and bluff crest position may vary from these projections.

Sea level rise elevations and time periods are based on 2018 OPC guidance and refer to a high emissions scenario with 2020 as a baseline.

Shoreline Features

Boardwalk	Seawalls
Beach Access Stairway	Approx. Cliff to Terrace Contact Location
Coastal Access Location	Bluff-Top Edge
Riprap Footprint	

0 75 150 Feet

Aerial: EagleView, 2022

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Coastal Access Location	Bluff-Top Edge
Riprap Footprint	

N

W

E

S

0

75

150 Feet

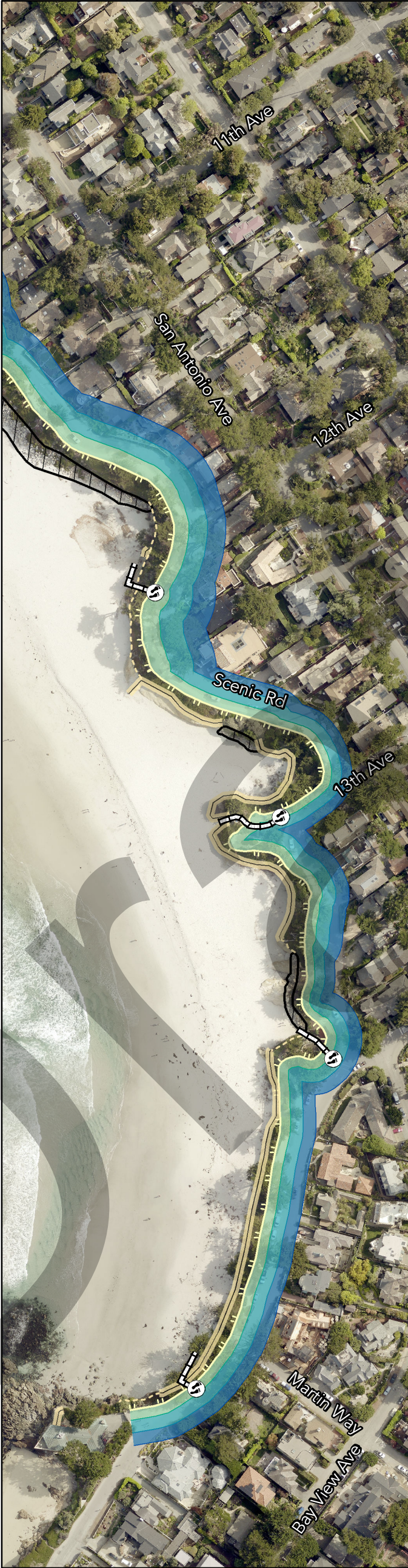
Aerial: EagleView, 2022

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Shoreline Features

Boardwalk

Beach Access Stairway

Coastal Access Location

Riprap Footprint

Approx. Cliff to Terrace Contact Location

Bluff-Top Edge

Armoring Storm Wave Overtopping Potential

Low

Medium

Medium-High

Very High

Not Evaluated

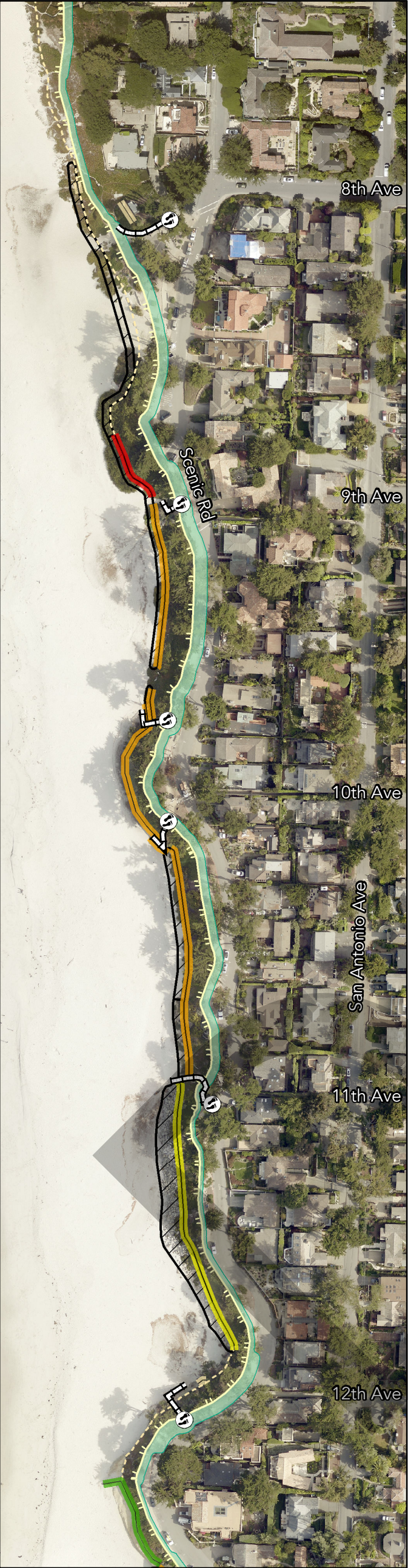
5th Avenue
Carmel-by-the-Sea
7th Avenue
9th Avenue
11th Avenue
13th Avenue

0 75 150 Feet

Aerial: EagleView, 2022

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Shoreline Features

Boardwalk

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Coastal Access Location

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Approx. Cliff to Terrace Contact Location

Bluff-Top Edge

Armoring Storm Wave Overtopping Potential

Low

Medium

Medium-High

Very High

Not Evaluated

N

W

E

S

0

75

150 Feet

Aerial: EagleView, 2022

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4 ft of SLR (2080-2100+)



Projected Bluff Crest Position Across Sea Level Rise Elevations

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2 ft

4 ft

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Shoreline Features

Boardwalk

Beach Access Stairway

Coastal Access Location

Riprap Footprint

Approx. Cliff to Terrace Contact Location

Bluff-Top Edge

Armoring Storm Wave Overtopping Potential

Low

Medium

Medium-High

Very High

Not Evaluated

N

E

S

W

0

70

140 Feet

Aerial: EagleView, 2022

Coastal Cliff and Dune Erosion Projection With Armoring

North Beach



Central Beach



South Beach



**Projected Bluff Crest Position
Across Sea Level Rise Elevations**

1 ft (2045 - 2060)

2 ft (2060 - 2080)

4 ft (2080 - 2100+)

Shoreline Features

Boardwalk

Beach Access Stairway

Coastal Access Location

Riprap Footprint

Seawalls

Approx. Cliff to Terrace Contact Location

Bluff-Top Edge

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