APPENDIX B
Jurisdictional Delineation/ Marine Reports

Michael Baker
INTERNATIONAL

We Make a Difference

November 16, 2023 JN 183038

City of Newport Beach
100 Civic Center Drive
Newport Beach, CA 92660
Robert Stein, Assistant City Engineer

SUBJECT: Delineation of State and Federal Jurisdictional Waters for the Collins Island Bridge Replacement Project, City of Newport Beach, Orange County, California

Dear Mr. Stein,

Michael Baker International (Michael Baker) has prepared this jurisdictional delineation to document the potential for federal waters regulated by the U.S. Army Corps of Engineers Los Angeles District (Corps) as well as state waters regulated by the Santa Ana Regional Water Quality Control Board (RWQCB), the California Department of Fish and Wildlife (CDFW) South Coast Region, and the California Coastal Commission (CCC) for the proposed Collins Island Bridge Replacement Project. Specifically, this report has been prepared to describe, map, and quantify aquatic features located within the survey area. The fieldwork for this jurisdictional delineation was conducted on October 11, 2023.

Project Location

Regionally, the project site is located within the City of Newport Beach (City), in the southwestern portion of Orange County; refer to Exhibit 1, *Regional Vicinity*. The project is depicted in Section 35 of Township 6 south, Range 10 west. The Pacific Ocean bounds the City to the west and surrounding jurisdictions include the cities of Huntington Beach and Costa Mesa to the north, Irvine to the east, and unincorporated Orange County to the south.

The project site is the Collins Island Bridge and its immediate vicinity located on Balboa Island in Newport Bay; refer to Exhibit 2, *Project Limits*. Collins Island is located on the western tip of Balboa Island and is connected to the greater Balboa Island via the Collins Island Bridge. Regional access to the project site is provided via State Route 1 (SR-1; Pacific Coast Highway) and local access to the site is provided via Marine Avenue (across the Balboa Island North Channel), and North Bay Front and Park Avenue on Balboa Island.

Project Description

The proposed project consists of the replacement of the Collins Island Bridge, seawall improvements, and future pump station accommodations (refer to Exhibit 3, *Overall Project Improvements*).

Bridge Replacement

The proposed bridge would be designed to be a total of 20 feet and 6 inches in width to accommodate one vehicle travel lane 13 feet and 9 inches-wide, one 4-foot wide sidewalk, and concrete barriers on each side to provide

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protection from projected sea level rise. The bridge would be 31 feet in length spanning over existing concrete sheet pile bulkheads.

The current slope along the roadway and sidewalk bridge approaches on both sides of the bridge exceed five percent. Therefore, the profiles would be adjusted to comply with Americans with Disabilities Act (ADA) standards. Landscaped areas and the bridge monument would also be improved to increase sight distance along the adjacent walkways to increase pedestrian safety. A new stop sign and limit line would also be added at the intersection on both sides of the bridge.

Street, sidewalk, and landscaping improvements are also proposed on the Balboa Island side along the Bay Front sidewalk and Park Avenue eastward until the alley. Anticipated improvements include monument sign construction, irrigation, paving, and landscaping.

Seawalls

Seawalls are designed to protect properties from water levels associated with high tides and storm surges. Water surface elevations are also expected to rise in the future due to climate change. Therefore, the project proposes to increase the height of existing seawalls adjacent to the bridge. Currently, most seawalls along Collins Island Bridge and along the Bay Front sidewalk consist of concrete sheet pile bulkheads with a concrete cap (coping) elevation of approximately 9 feet North American Vertical Datum of 1988 (NAVD 88). The proposed seawall improvements would be designed to have a top of wall coping elevation of 11 feet NAVD 88 with a future cap extension elevation up to 14 feet NAVD 88. Some of the existing concrete sheet piles are structurally deficient where existing tie back anchors have corroded and no longer provide adequate support at the upper part of the walls.

To maintain consistency between Collins Island and Balboa Island, existing seawalls along the Bay Front sidewalk would also be improved; refer to Exhibit 5, *Proposed Seawall Improvements*. The seawall improvements along the Bay Front sidewalk are required where the roadway and sidewalk profiles are proposed to be adjusted to meet ADA requirements and to accommodate future sea level rise. The Bay Front sidewalks adjacent to the new proposed seawalls would also be raised to provide a minimum of 42 inches from sidewalk to top of coping.

The new seawalls would be designed to allow access to existing boat ramps and docks. However, certain docks would be temporarily relocated during construction activities. Where possible, the existing concrete sheet pile bulkhead system would remain in place to reduce disturbance and associated environmental impacts. In the case of Bay Front sidewalk seawall improvements, new steel sheet piles would be placed seaward from the existing concrete sheet piles. A new sidewalk and parapet cap would provide seawall protection.

Future Pump Station Accommodations

The City is currently designing storm drain improvements for Park Avenue near the Collins Island Bridge as part of a separate project. As such, given that the proposed project and pump station project are being designed concurrently in close vicinity, the project includes pump station accommodations to convey stormwater outflow into the bay adjacent to the new bridge. Specifically, the pump station and catch basin will have a discharge pipe near the new seawall and east bridge approach. It will also have a collection/distribution drainpipe located beneath the Bay Front Sidewalk adjacent to the new seawall. It should be noted that while the pump station project is being

designed by the City concurrently with the proposed project, the pump station project is not a part of the proposed project and would be approved separately.

Summary of Regulations

There are four (4) key agencies that regulate activities within coastal streams, wetlands, and riparian areas in coastal California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates activities under Sections 1600 *et seq*. of the California Fish and Game Code (CFGC), the RWQCB regulates activities pursuant to Section 401 of the CWA and Section 13263 of the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the CCC regulates activities under the California Coastal Act.

Literature Review

A review of relevant literature and materials was conducted to obtain a general understanding of the environmental setting and preliminarily identify features/areas that may fall under the jurisdiction of the regulatory agencies. Relevant materials utilized during the literature review are summarized below.

Watershed

The project site is located within the Newport Bay Hydrologic Unit (18070204). The Newport Bay Watershed is defined by the foothills of the Santa Ana Mountains to the east (Loma Ridge), and the San Joaquin Hills to the west and southwest. The total area of the Newport Bay watershed is approximately 154 square miles. There are 4 sub-watersheds that make up the Greater Newport Bay Watershed: Peters Canyon Wash Upper San Diego Creek, Lower San Diego Creek, and Newport Bay.

Soils

On-site and adjoining soils were reviewed prior to conducting the field delineation using the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA), Web Soil Survey (refer to Attachment C). According to the *Custom Soil Resources Report for Orange County and Part of Riverside County, California* (USDA 2021), the project site is underlain with the Beaches (115) map unit.

Hydric Soils List of California

Michael Baker reviewed the *Hydric Soils List for California* (USDA 2021 to preliminarily verify whether any of the soils mapped within the project site are considered to be hydric. According to the *Hydric Soils List for California*, Beaches (Mapping Unit 115) is listed as hydric.

National Wetlands Inventory

Michael Baker reviewed the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Mapper. The project site has been mapped as Estuarine and marine Deepwater habitat (E1UBLx). This mapped area was used as reference while documenting all potentially jurisdictional features as observed on-site during the field delineation.

Flood Zone

Michael Baker also reviewed the Federal Emergency Management Agency's (FEMA's) National Flood Hazard Layer. Based on the Flood Insurance Rate Map *No. 06059C0382K*, the project site is located in Zone AO. Zone

AO is a Special Flood Hazard Area and is described as coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves and a base flood elevation (BFE) of 15 feet.

Methodology

Richard Beck, Professional Wetland Scientist, and Allexis Cruz conducted a formal jurisdictional delineation of the survey area on October 10, 2023, using the most recent, agency approved methodology, to identify and map jurisdictional limits within the survey area. The delineation was conducted to determine the jurisdictional limits of waters of the U.S. (WoUS), including potential wetlands, and waters of the State located within the boundaries of the survey area.

For this location, potential wetlands were delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps, 2008). For evaluation of wetland waters of the State, methods were modified so that an area can lack vegetation and still qualify as a State wetland in accordance with the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (State Water Resources Control Board, 2019). The project site is located within the Coastal Zone.

While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 100' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System (GPS) device to record and identify specific widths for ordinary high water mark (OHWM) indicators, locations of photographs, soil pits, and other pertinent jurisdictional features, if present.

Site Conditions

Refer to Attachment A for representative photographs taken within the survey area during the field delineation.

Non-Wetland Tidal Features

Pacific Ocean/Newport Bay

Portions of the project site includes non-wetland tidal areas of Newport Bay/Harbor. The project site is subject to permanent tidal inundation and high tide events (the High Tide Line [HTL] elevation is 7.7 feet above mean sea level). Little to no lateral variation occurs due to the presence of sea walls around the northern and southern limits of the project site. No other jurisdictional areas were noted during the time of the assessment.

Findings

U.S. Army Corps of Engineers

Evidence of a HTL and an OHWM was noted within the boundaries of the project site and survey area. Based on observation of surface water in the bay, the entire open water area would meet the definition of a WoUS as a Traditional Navigable Water (TNW). Refer to Exhibit 6, *Jurisdictional Map*. Approximately 0.01-acre of WoUS would be permanently impacted due to the installation of 250 linear feet of seawall, approximately two (2) feet in width. The seawall would be installed in front of the existing seawall and would be limited to the extent necessary for sea level rise protection.

Regional Water Quality Control Board

As mentioned above, the Pacific Ocean/Newport Bay meets the definition of a WoUS as well as Wates of the State. Impacts are the same as the Corps impacts as State Waters match WoUS.

California Department of Fish and Wildlife

Although other agencies have jurisdiction of the waters within the project site, the CDFW does not take jurisdiction of tidal/beach areas as they do not contain lakes or streambeds. CDFW jurisdiction of Newport Back Bay areas begins immediately east of the State Route 1 (SR-1) bridge. Based on the results of the field delineation, no CDFW jurisdiction is present within the boundaries of the project site; therefore, no impacts to CDFW jurisdiction are anticipated.

California Coastal Commission

As previously mentioned, the project site is located within the Coastal Zone. Based on the results of the field delineation, it was determined that approximately 0.01 acre (250 linear feet at a two-foot width) of CCC jurisdictional open water is located within the permanent impact area. Impacts are the same as the Corps impacts to waters within the Coastal Zone match WoUS.

Regulatory Approval Process

This report has been prepared for the City to document the jurisdictional authority of the Corps, RWQCB, CDFW, and CCC within the project site. Permit authorizations from the Corps, RWQCB, and CCC would be required prior to project construction.

Please feel free to contact me at 949-680-9355 or at rbeck@mbakerintl.com should you have any questions or require additional information.

Sincerely,

Richard Beck

Richard Beck, PWS
Senior Regulatory Specialist

Attachments:

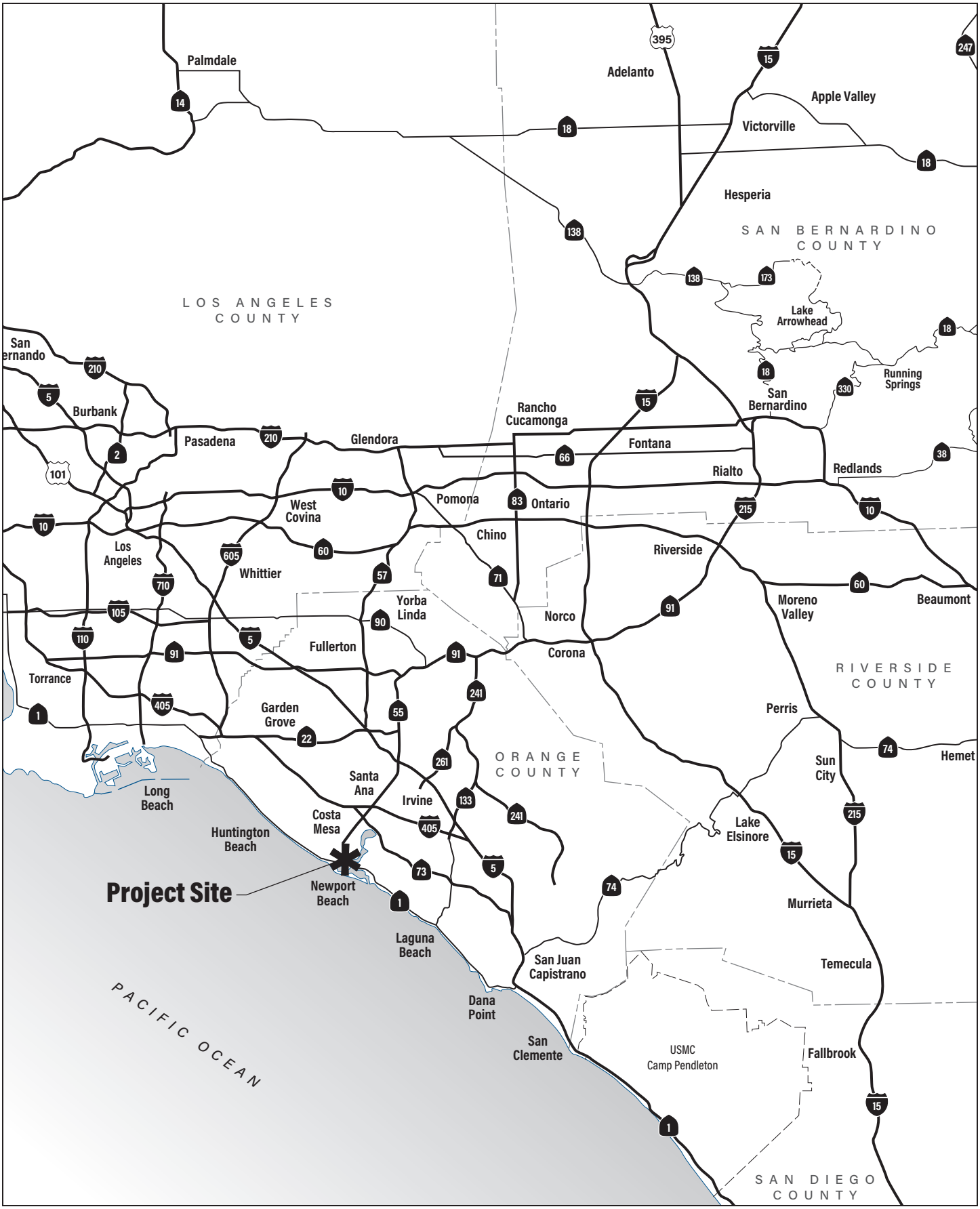
Site Photographs
Project Exhibits

SITE PHOTOGRAPHS

View looking at existing bridge, towards Collins Island.

View looking at side view of existing bridge, seawalls, and infrastructure.

View of adjacent boat docks to be temporarily removed.



COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
JURISDICTIONAL DELINEATION

Regional Vicinity

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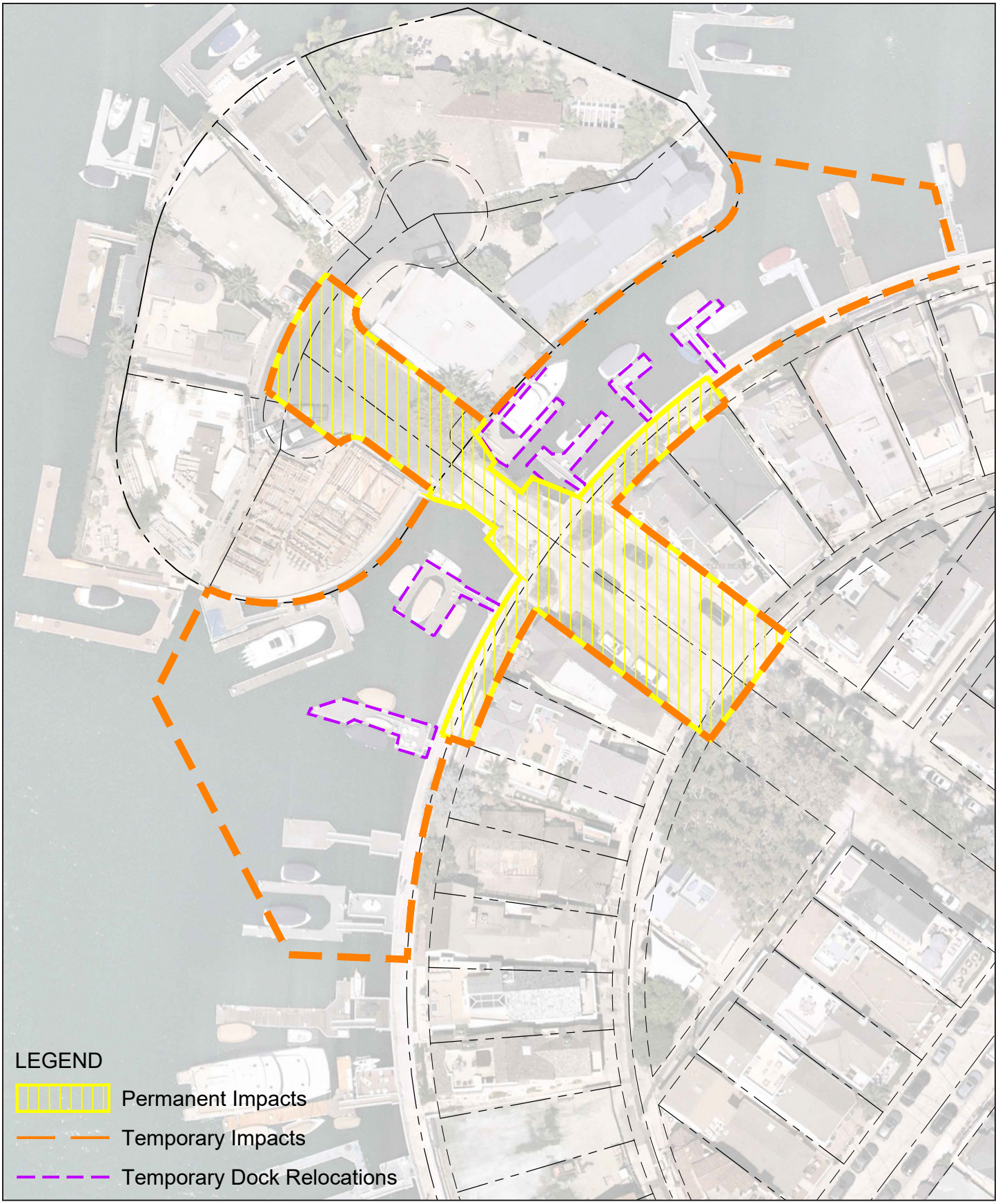
NOT TO SCALE

11/2023 • JN 191636

Exhibit 1



Source: Michael Baker International, July 2023

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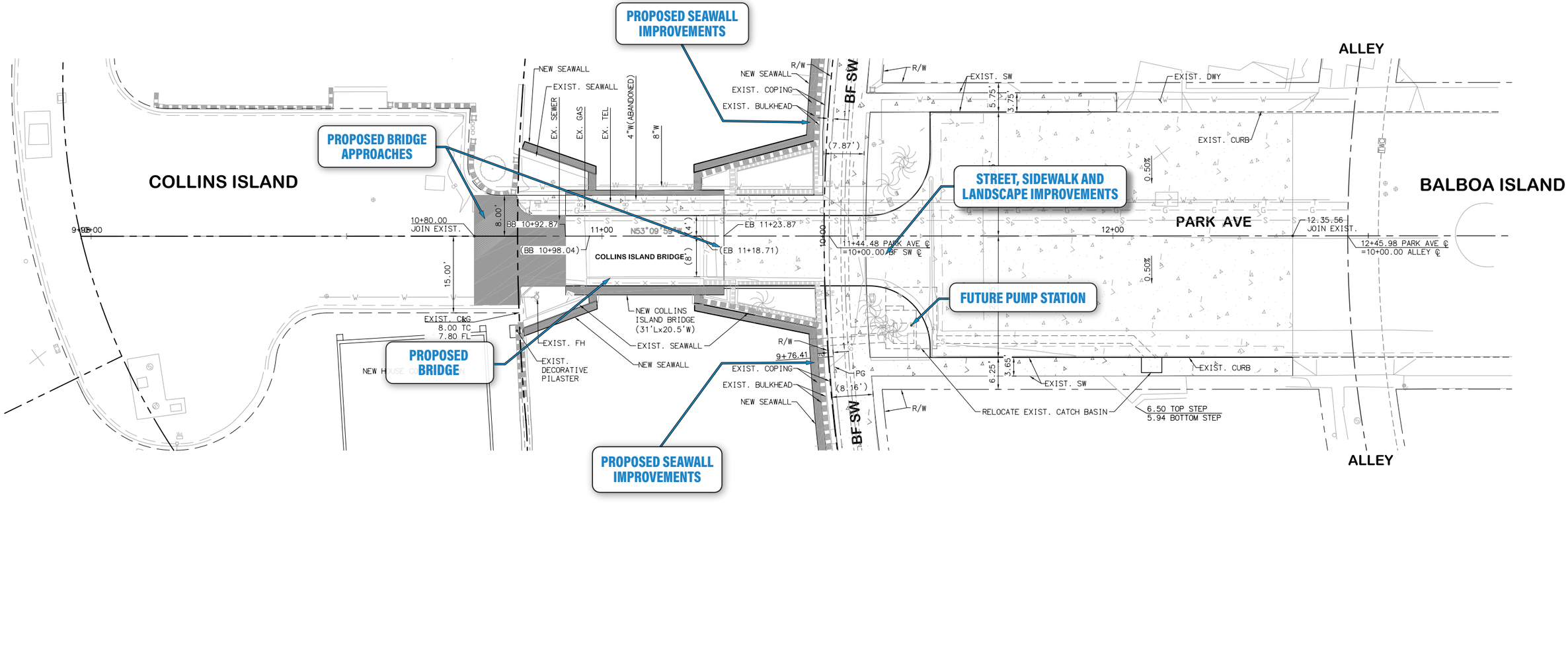
COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
JURISDICTIONAL DELINEATION

Project Limits

Exhibit 2



Source: Michael Baker International, February 2024

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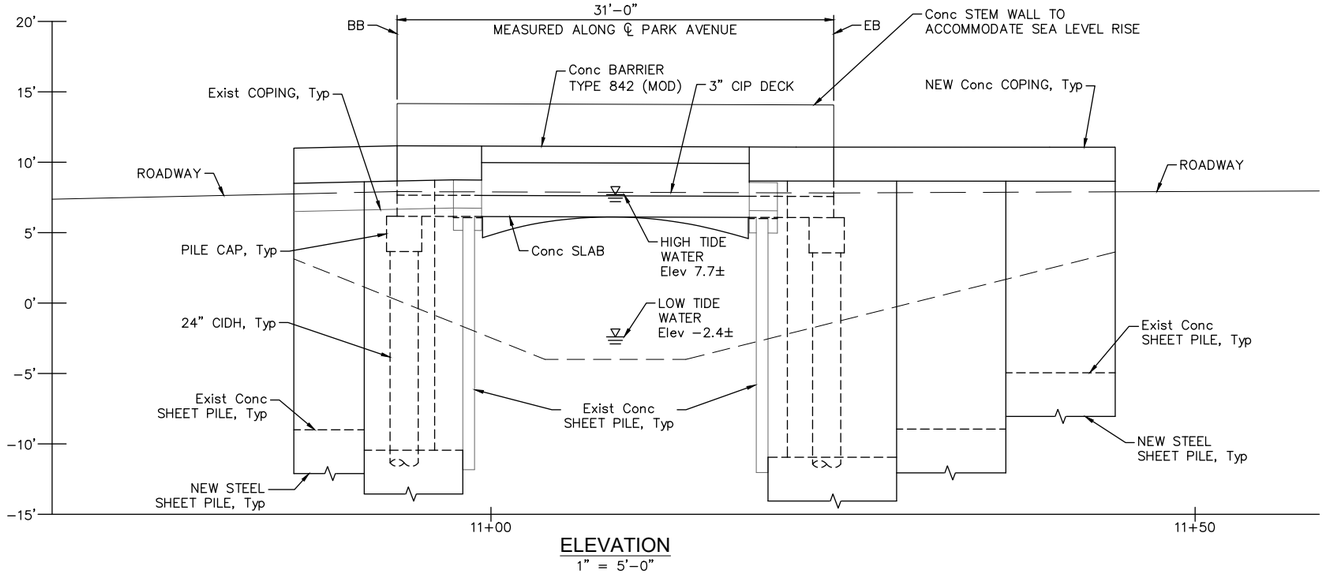
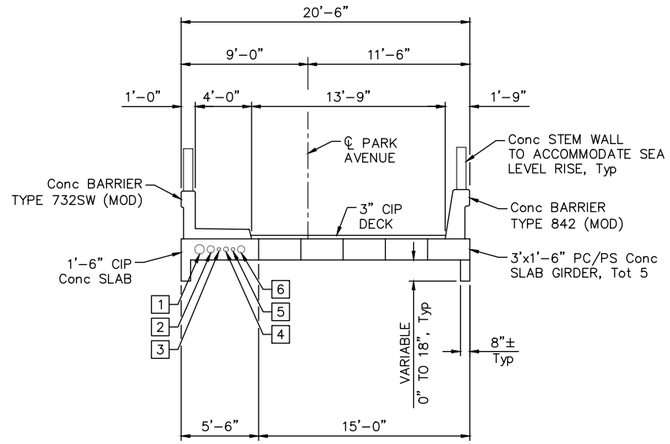
COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
JURISDICTIONAL DELINEATION

Overall Project Improvements

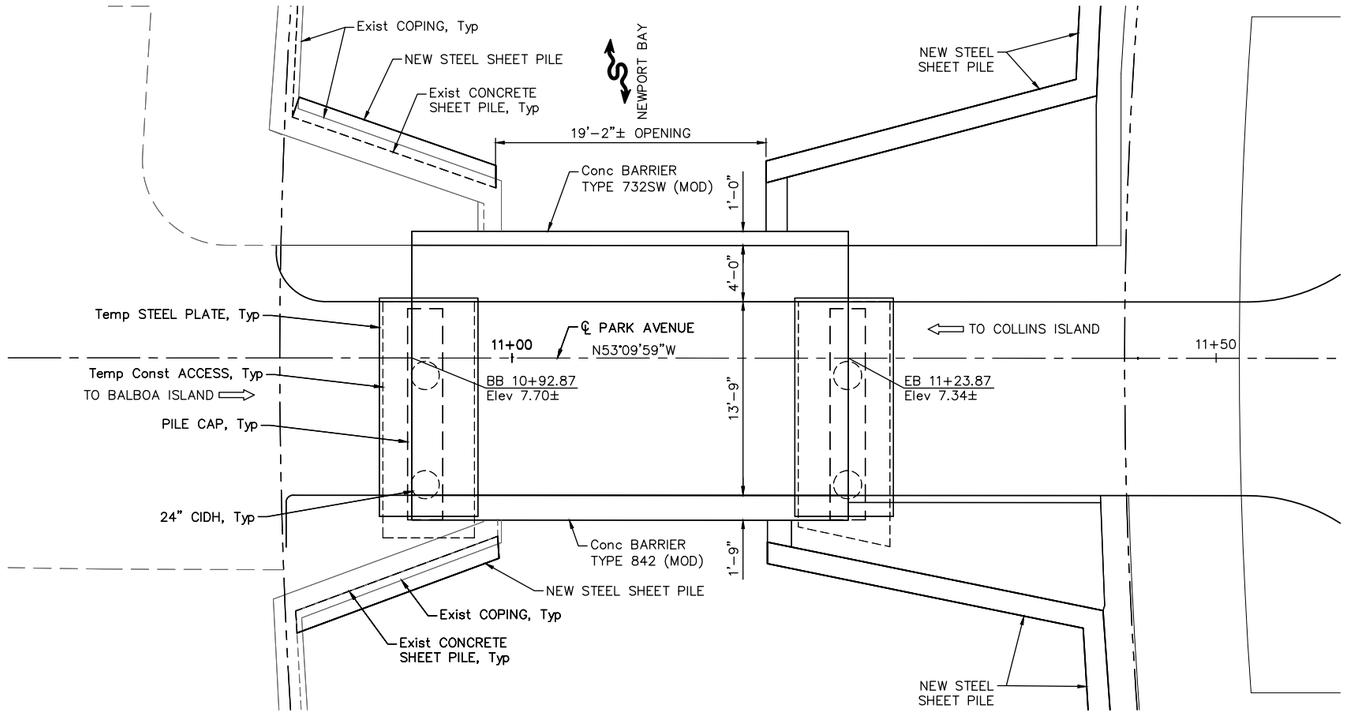
Exhibit 3



ELEVATION
1" = 5'-0"



TYPICAL SECTION
1" = 5'-0"



EXISTING UTILITIES:

1. 8" WATER
2. 6" WATER
3. 3" TELEPHONE
4. 4" GAS
5. 3" CONDUIT
6. 6" SEWER

Source: Michael Baker International, February 2024

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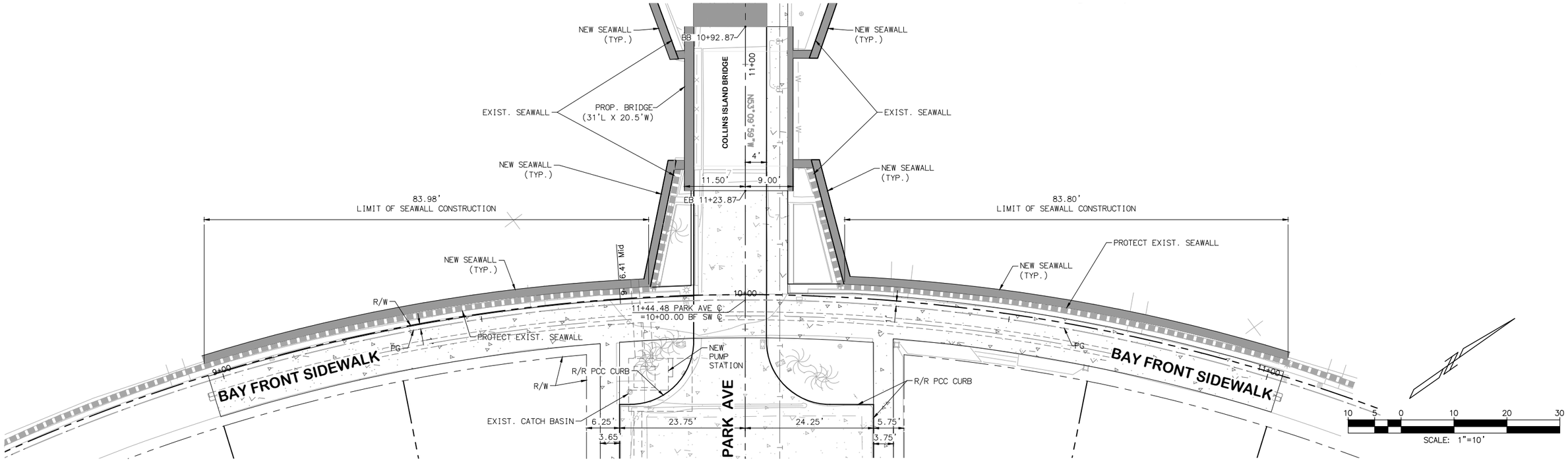
COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
JURISDICTIONAL DELINEATION

Conceptual Bridge Design

Exhibit 4



Source: Michael Baker International, February 2024

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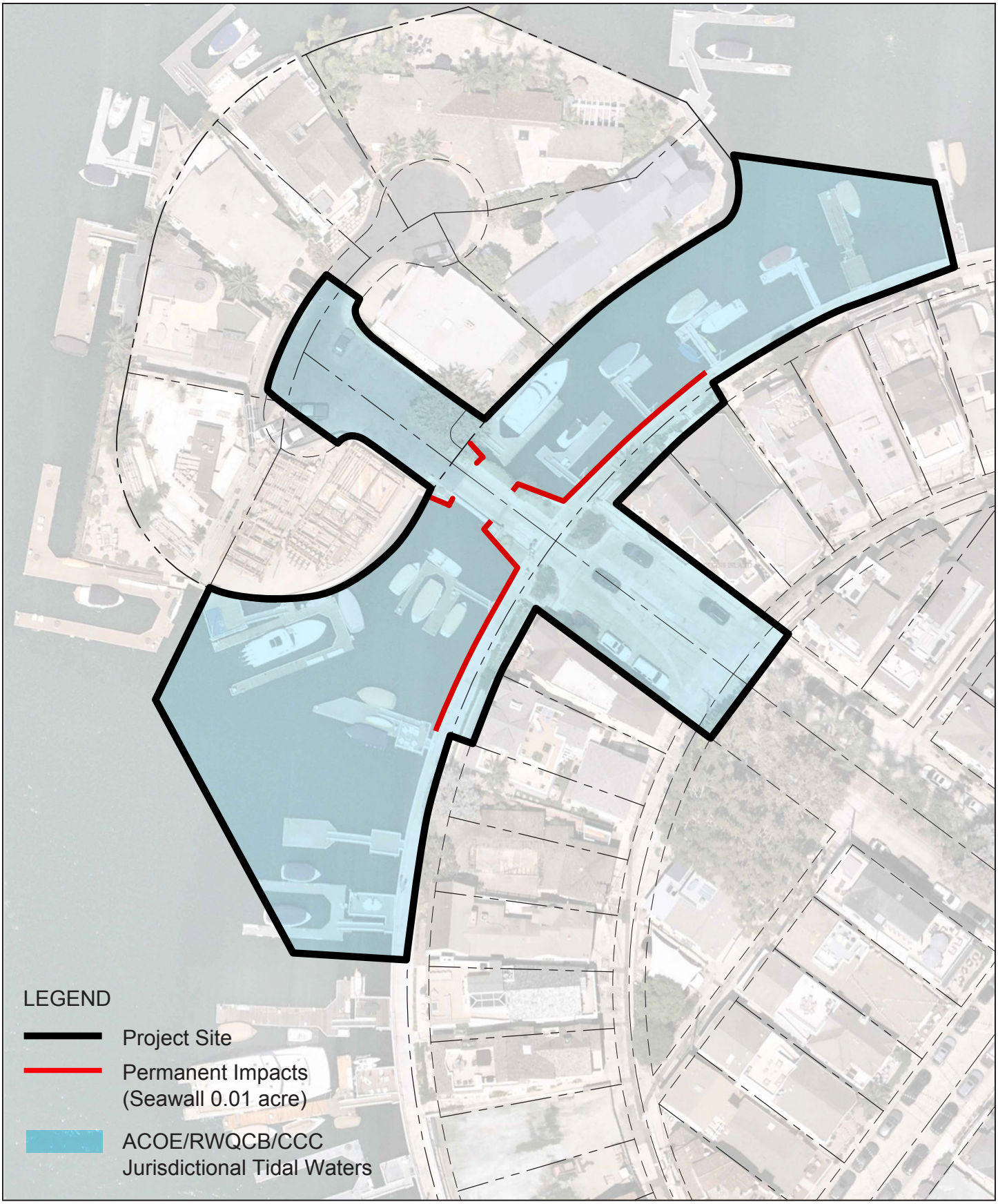
COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
JURISDICTIONAL DELINEATION

Proposed Seawall Improvements

Exhibit 5



Source: Michael Baker International, February 2024

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COLLINS ISLAND BRIDGE REPLACEMENT PROJECT
JURISDICTIONAL DELINEATION

Jurisdictional Map

Exhibit 6

Collins Island Bridge Replacement Project
Essential Fish Habitat Assessment
Newport Beach, California
Final Report

October 2023

Prepared for:

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Prepared by:

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List of Acronyms and Abbreviations

APE	Area of Potential Effect
CDFW	California Department of Fish and Wildlife
CPS	Coastal Pelagic Species
EFH	Essential Fish Habitat
FMP	Fishery Management Plan
HAPC	Habitat Area of Particular Concern
MLLW	Mean Lower Low Water
MSFCA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
NWP	Nationwide Permit
PFMC	Pacific Fishery Management Council
PGF	Pacific Coast Groundfish
SANDAG	San Diego Association of Governments
SMCA	State Marine Conservation Area

1.0 INTRODUCTION

This Essential Fish Habitat (EFH) assessment is provided in conformance with the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCA) and includes a description of the proposed project, an overview of the EFH designated within the project area, and an analysis of the direct and cumulative effects on EFH for managed fish species and their food resources. Species managed by the West Coast Groundfish, Coastal Pelagic Species, and Highly Migratory Species Fishery Management Plans (FMPs), and which are likely to occur within the project area, are considered in this assessment.

As required by the MSFCA, the purpose of this document is to present the findings of the EFH Assessment conducted for the retrofit of the Collins Island Bridge in Newport Bay, California. The project site occupies approximately 0.70 acres in central Newport Bay connecting Balboa Island with Collins Island (Figure 1). The objective of this EFH assessment is to evaluate how the proposed project may affect EFH within its area of influence designated by the Pacific Fishery Management Council (PFMC) and implemented by the National Oceanic and Atmospheric Administration/National Marine Fisheries Service (NMFS).

2.0 REGULATORY ENVIRONMENT

The project area is located within a general area designated as EFH for the following FMPs: Pacific Coast Groundfish (PFMC 2011a), Coastal Pelagic Species (PFMC 1998), and West Coast Highly Migratory Species (PFMC 2011b). For any proposed action that may adversely affect EFH, project proponents must provide the NMFS with a written assessment of the effects of that action on those species regulated under a federal FMPs. EFH is defined as "…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Under this definition, "waters" are defined to include "aquatic areas and their associated physical, chemical, and biological properties that are used by fish." These may include "…areas historically used by fish where appropriate; substrate to include hard bottom, structures underlying the waters, and associated biological communities." Also, under the definition of EFH, "necessary" means "the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem." An adverse effect to EFH is "any impact that reduces the quality and/or quantity of EFH" (see 50 Code of Federal Regulations § 600.910 (a) for further clarification). The level of detail required in the assessment is commensurate with the magnitude of potential impacts.

Newport Bay is a Habitat Area of Particular Concern (HAPC) for EFH. Newport Bay contains expansive meadows of eelgrass (*Zostera marina*), as well as broad diversity of coastal saltmarsh vegetation species considered EFH. This report evaluates the proposed activity with the project area impacts to EFH and managed species.

3.0 PROPOSED PROJECT

The Collins Island Bridge replacement project is located where Collins Island and Balboa Island meet in the City of Newport Beach, California on Coastal Zone State tidelands. Balboa Island is located in Lower Newport Bay and is one of the City's older, distinct residential neighborhoods along the coastline. On the western tip of Balboa Island, Collins Island is developed with eight single-family residences and is accessed only by the Collins Island Bridge via Park Avenue. The existing reinforced concrete bridge was constructed in 1953 and is approximately 20 feet and 8 inches long and 19 feet wide. The bridge is supported on concrete sheet pile bulkheads, which are insufficient to resist current code level seismic loads. The bridge accommodates one lane of vehicle traffic, one raised sidewalk, and steel railings on each side of the bridge. Essential utilities that serve Collins Island residents are currently located on the bridge. Given the age of the structure, the Collins Island Bridge does not meet current bridge code requirements and is nearing the

end of its useful lifetime. According to a 2012 bridge inspection report, the Collins Island Bridge was designated as functionally obsolete and has not been improved since 2012.

The proposed Collins Island Bridge Replacement Project has three major components: 1) bridge replacement, 2) seawall improvements, and 3) future pump station accommodations for a separate project. The first two components are described in further detail below.

The proposed bridge is designed to be 20 feet and 6 inches wide to accommodate one 13 feet and 9 inches wide vehicle travel lane, one 4-foot-wide sidewalk, and concrete barriers on each side to provide protection from projected sea level rise. The bridge as designed is 31 feet in length spanning over existing concrete sheet pile bulkheads. The roadway and both sides of the sidewalk bridge approaches have slopes that exceed five percent. Therefore, the profiles would be adjusted to comply with Americans with Disabilities Act (ADA) standards. Landscaped areas and the bridge monument would also be improved to increase sight distance along the adjacent walkways to increase pedestrian safety.

Seawalls are designed to protect properties from water levels associated with high tides and storm surges. Water surface elevations are expected to rise in the future due to climate change. Therefore, the project proposes to increase the height of existing seawalls adjacent to the bridge. Currently, most seawalls along Collins Island Bridge and along the Bay Front sidewalk consist of concrete sheet pile bulkheads with a concrete cap (coping) elevation of approximately 9 feet North American Vertical Datum of 1988 (NAVD 88). The proposed seawall improvements would be designed to have a top of wall coping elevation of 11 feet NAVD 88 with a future cap extension elevation up to 14 feet NAVD 88. Some of the existing concrete sheet piles are structurally deficient where existing tie back anchors have corroded and no longer provide adequate support at the upper part of the walls. The new seawalls would be designed to allow access to existing boat ramps and docks. However, certain docks would be temporarily relocated during construction activities.

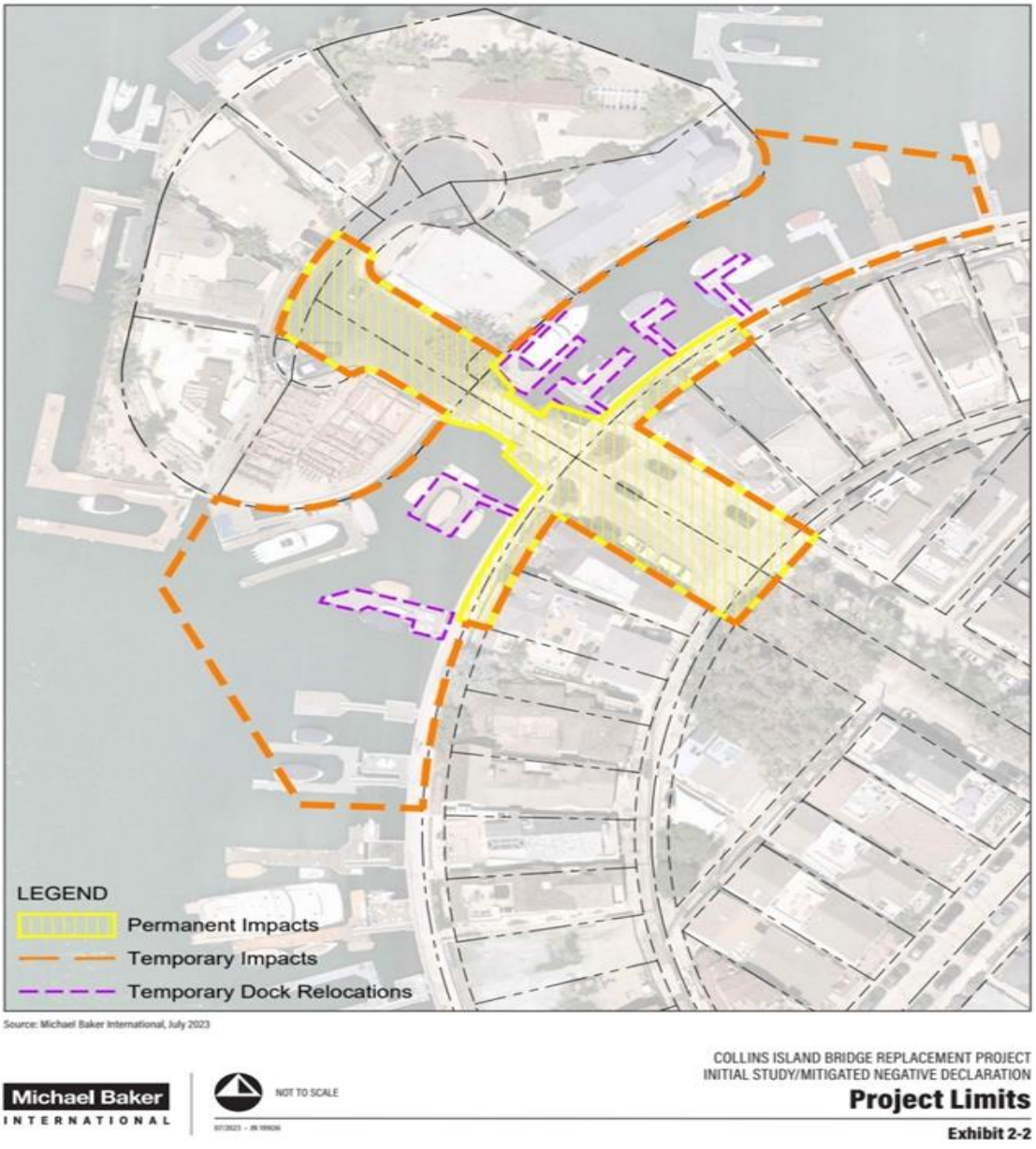

Figure 1. Construction Boundaries, Collins Island Bridge Project Area Newport Beach, CA.

4.0 SITE CHARACTERISTICS

The proposed project is specifically located within an area designated as EFH for two FMPs; Pacific Coast Groundfish (PFMC 2011a) and Coastal Pelagic Species (PFMC 1998). A preliminary survey for eelgrass was conducted on September 16, 2023, for the areas encompassed by the proposed project footprint. Eelgrass resources within the construction Area of Potential Effect (APE) were low to medium density in extent. Areas encompassed, or potentially directly impacted, by the proposed action were mapped and eelgrass communities' locations and densities were identified (Figure 2). The eelgrass communities nearest to the bridge were low density beds (≤20 turions/m2) occurring immediately adjacent to the existing bridge and seawall. Saltmarsh habitat, sand shoals, mudflats, and deep channels bordered much of the eelgrass habitat and biological communities within the APE were primarily dominated by marine species, based on species composition.

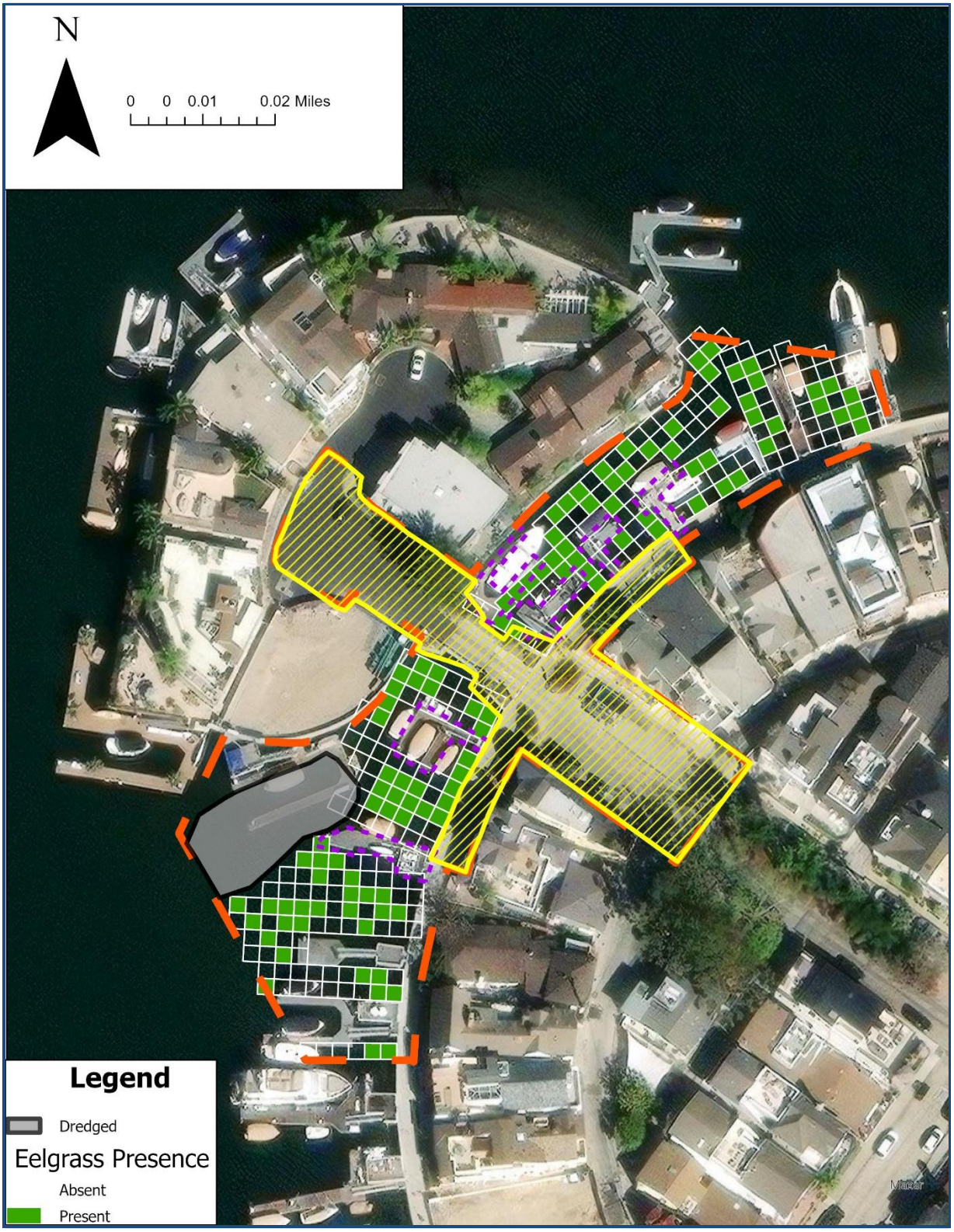

Figure 2 Eelgrass communities in the Project Area.

5.0 FISH COMMUNITIES

Orange County Sanitation District (OCSD) conducts semi-annual trawls to collect fish and large invertebrates at pre-determined stations and depth regimes adjacent to the project area. In the 2021 and 2022 surveys a 7.6-meter-wide otter trawl fitted with a 0.64 cm cod-end mesh net was towed via research vessel. The net was towed for 450 meters at approximately 2 knots (OCSD 2023). A total of 15,369 fish were collected in 2021 and 2022 surveys that represented 42 species (Table 1). However according to Allen 2006 there have been 142 species occurring in the coastal Southern California Bight found in studies over the last 4 decades.

To focus on the more recent data during the 2021 and 2022 surveys Pacific Sanddab (*Citharicthys sordidus*; 41.7%), yellowchin Sculpin (*Icelinus quadriseriatus*; 17.3%) longfin sanddab (*Citharichthys xanthostigma*; 5.8%), and speckled sanddab (*Citharichthys stigmaeus*; 5.1%) were the most abundant fish collected, representing about 70% of the total catch (OCSD 2023). Of the 14 families represented *Paralichthyidae* (sand flounders), *Synodontidae* (Lizardfish), *Pleuronectidae* (right-eye flounders), and *Cottidae* (sculpins) accounted for 37.5% of the species and 81.2% of the percent captured (Table 1). Fish abundance has historically been highly variable, although some patterns are consistent (OCSD 2023); the shallower stations typically have the lowest abundances, while the deep stations have the highest abundances. Depth-related abundance patterns in 2021-2022 were consistent with previous years (OCSD 2023).

Table 1. Number of species captured and abundance for the 2021 and 2022 surveys

Scientific Name	Common Name	Abundance	
		Number Captured (N)	Percent Captured (%)
Citharichthys sordidus	Pacific sanddab	6,414	41.7
Icelinus quadriseriatus	yellowchin Sculpin	2,658	17.3
Citharichthys xanthostigma	longfin sanddab	889	5.8
Citharichthys stigmaeus	speckled sanddab	784	5.1
Sebastes saxicola	stripetail Rockfish	768	5.0
Microstomus pacificus	Pacific Dover sole	502	3.3
Symphurus atricaudus	California tonguefish	447	2.9
Zaniolepis frenata	shortspine combfish	413	2.7
Lyopsetta exilis	slender sole	400	2.6
Zaniolepis latipinnis	longspine combfish	372	2.4
Parophrys vetulus	English sole	255	1.7
Hippoglossina stomata	bigmouth flounder	241	1.6
Pleuronichthys verticalis	hornyhead turbot	222	1.4
Chitonotus pugetensis	roughback sculpin	204	1.3
Zalembius rosaceus	pink surfperch	159	1.0
Scorpaena guttata	California scorpionfish	122	0.8
Sebastes goodei	chilipepper rockfish	84	0.5
Sebastes semicinctus	halfbanded rockfish	72	0.5
Porichthys notatus	plainfin midshipman	65	0.4
Synodus lucioceps	California lizardfish	53	0.3
Lycodes pacificus	blackbelly eelpout	52	0.3
Odontopyxis trispinosa	pygmy poacher	32	0.2
Sebastes chlorostictus	greenspotted rockfish	32	0.2

Merluccius productus	Pacific whiting (hake)	29	0.2
Sebastes sp	red rockfish	19	0.1
Sebastes elongatus	greenstriped rockfish	15	0.1
Sebastes hopkinsi	squarespot Rockfish	15	0.1
Xystreurys liolepis	fantail flounder	9	0.1
Argentina sialis	silver smelt	8	0.1
Raja inornata	California skate	8	0.1
Glyptocephalus zachirus	rex sole	5	<0.1
Sebastes levis	cowcod	5	<0.1
Paralichthys californicus	California Halibut	4	<0.1
Plectobranchus evides	bluebarred prickleback	4	<0.1
Agonopsis sterletus	southern spearnose poacher	1	<0.1
Chilara taylori	spotted cusk-eel	1	<0.1
Genyonemus lineatus	white croaker	1	<0.1
Kathetostoma averruncus	Smooth stargazer	1	<0.1
Ophiodon elongatus	lingcod	1	<0.1
Paralabrax nebulifer	barred sand bass	1	<0.1
Pleuronichthys decurrens	curlfin sole	1	<0.1
Xenertmus triacanthus	bluespotted poacher	1	<0.1
Total Abundance		15,369	100

*Survey data is based on observations published by *OCSD 2023*

5.1 Fishery Management Plans

Under the MFCMA, the federal government has jurisdiction to manage fisheries in the U.S. Exclusive Economic Zone (EEZ), which extends from the outer boundary of state waters (3 nm from shore) to a distance of 200 nm from shore. Fishery Management Plans (FMPs) are extensive documents that are regularly updated. The goal of a FMPs includes the development and sustainability of an efficient and profitable fishery, optimal yield, adequate forage for dependent species and long-term monitoring. There are two FMPs that include waters adjacent to the proposed project site; the Coastal Pelagic FMP including 6 species and the Pacific Groundfish FMP including 92 species.

5.1.1 Coastal Pelagics

In 2008 the Coastal Pelagic FMP covered one invertebrate (market squid) and four fish species (northern anchovy, jack mackerel, Pacific mackerel, and Pacific sardine). Amendment 12 to the Pelagic FMP was finalized in 2009 to protect krill. Krill, a shrimp like crustacean are very important on a trophic level and are the basis of the marine food chain. EFHs for Coastal Pelagics are defined as all marine and estuarine waters from the shoreline of the coasts of California, Oregon and Washington offshore to the limits of the EEZ and above the thermocline.

Although no Coastal Pelagic FMP species were observed during 2021 and 2022 surveys for the adjacent Orange County Sanitation District, all species covered could occur at some point during their life stages. (Allen 2006) The northern anchovy historically ranged from the Queen Charlotte Islands, British Columbia, south to Cabo San Lucas, Baja California. More recently, populations have moved into the Gulf of California, Mexico. Larvae and juveniles are often abundant in nearshore areas and estuaries with adults being more oceanic; however, adults may also be found in shallow nearshore areas and estuaries. Anchovy are nonmigratory but do make extensive inshore-offshore and along-shore movements (Emmett et al. 1991). During times of high abundance (from the early part of the 20th century into the 1940s) Pacific sardines ranged from the Gulf of California north to southeastern before the fishery crashed in the 1950's. Large populations still occur south of point

conception into Baja California. The Pacific sardine is epipelagic, occurring in loosely aggregated schools. In times of abundance this species can occur up to 150 miles offshore (Wolf et al., 2001)

Jack mackerel and Pacific mackerel occur from Santa Maria Bay, Mexico to Yaquina Bay, Oregon. They are found in California bays, estuaries and coastal pelagic ocean waters throughout the year. They are schooling fish which prefer shallow water less than 100 feet and are most common in 5 to 50 foot depths (CDFW 2013). All costal pelagics are associated with the water column except for the female market squid, which lays egg masses on sandy bottoms during spawning at depths of about 15-180 feet The market squid ranges coastally from Baja California to Alaska and can be found within 200 miles of the shore (PFMC, 2008b).

5.1.2 Pacific Groundfish

There are 92 fish species included in the Pacific Groundfish FMP. EFH for Pacific Groundfish include all waters off southern California between Mean Higher High Water (MHHW) and depths to 11,483 ft. The Groundfish FMP also includes the extent of saltwater intrusion into freshwater inputs. Habitat Areas of Particular Concern (HAPCs) include but are not limited to estuaries, canopy kelp, seagrass, and rocky reefs.

The most abundant Pacific Groundfish groups captured during the OCSD 2021 and 2022 surveys were the flatfish followed by the rockfish, and then roundfish. Of the 92 fish species covered in this FMP 14 species were observed during the surveys. In the flatfish group, Pacific sanddabs had the greatest abundance with 41.7% of the total catch and recording 6,414 individuals. Dover sole were the 6th most abundant species with 3.3% of the total catch and recording 502 individuals, while English sole (11th most abundant) accounted for 1.7% of the total catch with 255 individuals. rex sole (31st most abundant) and curlfin sole (41st most abundant) were both recorded as less than 1% of the catch and less than 6 individuals.

The rockfish included California scorpionfish (16th most abundant) which accounted for 0.8% of the total catch with 122 individuals. The chilipepper rockfish (17th most abundant) accounted for 0.5% of the total catch with 84 individuals, halfbanded rockfish (18th most abundant) accounted for 0.5% of total catch with 72 individuals, and greenspotted rockfish (23rd most abundant) accounted for 0.2% of total catch with 32 individuals individually. While the greenstriped rockfish (26th most abundant), squarespot rockfish 27th most abundant), and cowcod (32nd most abundant) all recorded less than 16 individuals captured per species.

The roundfish included one species the Pacific whiting (hake) (24th most abundant) with 29 individuals accounting for 0.1% of the total catch.

Table 2 NMFS Managed Species observed near Collins Island, including Abundance, Total Percent and Habitat.

Common Name	Observed During 2021 & 2022 Surveys	Abundance (Rank and % of Total)	Habitat
Coastal Pelagics			
Northern Anchovy	No	-	Open water
Pacific Sardine	No	-	Open water
Pacific Mackerel	No	-	Open shallow water
Jack Mackerel	No	-	Open shallow water
Market Squid	No	-	Open water
Pacific Groundfish			
Pacific sanddab	Yes	1st/41.7%	Soft Bottom
Pacific Dover sole	Yes	6th/3.3%	Soft Bottom

English Sole	Yes	11th/1.7%	Soft Bottom
California scorpionfish	Yes	16th/0.8%	Hard Substrate & Kelp
Chilipepper rockfish	Yes	17th/0.5%	Hard Substrate & Kelp
Halfbanded rockfish	Yes	18th/0.5%	Hard Substrate & Kelp
Greenspotted rockfish	Yes	23rd/0.2%	Soft & Hard Substrate
Pacific whiting (hake)	Yes	24th/0.2%	Open Water & Hard substrate
Greenstriped rockfish	Yes	26th/0.1%	Hard Substrate & Kelp
Squarespot rockfish	Yes	27th/0.1%	Hard Substrate & Kelp
Rex Sole	Yes	31st/<0.1%	Soft Bottom
Cowcod	Yes	32nd/<0.1%	Hard Substrate & Kelp
Lingcod	Yes	39th/<0.1%	Hard Substrate & Kelp
Curlfin sole	Yes	41st/<0.1%	Soft Bottom

6.0 ASSESSMENT OF IMPACTS

This section will highlight and discuss all potential impacts resulting from construction activities. Accounting for all potential biological resources that may be present in the project footprint with the potential to be disturbed. Possible outcomes during and post construction activities are also included.

6.1 Impacts Resulting From Construction Activities

Activities associated with the proposed Collins Island Bridge and Seawall construction, may temporarily affect biological resources important to managed fish species if present in the APE. Terrestrial construction activities are not expected to impact marine resources. Best Management Practices would be put in place to mitigate any potential effects associated with terrestrial construction activities.

The potential impacts as a result of the action to the fourteen managed fish species demonstrating moderate abundance adjacent to Collins Island waters, if any, are expected to be temporary. Should any individuals of the species managed by the CPS FMP occur within the immediate vicinity of the project area, they would temporarily relocate to another area of open water or other shallow water habitat as a result of construction activities, i.e., increased noise or turbidity. If the species managed by the PGF FMP occur during the construction timeframe and within the action area, they would also temporarily relocate another area of open water or other shallow water habitat as a result of these activities. Also, the final bridge and seawall construction activities should not impact the denser eelgrass beds located outside APE serving as EFH.

Fish species passing through, or occupying, the bridge construction APE, as well as benthic invertebrates and those that are resident on the existing bridge sediments and hard surfaces, would be disturbed during the construction activities. Suspension of sediments with increased tidal height during construction could also have sub-lethal to lethal effects on the invertebrates immediately adjacent to the construction APE. This impact, however, would be temporary given the tidal habitat, relative abundance, rapid colonization rates, and movement of some individuals of these species. The soft bottom benthic habitat will be able to repopulate and recolonize once construction activities cease.

Fish eggs, larvae, juveniles, and adults would experience few to no effects due to construction activities. Fish eggs and larvae are primarily found adjacent to the water column in this area and are dispersed by water movement, while juvenile and adult fishes would move to avoid the disturbance during construction activities. Short-term water quality impacts (e.g., increase in turbidity) may affect resident fishes; however, these impacts would have no effect on the success of fish populations due to the ability of the juvenile and adult fishes to relocate to other areas. The constant water replenishment due to tidal flow in the bay

transports fish larvae and eggs to various areas within the water body. A brief relocation of these transient species would not result in biologically significant impacts with regard to competition, predation, or spawning.

Other effects of in-water construction of the bridge and seawall include the unnatural occurrence of light and noise. Both would be short-term during construction activities. It is unlikely that these effects would lead to reduced survival, and if so, only a small percentage of individuals within fish populations would potentially be affected.

6.2 Impacts Resulting From Project Operations

No potential long-term deleterious effect on biological resources is expected from the Collins Island Bridge and Seawall construction project. Resident fish species would likely return if they were temporarily displaced due to construction activities. Eelgrass habitat in Newport Bay is abundant and any disrupted or displaced species would find suitable habitat in the vicinity of the construction APE. Long-term effects would potentially be beneficial, in that the supports or pilings of the new bridge(s) would provide substrate for organisms, and thus could provide additional benefit to fish populations near Harbor Island and within Newport Bay.

7.0 MITIGATION MEASURES

The following measures are designed to reduce or eliminate potential impacts to sensitive fisheries habitats. The assessment of impacts is based on the assumption that the proposed project would include the following.

- Equipment shall be inspected regularly (daily) during construction, and any leaks found shall be repaired immediately.
- Refueling of vehicles and equipment shall be in a designated, contained area.
- Drip pans shall be used under stationary equipment when refueling or maintenance.
- Drip pans that are used shall be covered during rainfall to prevent leaching of contaminants.
- Construction and maintenance of appropriate containment structures to prevent offsite transport of pollutants from spills and construction debris.
- Monitoring to verify Best Management Practices (BMPs) are implemented and kept in good working order.

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Pre-Construction Surveys Eelgrass (*Zostera marina*) & *Caulerpa taxafolia*
Collins Island Bridge Replacement Project
Newport Beach, California
Final Report
October 2023

Prepared for:

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Prepared by:

Six Scientific Service
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1.0 Introduction

The Collins Island Bridge replacement project is located where Collins Island and Balboa Island meet in the City of Newport Beach, California on Coastal Zone State tidelands. Balboa Island is located in Lower Newport Bay and is one of the City's older, distinct residential neighborhoods along the coastline. On the western tip of Balboa Island, Collins Island is developed with eight single-family residences and is accessed only by the Collins Island Bridge via Park Avenue. The existing reinforced concrete bridge was constructed in 1953 and is approximately 20 feet and 8 inches long and 19 feet wide. The bridge is supported on concrete sheet pile bulkheads, which are insufficient to resist current code level seismic loads. The bridge accommodates one lane of vehicle traffic, one raised sidewalk, and steel railings on each side of the bridge. Essential utilities that serve Collins Island residents are currently located on the bridge. Given the age of the structure, the Collins Island Bridge does not meet current bridge code requirements and is nearing the end of its useful lifetime. According to a 2012 bridge inspection report, the Collins Island Bridge was designated as functionally obsolete and has not been improved since 2012.

The proposed Collins Island Bridge Replacement Project has three major components: 1) bridge replacement, 2) seawall improvements, and 3) future pump station accommodations for a separate project. The first two components are described in further detail below.

The proposed bridge would be designed to be a total of 20 feet and 6 inches in width to accommodate one vehicle travel lane 13 feet and 9 inches-wide, one 4-foot-wide sidewalk, and concrete barriers on each side to provide protection from projected sea level rise. The bridge would be 31 feet in length spanning over existing concrete sheet pile bulkheads. The current slope along the roadway and sidewalk bridge approaches on both sides of the bridge exceed five percent. Therefore, the profiles would be adjusted to comply with Americans with Disabilities Act (ADA) standards. Landscaped areas and the bridge monument would also be improved to increase sight distance along the adjacent walkways to increase pedestrian safety.

Seawalls are designed to protect properties from water levels associated with high tides and storm surges. Water surface elevations are also expected to rise in the future due to climate change. Therefore, the project proposes to increase the height of existing seawalls adjacent to the bridge. Currently, most seawalls along Collins Island Bridge and along the Bay Front sidewalk consist of concrete sheet pile bulkheads with a concrete cap (coping) elevation of approximately 9 feet. The proposed seawall improvements would be designed to have a top of wall coping elevation of 11 feet with a future cap extension elevation up to 14 feet. Some of the existing concrete sheet piles are structurally deficient where existing tie back anchors have corroded and no longer provide adequate support at the upper part of the walls. The new seawalls would be designed to allow access to existing boat ramps and docks. However, certain docks would be temporarily relocated during construction activities. Where possible, the existing concrete sheet pile bulkhead system would remain in place to reduce disturbance and

associated environmental impacts. In the case of Bay Front sidewalk seawall improvements, new steel sheet piles would be placed seaward from the existing concrete sheet piles.

To comply with US Army Corps of Engineers Nationwide Permit (NWP) Number 14 requirements, a pre-construction survey was completed to identify potentially sensitive marine habitats and species within and adjacent to the area of construction to support non-discretionary special conditions (item 7). The pre-survey information will be assessed to determine the presence/absence of Caulerpa taxifolia and the proximity of construction activities to sensitive marine biological resources (Eelgrass) and ensure the project utilizes adequate protection of these resources during construction. To support the pre-construction survey, Six Scientific Service (SixSci) was contracted by Michael Baker International (Michael Baker) to provide survey services.

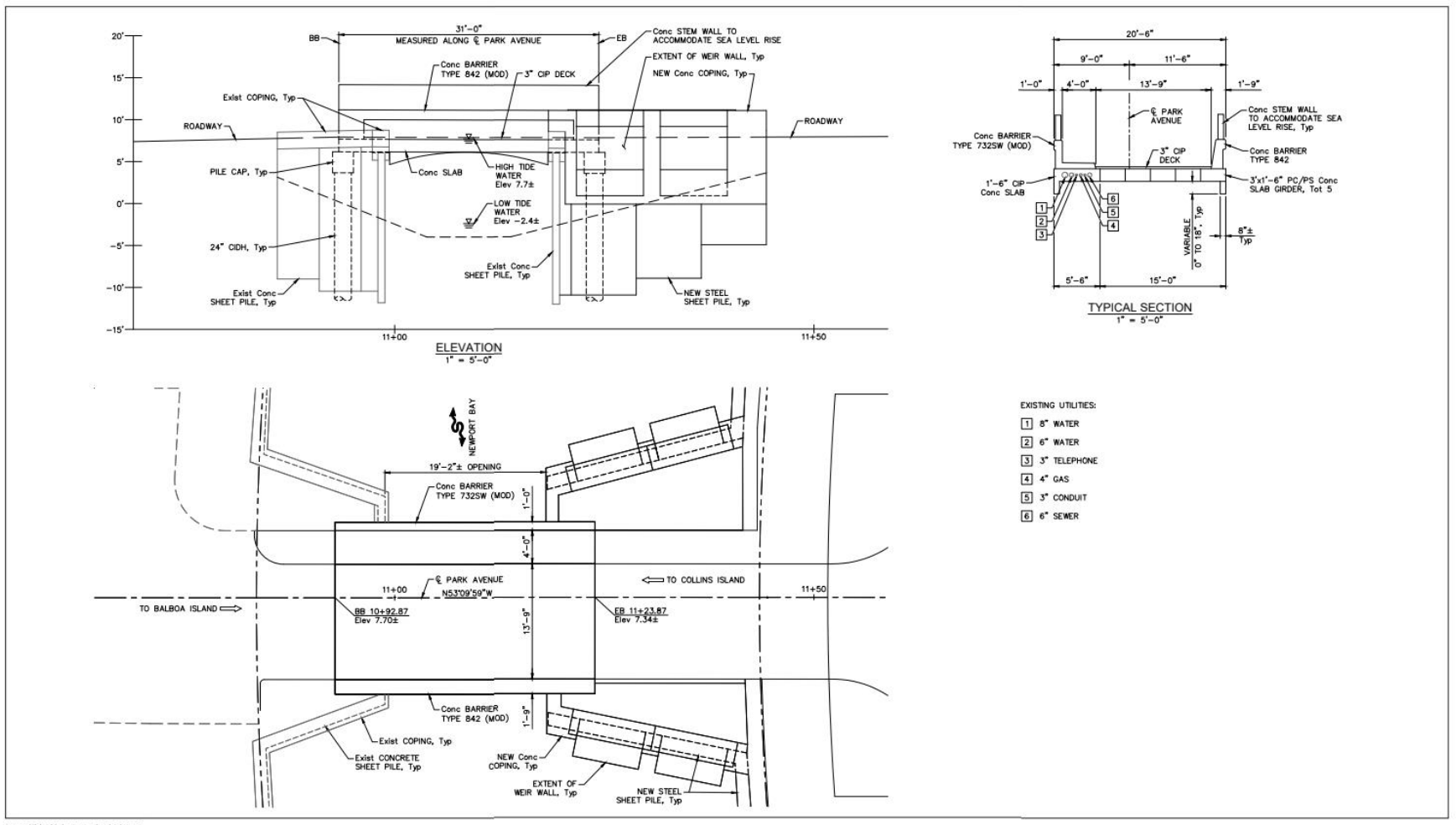

Figure 1: CollinsError! Reference source not found.

2.0 Survey Methodology

To identify existing sensitive habitats (Eelgrass) within the Areas of Potential Effect (APE) that may be impacted from construction related activity (i.e., physical disturbance, turbidity, and shading), an Eelgrass (*Zostera marina*) survey was conducted on September 16, 2023, to determine presence/absence of eelgrass within the APE and provide an initial assessment of adjacent eelgrass communities. In addition, a Caulerpa taxifolia presence/absence surveys was completed on September 16, 2023.

The survey methodology for the Collins Island Bridge rebuild project was developed by SixSci in consultation with Michael Baker. The aim of the pre-construction surveys was to provide a rapid assessment-based approach to delineate the presence and absence of eelgrass within the project area (Area of Potential Effect [APE]), adjacent to the project area, and assess the potential for impact. Diver transects and underwater photography was used to conduct a visual-based survey including 100% of the wetted project area. The survey plan was based on previous experience surveying similar areas, using similar techniques, and consistent with methods promulgated by the California Department of Fish and Wildlife (CDFW) and National Marine Fisheries Service (NMFS) for Eelgrass surveys in the California Eelgrass Mitigation Policy (CEMP 2014).

A GPS unit was used to map the corners of the survey area, a range finder was used to confirm locations and distances. A dive vessel navigated the diver on 10-ft intervals and a diver swam out a meter tape in length patterns of the project recording densities. One vessel operator, one diver and one data recorder completed cross-channel transects every 10 feet in sections until the entire length was surveyed on both sides and underneath the bridge. The survey was completed on September 16, 2023, in a positive tide of 1.0 to 4.9 feet and the surface water temperature was 21.6°C.

Density was recorded using a 50-centimeter quadrant divided into four 25-centimeter squares (625 square centimeters). Underwater photos were taken of the Eelgrass with and without transect laid over. A Caulerpa taxifolia survey in accordance with the Caulerpa Control Protocol was executed on September 16, 2023.

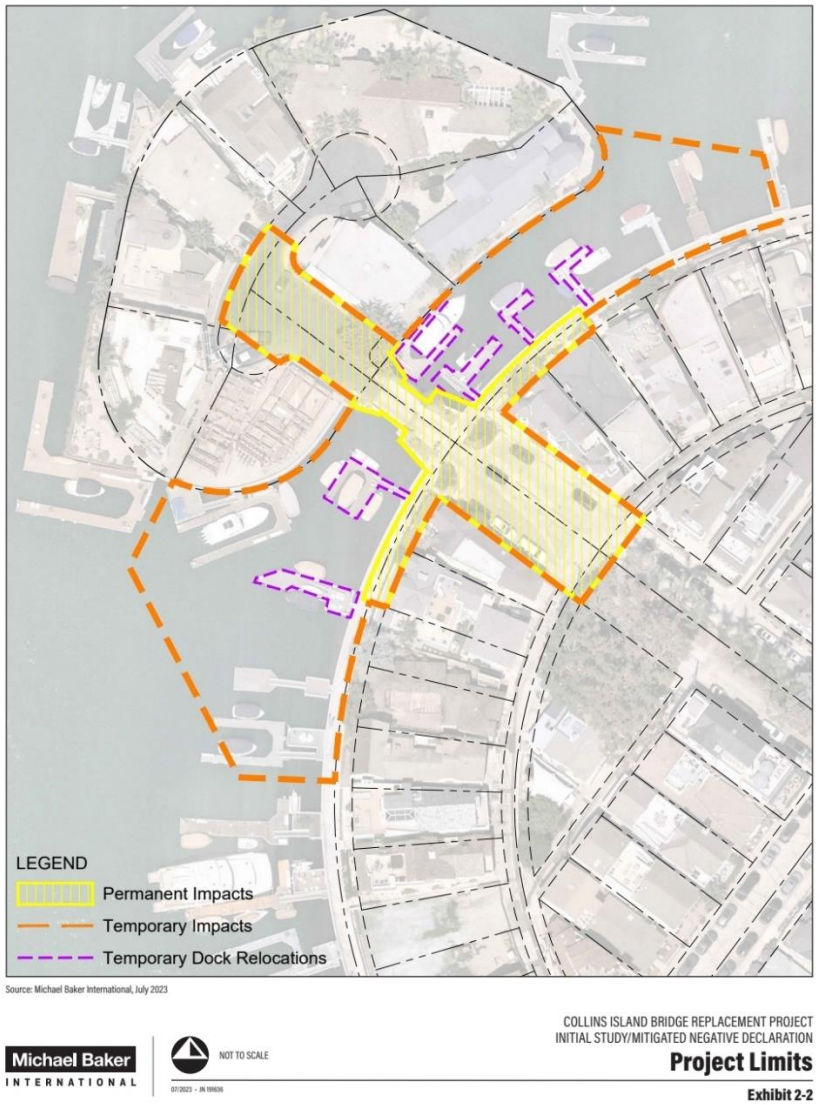

Figure 2. Collins Island Bridge Rebuild Project Area

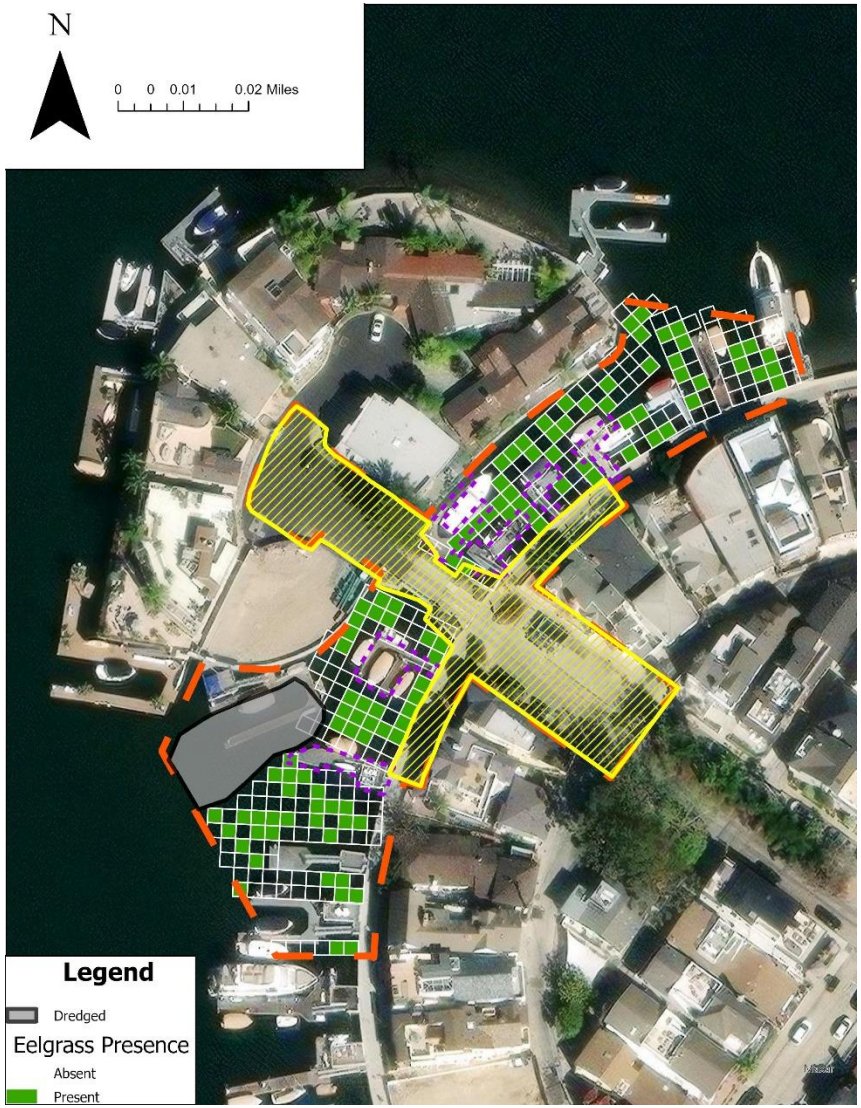

Figure 3. Eelgrass and Caulerpa transects Collins Island Bridge September 2023

3.0 Survey Results

The results of the visual survey within the APE detect some medium to low density patches of Eelgrass at the project site. Survey results and consultation from the 2022 Newport Bay Eelgrass monitoring report indicate as discovered the documented Eelgrass is located throughout the APE in open areas where no shading is present. Visual observation indicates medium to low density eelgrass beds are present near docks and the denser beds are in the open water at the north and south border of the APE. Most plant turions were extending between 0.2 and 0.5 meters from the substrate (Figure 3) in the project area.

The diver counted the number of live, green shoots "turions" at the sediment/shoot interface, within replicated 1/16th sq m quadrats Densities were recorded at the diver completed length transects. Densities ranged from 1 to 5 turions per 625 centimeters^2 or 1/16th sq m. The medium to low density eelgrass beds accounts for 10,700 square feet in the 30,492 square-foot wetted work area. The majority of eelgrass present reside at least 8 feet from the bridge on both sides and away from the shadows of any docks or boats. No eelgrass is present under the bridge opening. The beds are sparse in the APE when compared to documented beds outside of the work area.

Mixed in with the Eelgrass, Gracilaria turgida was observed with Sargassum. Associated biologics (Fish, invertebrates, etc.) were observed and noted. Several round rays, one bared sand bass, and some burrowing invertebrates (tube dwelling anemones, clams, etc.) were observed in and near the project area.

No Caulerpa taxifolia was observed in or near the project area during any of the surveys at the site on September 16, 2023

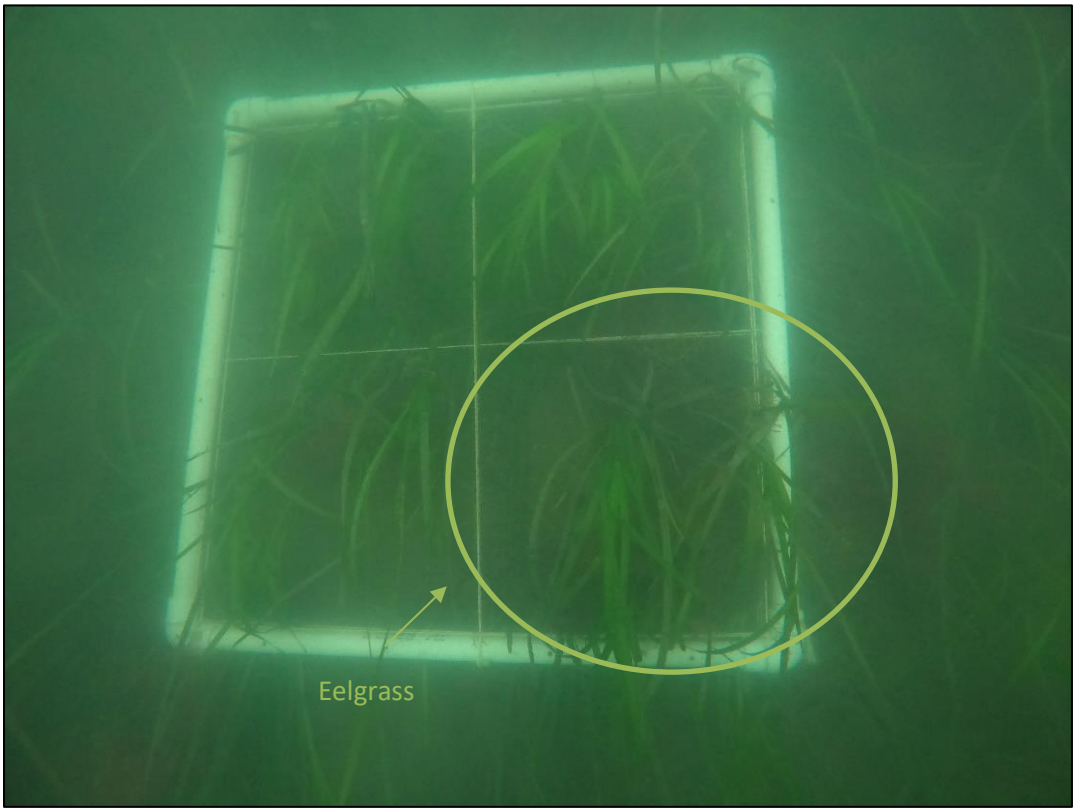

Figure 4. Underwater Photo Showing the Eelgrass Community.

4.0 Discussion

Eelgrass (*Zostera marina*) was visually detected inside the APE in the temporary impact area (TIA) is and adjacent to the expected permanent impact area (PIA). The eelgrass patches found within the project area were largely a medium to low density eelgrass community with denser beds on border of the TIA. The majority of the plants comprised of low numbers of turions per plant (Figure 5). Eelgrass beds were observed in this area during the 2022 Newport Bay Eelgrass monitoring report and our observations confirm the documented Eelgrass beds. High to low density beds can be found within the APE but none in the permanent impact area (PIA) adjacent to the bridge. Because the increased shading from trees, docks, the bridge and vessels stored in the area near the PIA eelgrass is low density to not present within ten feet of the bridge and seawalls. The beds are denser in the open waters at the north and south of the APE. The denser beds would see little effects from temporal construction activities. Eelgrass is less dense in and around docks and moored vessels. If any effects occurred, they would not contribute to any adverse long-term damage to the eelgrass health in the work area.

The replacement of the bridge and seawall retrofit will add 1.5ft and total width to the existing bridge and less than a foot on all existing seawalls. No eelgrass is present in the footprint of the PIA. The survey also indicates eelgrass abundance in the APE is sun based and if the temporary impact area is impacted there is little to no potential for construction-related impacts to existing eelgrass communities (i.e., temporary shading, physical disturbance, decreased light [turbidity]) and if deemed necessary construction Best Management Practices (BMPs) will provide adequate protections during in-water operations. These BMPs would include decreasing sedimentation using terrestrial booms, planning in water work according to eelgrass survey results and tide and avoid any unneeded shading. The temporary structures will be in place at most 7 months which will leave ample growth season for any impacts if they occur to recover before the next dormant/winter season. Any in-water manipulation or dock temporary relocation will be conducted with guidance from the most recent eelgrass survey to minimize the disturbance and not effect more dense beds. With the footprint of the proposed in water activity and construction being so small and eelgrass is not present in the footprint there should be no long-term effects to health of eelgrass in the project area and no mitigation would be needed.

During dive surveys a freshly dredged area in the south-west area of the APE was discovered. After investigation it was a location was Caulerpa taxafolia was identified and eradicated. The diver completed a 100% survey of the area to confirm no Caulerpa was present.

The survey results presented here were collected during the peak growth season (April to September). During the estimated construction window, the areal extent and/or presence of Eelgrass is not expected to vary, having compared seasonal assemblages from the survey completed and reviewed at this work site.

Figure 5. Harbor Island Bridge Construction Area Eelgrass Location.

5.0 References

National Marine Fisheries Service. California Eelgrass Mitigation Policy (CEMP), Adopted October 2014.

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US Army Corps of Engineers. Nationwide Permit Verification, SPL-2014-00364-RRS, April 8, 2015

City of Newport Beach Public Works. Eelgrass Monitoring in Newport Bay. February 24, 2023

Appendix A

Caulerpa Survey Reporting Form

This form is required to be submitted for any surveys conducted for the invasive exotic alga *Caulerpa taxifolia* that are required to be conducted under federal or state permits and authorizations issued by the U.S. Army Corps of Engineers or Regional Water Quality Control Boards (Regions 8 & 9). The form has been designed to assist in controlling the costs of reporting while ensuring that the required information necessary to identify and control any potential impacts of the authorized actions on the spread of *Caulerpa*. Surveys required to be conducted for this species are subject to modification through publication of revisions to the *Caulerpa* survey policy. It is incumbent upon the authorized permittee to ensure that survey work is following the latest protocols. For further information on these protocols, please contact: Robert Hoffman, National Marine Fisheries Service (NOAA Fisheries), (562) 980-4043, or William Paznokas, California Department of Fish & Game, (858) 467-4218).

Report Date:	September 16, 2023
Name of bay, estuary, lagoon, or harbor:	Lower Newport Bay
Specific Location Name: (address or common reference)	Colins Island Bridge at Balboa Island
Site Coordinates: (UTM, Lat./Long., datum, accuracy level, and an electronic survey area map or hard copy of the map **must** be included)	See Report
Survey Contact: (name, phone, e-mail)	Chris Clark / Senior Marine Scientist
Personnel Conducting Survey (if other than above): (name, phone, e-mail)	Bryce Dewees, Diver, Certified Caulerpa Investigator
Permit Reference: (ACOE Permit No., RWQCB Order or Cert. No.)	
Is this the first or second survey for this project?	First survey
Was *Caulerpa* Detected?: (if *Caulerpa* is found, please immediately contact NOAA Fisheries or CDFG personnel identified above)	_____**Yes, Caulerpa was found at this site and** _____**has been contacted on _____ date.** X_____**No, Caulerpa was not found at this site.**

Description of Permitted Work: (describe briefly the work to be conducted at the site under the permits identified above)	Construction of new bridge and seawall	
Description of Site: (describe the physical and biological conditions within the survey area at the time of the survey and provide insight into variability, if known. Please provide units for all numerical information).	*Depth range:*	o feet to 15 feet
	Substrate type:	Muddy substrate
	Temperature:	21.6 C
	Salinity:	28.2 ppt
	Dominant flora:	Eelgrass
	Dominant fauna:	Round rays
	Exotic species encountered (including any other Caulerpa species):	No
	Other site description notes:	
Description of Survey Effort: (please describe the surveys conducted including type of survey (SCUBA, remote video, etc.) and survey methods employed, date of work, and survey density (estimated percentage of the bottom actually viewed). Describe any limitations encountered during the survey efforts.	*Survey date and time period:*	9/16/23 0700 to 1200
	Horizontal visibility in water:	8 feet
	Survey type and methods:	Diver, quadrant and transect tape
	Survey personnel:	Bryce Dewees
	Survey density:	
	Survey limitations:	
Other Information: (use this space to provide additional information or references to attached maps, reports, etc.)		

Caulerpa Survey Reporting Form (version 1.2, 10/31/04)