



THE CITY OF SAN DIEGO

MEMORANDUM

DATE: May 28, 2026

TO: Kristen Forburger, Program Manager, Engineering and Capital Projects

FROM: Leslie Yen, Environmental Biologist III, Engineering and Capital Projects

SUBJECT: Summary of Results from General Biological Resources Survey update for Junipero Serra Museum Americans with Disabilities Act Improvements Project, San Diego, California (Update from Biological Letter Report for the Junipero Serra Museum Americans with Disabilities Act Improvements Project, April 23, 2026)

This Biological Letter Report summarizes the results of a general biological resources survey within the proposed impact area within the City-owned Presidio Park located in San Diego, California. The report results update the previous results presented in the Biological Letter Report for the *Junipero Serra Museum Americans with Disabilities Act Improvements Project*, prepared on April 23, 2026 (Attachment 2). Pursuant to the City's Biology Guidelines (2018), Guidelines for Conducting Biological Surveys "Biological surveys that are over 24-months shall be required to be updated to reflect the most current conditions affecting the project site," Therefore, this report documents any potential changes to the existing biological conditions within the proposed project site and recommends updates or changes to proposed mitigation or minimization measures to compensate for potential impacts associated with project implementation.

The details of the project description and background can be found in Attachment 2.

A site visit was conducted May 27, 2026 by City of San Diego's Engineering and Capital Projects Department (ECP) Qualified Environmental Biologist III, Leslie Yen. to analyze the current conditions of biological resources. Changes to flora and fauna from the previous 2024 survey were documented onsite within the limits of work.

Weather conditions during the survey were 60 degrees Fahrenheit, 100% cloud cover, windspeeds that averaged 5-10 miles per hour. The survey area is an urban park with historic buildings and monuments. The majority of the survey area consists of developed land or areas with landscaping or non-native/ornamental vegetation.

Vegetation communities, sensitive resources, and flora have not changed from previous surveys (Attachment 1 and 2).

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Kristen Forburger
May 28, 2026

The following wildlife species was observed during this survey: black phoebe (*Sayornis nigricans*), western bluebird (*Sialia mexicana*), American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), California towhee (*Melospiza crissalis*), house finch (*Haemorhous mexicanus*), American goldfinch (*Spinus tristis*), California ground squirrel (*Otospermophilus beecheyi*), and desert cottontail (*Sylvilagus audubonii*). No sensitive wildlife species were observed.

No changes or additions to previously proposed mitigation measures are recommended as results of *Junípero Serra Museum Americans with Disabilities Act Improvements Project, prepared on April 23, 2026* are confirmed accurate and biological conditions on the proposed project remain the same.

If you have any questions or concerns, do not hesitate to contact me: lyen@san Diego.gov or call (619) 533-3835.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Leslie Yen', with a stylized flourish at the end.

Leslie Yen
Environmental Biologist III

Attachments: 1. Site Photographs
2. Biological Letter Report for the Junípero Serra Museum Americans with Disabilities Act Improvements Project (RECON, 2026)

**Junipero Serra Museum:
May 28, 2026 – SITE PHOTOGRAPHS**



Photo 1. This photo shows the view from northern most end, facing southwest. The area primarily consists of ornamentals.



Photo 2. This photo shows the view from the midway point, facing west. The area primarily consists of eucalyptus with planted pines.



Photo 3. This photo shows the view from the southeastern edge, facing north.



Photo 4. This photo shows the view from the south end, facing north.



An Employee-Owned Company

April 23, 2026

Environmental and Permitting Support Staff
Engineering and Capital Projects Department City of San Diego
525 B Street, Suite 750, MS 908A
San Diego, CA 92101

Reference: Biological Letter Report for the Junípero Serra Museum Americans with Disabilities Act Improvements Project (WBS# S-15034.02.02; RECON 9087.1)

Dear Environmental and Permitting Support Staff:

This report summarizes the existing and potential biological resources on the proposed Junípero Serra Museum Americans with Disabilities Act (ADA) Improvements Project (project) area. It identifies potential impacts to sensitive biological resources and provides recommendations to avoid, minimize, and/or mitigate those impacts in accordance with the City of San Diego (City) Biology Guidelines (City of San Diego 2018) and Significance Determination Thresholds (City of San Diego 2022).

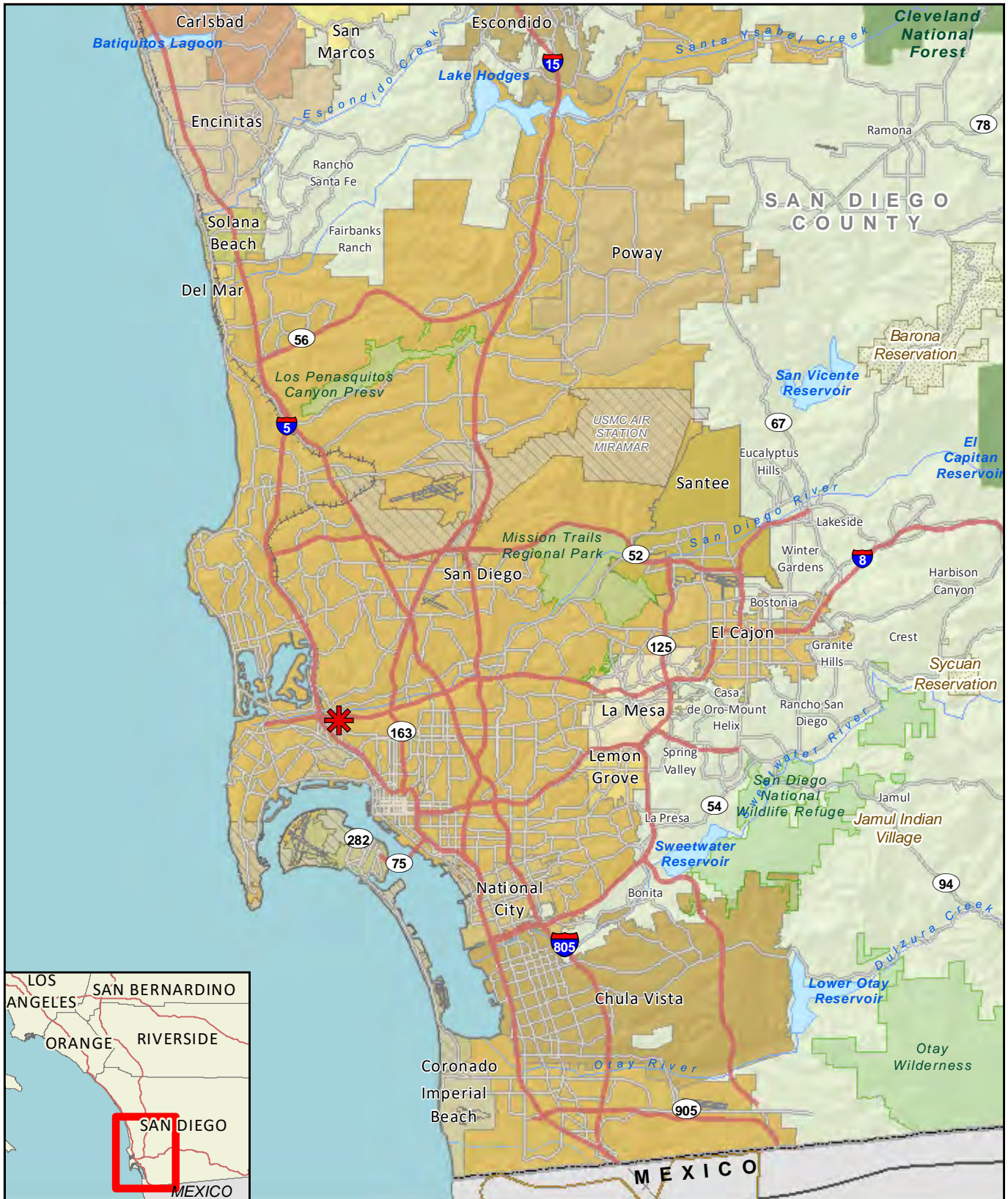
1.0 Introduction and Project Description

The purpose of this biological letter report is to: (1) document the existing biological conditions within the proposed project survey area; (2) evaluate the survey area and the vicinity for the potential to support sensitive biological resources; (3) provide an analysis of impacts to sensitive biological resources; and (4) detail mitigation measures to reduce these impacts to below a level of significance.

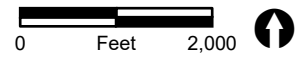
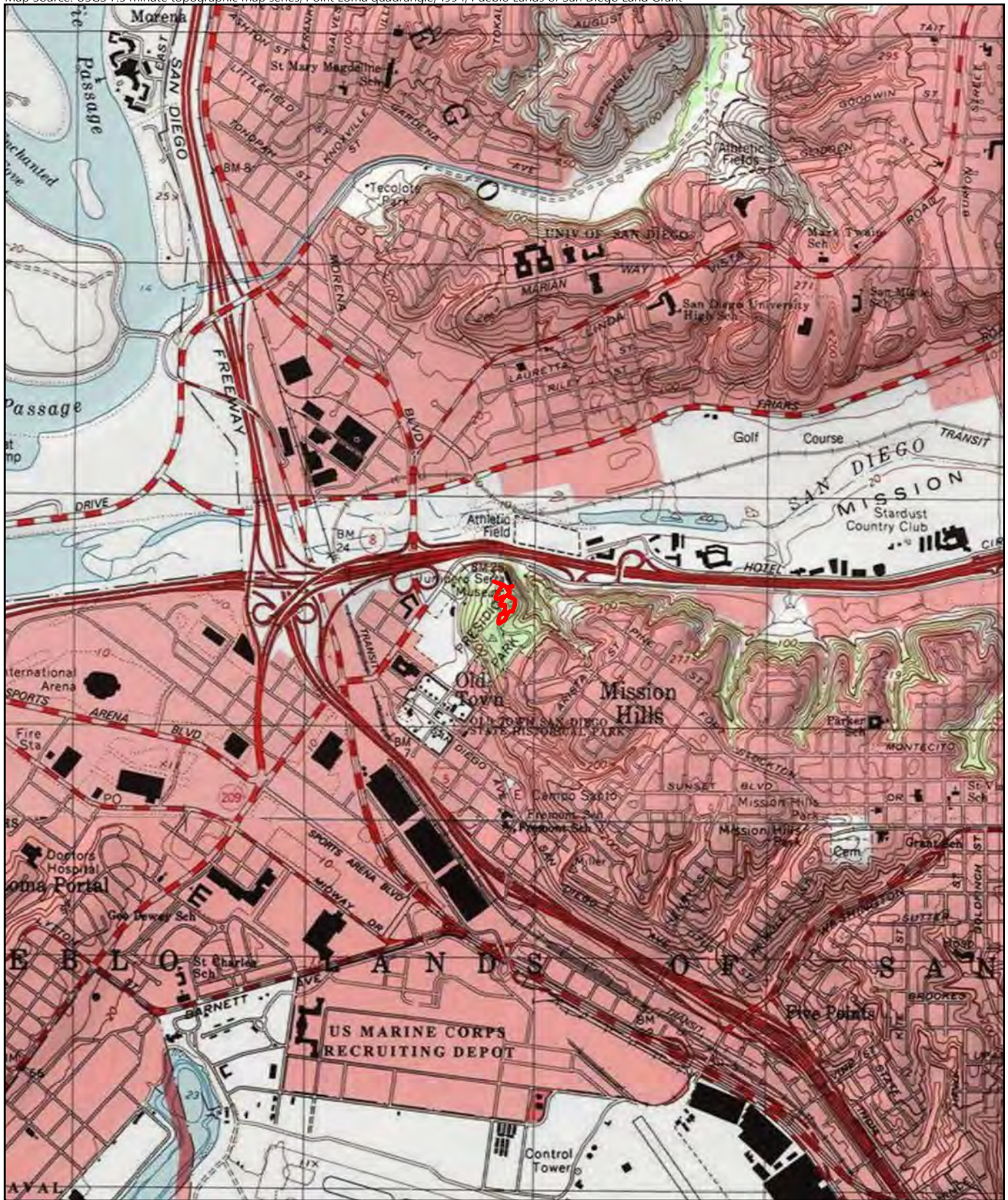
1.1 Project Location

The project area occurs within the City-owned Presidio Park, which includes the Junípero Serra Museum. It lies south of Interstate 8 and just south of Taylor Street, northeast of Old Town San Diego State Historic Park (Figure 1). The proposed project area is shown on the U.S. Geological Survey (USGS) 7.5-minute topographic map series, Point Loma and La Jolla quadrangles, within an unsectioned portion of the Pueblo Lands of San Diego Land Grant (Figure 2; USGS 1994 and 1996). The proposed project area is found on the City 800' map Number 210-1701 (Figure 3). The proposed project area includes the Junípero Serra Museum and extends south to Cosoy Way. It is bounded on the west by a north-south portion of Presidio Drive and on the east by the canyon bottom in the eastern portion of Presidio Park (Figure 4).

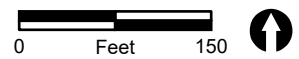
For this study, the survey area consists of the project area (1.62 acres) and a 300-foot buffer, totaling 19.37 acres (see Figure 4). The survey area is situated at the northern edge of the residential neighborhood of Mission Hills, just east of the Presidio Hills Golf Course and the Old Town neighborhood. Interstate 8 and the San Diego River run roughly east-west through Mission Valley just north of the survey area. The project area is largely separated from the San Diego River by Interstate 8 and Taylor Street. The majority of the survey area consists of urban park land on a gradual north-facing hill supporting maintained lawns, trees, and landscaping. Areas in the northern and northeastern portions of the survey area contain both native and naturalized vegetation and a series of trails (both dirt and paved) along steep canyon slopes. Portions of the City's Multi-Habitat Planning Area (MHPA) occur within the survey area (see Figure 4).



 Project Location



 Project Boundary



 Project Area

FIGURE 4

Project Location on Aerial Photograph

1.2 Project Description

The proposed project is the construction of a new ADA-compliant parking lot that would expand available parking capacity and provide ADA-compliant access to the Junípero Serra Museum. The parking lot would include four standard diagonal parking spaces and five ADA-compliant diagonal parking spaces (nine total spaces), accessed by a new 28-foot-wide driveway that would connect the proposed parking lot with Presidio Drive. A 6-foot-wide concrete ADA-compliant path would provide access to the existing lower parking lot and to the existing museum. The new parking lot would include a concrete sidewalk along its northwest side that would provide a pedestrian connection to the ADA-compliant path. A 12-foot by 52-foot biofiltration basin, proposed at the base of the driveway near Presidio Drive, would collect and treat stormwater runoff from the impervious surfaces (asphalt and concrete surfacing from the proposed parking lot and sidewalk). A self-mitigating dispersion area to the north of the site would capture stormwater run-off from the concrete path. The project would also include lighting and signage around the parking lot, the sidewalk around the northwest side of the parking lot, and the ADA-compliant path. The proposed lighting includes eleven 13-to-15-foot-tall, pole-mounted streetlights with downcast shades that would be placed along the access driveway, the parking lot, and the ADA-compliant path connecting the parking lot to the museum. Approximately 12 linear feet of 3-foot-tall retaining wall would run along portions of the ADA-compliant path. The project design incorporates installation of native trees and revegetation with native plant species to provide habitat for monarch butterfly (*Danaus plexippus*) and other species with permanent irrigation (Attachment 1).

The proposed project would impact a total area of 1.62 acres. The project would require a Boundary Line Adjustment (BLA) to the existing MHPA. The BLA would remove 0.31 acre and add 0.86 acre to the MHPA east of the project footprint, resulting in a net increase of 0.55 acre inside the MHPA.

2.0 Regulatory Setting

2.1 Federal Regulations

The federal Migratory Bird Treaty Act (16 United States Code 703 et seq.), or MBTA, is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, or attempt such actions, except as permitted by regulation. The take, possession, import, export, transport, sale, purchase, barter, or offering of these activities is prohibited, except under a valid permit or as permitted in the implementing regulations. On October 4, 2021, the USFWS published a revision of interpretation of the MBTA. With the final rule, USFWS has effectively reinstated its position that "incidental take" (e.g., pursuing, hunting, shooting, capturing, collecting, harming, killing) that results from, but is not the purpose of, carrying out otherwise lawful activity is prohibited by the MBTA. The project is designed to comply with MBTA, which precludes direct impacts to nesting birds and raptors.

2.2 State Regulations

Section 3503 from the California Fish and Game Code applies to projects in the state. This section states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto," and Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized.

2.3 City of San Diego Regulations

The City's Multiple Species Conservation Program (MSCP) Subarea Plan was designed, in part, to maintain a preserve system that allows for animals and plants to exist at both the local and regional levels. The MSCP has identified large blocks of native habitat having the ability to support a diversity of plant and animal life known as "core biological resource areas." "Linkages" between these core areas provide for wildlife movement. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. Input from responsible agencies and other interested participants resulted in the creation of the City's MHPA. The MHPA is the area within which the permanent MSCP preserve would be assembled and managed for its biological resources. MHPA lands are considered by the City to be sensitive biological resources. As shown in Figure 4, the MHPA occurs in two general segments within the survey area. One segment occurs on the far western portion of the survey area, primarily on west-facing slopes with eucalyptus woodland. The second segment begins at the museum and extends to the south over the eastern portion of the knoll, and to the southeast along the southern perimeter of the canyon the slopes. This area includes primarily eucalyptus woodland and ornamental plantings, but also includes developed areas and the larger patch of disturbed southern mixed chaparral. The MSCP also identifies land use adjacency guidelines to minimize direct and indirect impacts and maintain the function of the MHPA (City of San Diego 1997). These adjacency guidelines address drainage, toxins, lighting, noise, barriers, invasive species, brush management requirements, and placement of grading footprints relative to the MHPA. Project consistency with the MSCP is discussed in Section 6.0.

The City's Biology Guidelines (City of San Diego 2018) were formulated to aid in the implementation and interpretation of the Environmentally Sensitive Lands Regulations (ESL), San Diego Land Development Code, Chapter 14, Division 1, Section 143.0101. Section III of the Guidelines (Biological Impact Analysis and Mitigation Procedures) also serve as standards for the determination of impacts and mitigation under the California Environmental Quality Act (CEQA). The ESL defines sensitive biological resources as those lands included within the MHPA as identified in the City's MSCP Subarea Plan (City of San Diego 1997), and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA or IIIB; habitat for rare, endangered or threatened species; or narrow endemic species.

The City's Whitebook, also known as the City Supplement (City of San Diego 2021), contains specifications for public works construction, which are specific to the City. Therefore, the Whitebook takes precedence over the specification language contained in the "Greenbook," which covers general provisions for public works construction (Public Works Standards, Inc. 2024). Construction methods contained in the Whitebook include avoidance of biological resources, such as nesting birds, and maintenance and monitoring of revegetation that are implemented as general provisions for City public works construction.

3.0 Methods and Survey Limitations

Biological resource data for the project were obtained from a combination of background research, general biological field surveys, arborist surveys, and focused surveys for Crotch's bumble bee (*Bombus crotchii*), as detailed below.

3.1 Background Research

Prior to fieldwork, RECON Environmental, Inc. (RECON) analyzed existing sensitive species data recorded within two miles of the proposed project areas. This analysis included searches of the U.S. Fish and Wildlife (USFWS) All Species Occurrences Database (USFWS 2024a) and critical habitat portal (USFWS 2024b), the SanBIOS database (County of San Diego 2024), and California Natural Diversity Database (California Department of Fish and Wildlife [CDFW]

2024a). Determination of the potential occurrence for sensitive species is based upon the results of the database searches, as well as known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; CDFW 2024b–e; California Native Plant Society [CNPS] 2024; Reiser 2001; Tremor et al. 2017). Background research to assess the existing biological conditions also included a review of online aerial satellite imagery, USGS topographic map (USGS 1994 and 1996), and U.S. Department of Agriculture soil survey maps (U.S. Department of Agriculture 1973).

3.2 Biological Resources Survey

RECON biologists conducted general biological resources surveys for the project initially in 2018, followed by updated surveys in 2024. Table 1 lists the survey dates, surveying biologists, and weather conditions during the surveys. General biological surveys were conducted on-foot by meandering throughout the survey area where slope and vegetation density allowed access. Areas that were too steep for direct access were viewed from the closest accessible areas using binoculars, when necessary.

Table 1 Schedule of Surveys			
Date	Personnel	Start Conditions	End Conditions
General Biological Survey			
02/28/2024	Cailin Lyons, Camille Defrenne	60°F; 0–2 mph wind; 0% cloud cover	65°F; 0% cloud cover; 0–2 mph wind
08/13/2018	Brian Parker, Andrew Smisek	79°F; 2–6 mph wind; 0% cloud cover	83°F; 0% cloud cover; 2–6 mph wind
Tree Survey and Monarch Butterfly Habitat Assessment			
5/5/2024	J.R. Sundberg	n/a	n/a
4/22/2021	J.R. Sundberg	n/a	n/a
Crotch’s Bumble Bee Focused Surveys			
6/20/2024	Wendy Loeffler	11:24 a.m.; 75°F; winds 2 mph; 5% cloud cover	2:00 p.m.; 76°F; winds 2 mph; 0% cloud cover
7/9/2024	Wendy Loeffler	1:42 p.m.; 83°F; winds 1 mph; 5% cloud cover	3:33 p.m.; 79°F; winds 2 mph; 30% cloud cover
7/23/2024	Wendy Loeffler	10:42 a.m.; 83°F; winds 0–21 mph; 5% cloud cover	12:42 p.m.; 89°F; winds 1–3 mph; 2% cloud cover
°F = degrees Fahrenheit; % = percent; mph = miles per hour; n/a = not applicable			

During the general biological survey, all plant species observed and all wildlife species detected within the survey area were recorded. Vegetation communities were hand-mapped on a 1:2400-scale aerial photograph with the assistance of a sub-meter-accurate global positioning system receiver. Any sensitive plant and animal species that were observed during the survey were noted, and the potential for other sensitive species to be present was assessed. Although a formal jurisdictional delineation was not conducted, the general biological survey also included an informal search for potential jurisdictional areas.

Surveys were conducted during the daytime to maximize visibility for the detection of plants and most animals. In addition, surveys were conducted over several seasons (winter, spring, and summer) to detect both overwintering and resident populations of wildlife, as well as a range of floral resources. Nonetheless, plant and animal species

inventories were limited by seasonal and temporal factors, as well as noise levels from the adjacent freeway. Birds represent the largest component of the vertebrate fauna, and because they are active in the daytime, diurnal surveys maximize the number of observations of this portion of the fauna. Diurnal surveys may result in fewer observations of animals that are more active at night, such as mammals. In addition, many species of reptiles and amphibians are nocturnal and/or secretive in their habits and are difficult to observe using standard meandering transects. In addition, some plant species may not have been flowering at the time of surveys. To account for survey limitations, special-status plant and wildlife species that could occur based on species records, known ranges, and habitat preferences are analyzed herein based on their potential to occur.

3.3 Tree Survey and Monarch Butterfly Habitat Assessment

RECON arborist, J.R. Sundberg, conducted tree surveys for the project in 2021 and 2024. The tree surveys included identification of the location and species of all existing trees within the proposed project area, including an evaluation of the trees for the potential to support monarch butterfly roosting. During the 2021 survey, all trees with a diameter at breast height greater than 5 inches were mapped with the assistance of a sub-meter-accurate global positioning system receiver. During the 2024 verification survey, the arborist checked all of the 109 trees that were mapped in 2021 and noted any significant discrepancies with the 2021 data. A subset of these trees (16 out of 109) was also remeasured for diameter at breast height. Complete survey methods are provided in the Tree Survey Letter Report for the Junipero Serra Museum Americans with Disabilities Act Improvements Project (Attachment 2).

3.4 Crotch's Bumble Bee Focused Surveys

RECON biologist, Wendy Loeffler, conducted a habitat assessment and focused surveys for the California Endangered Species Act (CESA) Candidate Crotch's bumble bee following the methodologies set forth in the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023). Surveys were authorized through a Memorandum of Understanding issued on May 17, 2024, by CDFW to Principal Investigator, Wendy Loeffler.

The habitat assessment included an evaluation for foraging, nesting, and overwintering habitat, and was conducted concurrently with focused surveys on June 20, July 9, and July 23, 2024, consistent with the Colony Active Period of Crotch's bumble bee within the South Coast Region (April through August). The initial habitat assessment area covered 6.63 acres, which covered the proposed project area and a 100-foot buffer. The habitat assessment was conducted on-foot by meandering throughout the survey area. RECON recorded potential foraging, nesting (e.g., bare ground, rodent burrows), and/or overwintering resources (e.g., leaf litter, woody forest edge); documented general plant diversity; and estimated the absolute percent cover of nectar sources. Surveys for foraging individuals were then conducted, and included walking large meandering transects to incorporate patches of floral resources and capture bumble bees with a net from blooms. Photographs were taken of each bee and submitted to the CDFW-approved taxonomist, Jaymee Marty from Marty Ecological Consulting, for identification. Complete survey methods are provided in Post-survey Notification of 2024 Crotch's Bumble Bee Focused Surveys for the Junipero Serra Museum Americans with Disabilities Act Improvements Project (Attachment 3).

4.0 Survey Results

4.1 Physical Characteristics

The survey area is an urban park with a number of historic buildings and monuments. The majority of the survey area consists of developed land or areas with landscaping or non-native/ornamental vegetation. Topography consists of a hill in the central portion of the survey area, with a canyon in the eastern portion. Elevations range from a high of 212 feet above mean sea level (AMSL) at a residential property along the southeast edge of the survey area to a low of

approximately 23 feet AMSL within Taylor Street along the northern portion of the survey area. The knoll in the central portion of the survey area peaks at approximately 181 feet AMSL approximately 55 feet south of the museum building (USGS 1996).

Soils within the survey area are identified as Gaviota fine sandy loam, 30 to 50 percent slopes, Olivenhain-Urban land complex, 9 to 30 percent slopes, Tujunga sand, 0 to 5 percent slopes, and Urban Land (Figure 5; USDA 1973). Gaviota fine sandy loams are present primarily in the eastern portion of the survey area, with a segment extending northwest to include the soils beneath the museum; Olivenhain-Urban land complex soils are present primarily within the western and southern portion of the survey area; Tujunga sand is present along the northern edge of the survey area; and Urban land is present in a small segment of the northwestern edge of the survey area.

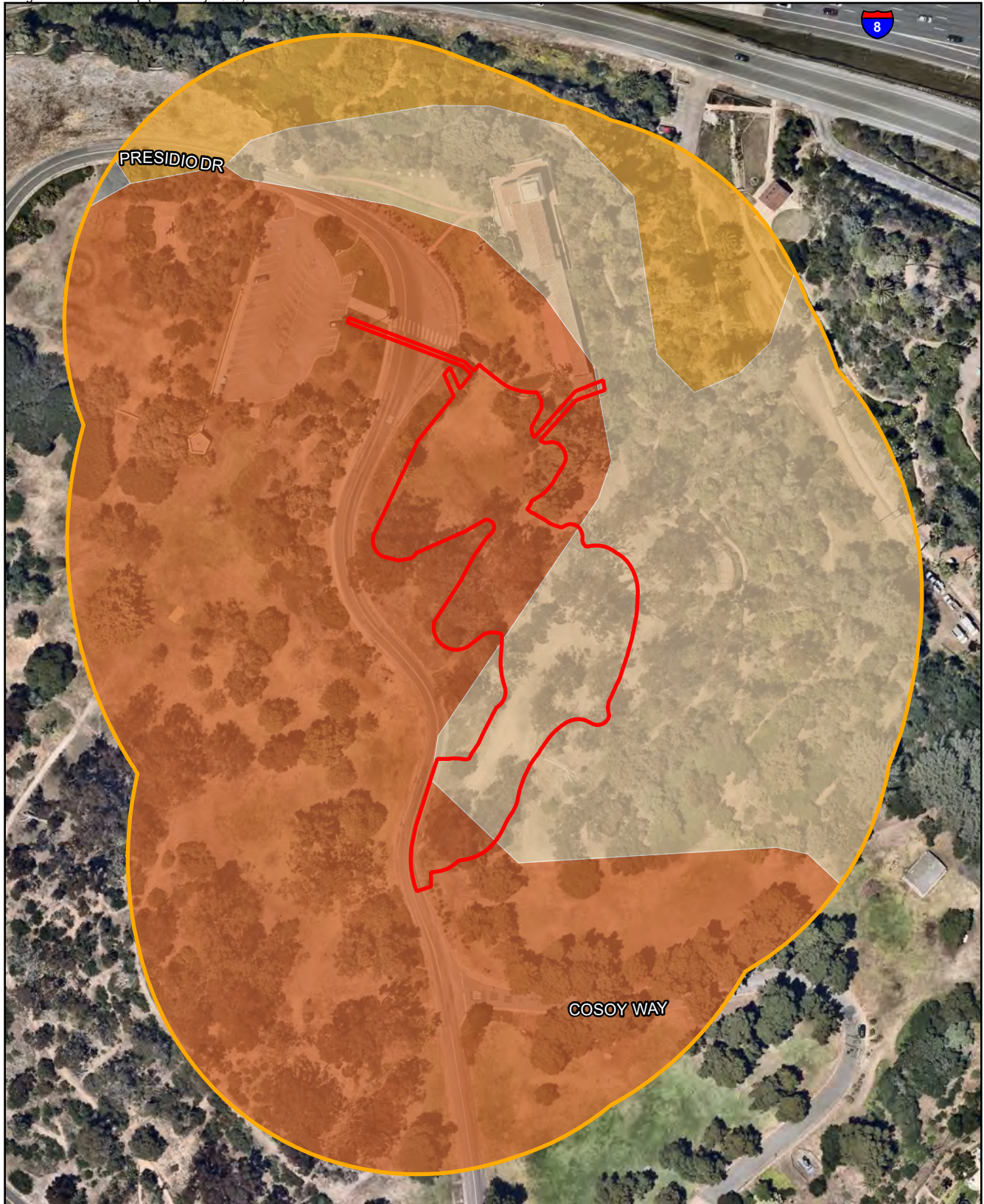
4.2 Vegetation Communities



The following eight vegetation communities/land cover types were mapped within the survey area: coast live oak woodland (Tier I, rare upland), disturbed southern mixed chaparral (Tier IIIA, common upland), eucalyptus woodland (Tier IV, other uplands), non-native woodland (Tier IV), non-native vegetation (Tier IV), disturbed land (Tier IV), ornamental plantings (Tier IV), and urban/developed (Figure 6). The acreage of each of these vegetation communities and land cover types is summarized in Table 2, below. Each community, including the dominant plant species observed, is described below.

Community or Type (Holland/Oberbauer Code)	City of San Diego Tier	Inside MHPA	Outside MHPA	Total
Coast live oak woodland (71160)	I	0.08	0.21	0.29
Disturbed southern mixed chaparral (37120)	IIIA	0.66	0.21	0.87
Eucalyptus woodland (79100)	IV	1.44	2.52	3.96
Non-native woodland (79000)	IV	0.91	0.37	1.28
Non-native vegetation (11000)	IV	0.15	0.69	0.84
Disturbed land (11300)	IV	0.27	0.94	1.21
Ornamental plantings (12000)	IV	0.79	7.87	8.66
Urban/developed (12000)	None	0.33	1.93	2.26
Total		4.63	14.74	19.37
MHPA = Multi-Habitat Planning Area				
¹ Areas are presented in acres, rounded to the nearest 0.01; discrepancies are due to rounding				





4.2.1 Coast Live Oak Woodland

Coast live oak woodland occurs on the coastal slopes of southern California, and in San Diego it is most commonly found on north-facing slopes and shaded ravines below 4,000 feet (Holland 1986). It is dominated by mature coast live oak (*Quercus agrifolia*), often with a poorly developed shrub understory. Coast live oak woodland is considered a Tier I (rare upland) vegetation community (City of San Diego 2018). Within the survey area, coast live oak woodland occurs as two small patches to the north and east of Cosoy Way (see Figure 6). Each patch contains less than ten coast live oak trees that are distributed relatively close together but often without an overlapping canopy. The understory of the coast live oak woodland is generally unmaintained and dominated by ripgut grass (*Bromus diandrus*), other non-native herbaceous species, or ornamental shrubs, such as acacia (*Acacia* sp.).



-  Project Area
-  Survey Area

Soil Types

-  Gaviota Fine Sandy Loam, 30 to 50 Percent Slopes
-  Olivenhain-Urban Land Complex, 9 to 30 Percent Slopes
-  Tujunga Sand, 0 to 5 Percent Slopes
-  Urban Land

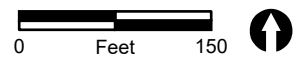
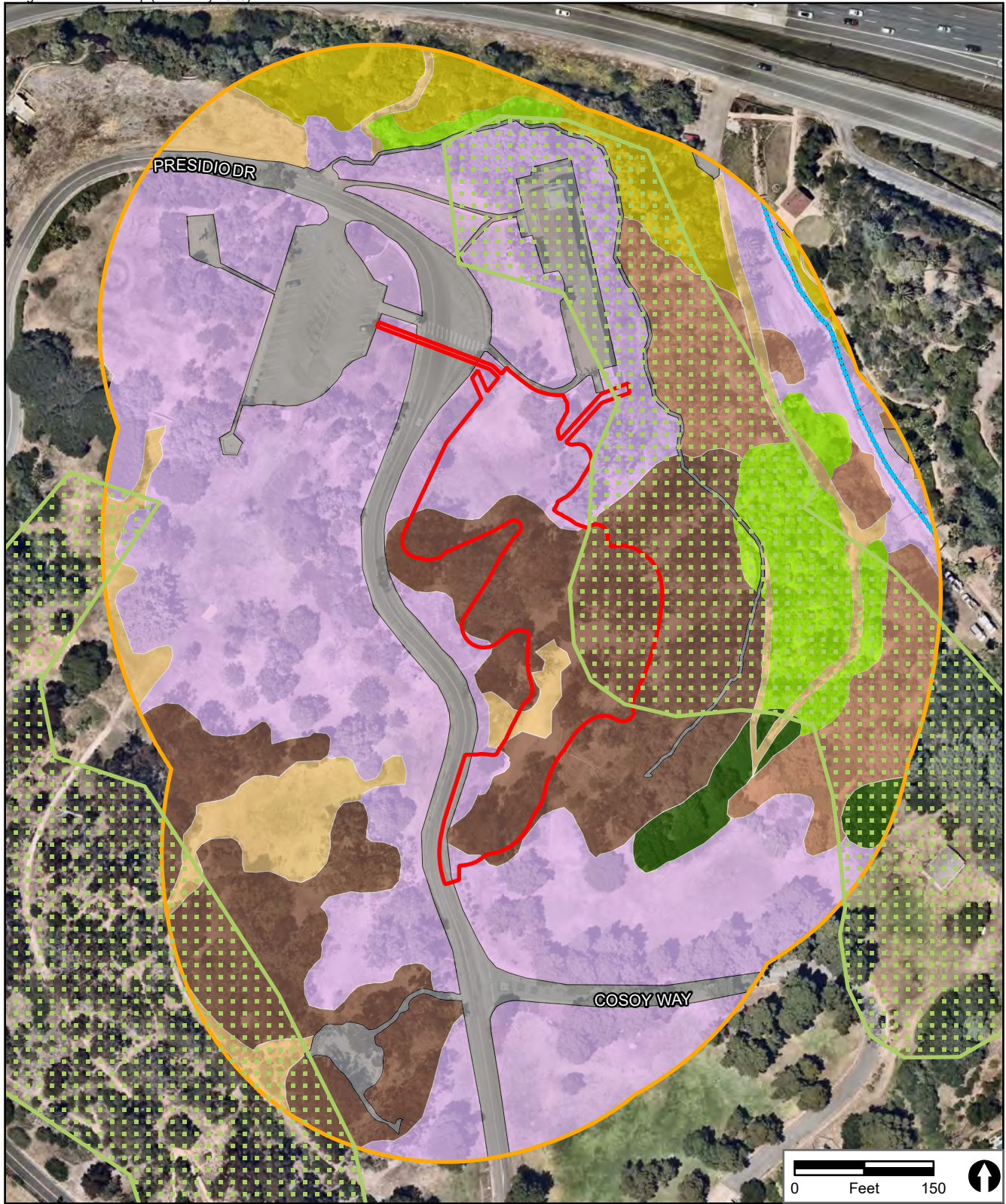


FIGURE 5
Soil Types



- Project Area
- Survey Area
- City of San Diego MHPA
- Channelized Drainage

Vegetation Communities

- Disturbed Southern Mixed Chaparral
- Coast Live Oak Woodland
- Non-native Woodland
- Non-native Vegetation

- Eucalyptus Woodland
- Ornamental Plantings
- Disturbed Land
- Urban/Developed

FIGURE 6

Existing and Impacted Biological Resources

4.2.2 Disturbed Southern Mixed Chaparral

Southern mixed chaparral is considered a Tier IIIA (common upland) vegetation community (City of San Diego 2018). It is typically dominated by tall (5–10 feet tall) broad-leaved sclerophyllous shrubs or small trees on protected north-facing and canyon slopes. The vegetation is usually dense, with little or no understory. Within the survey area, southern mixed chaparral occurs as two isolated patches, one on the upper portion of the slope in the central portion of the survey area and to the north of the museum (see Figure 6). This vegetation community is dominated by lemonade berry (*Rhus integrifolia*) and toyon (*Heteromeles arbutifolia*), and a non-native shrub, Kei apple (*Dovyalis caffra*). It has lesser amounts of laurel sumac (*Malosma laurina*) and bladderpod (*Peritoma arborea*), as well as non-natives, such as olive (*Olea europaea*) and Cape leadwort (*Plumbago auriculata*). This community is considered disturbed because it has a large proportion of non-native species. Vegetation cover is approximately 75 percent, and the understory is mostly bare ground.

4.2.3 Eucalyptus Woodland

Eucalyptus woodland is characterized by tall, non-native, gum trees (*Eucalyptus* spp.). It is common in urban areas and the coastal plains, where it often forms monotypic stands that exclude growth of other plants (Oberbauer et al. 2008). Eucalyptus woodland is considered a Tier IV (other uplands) vegetation community because it does not support native vegetation (City of San Diego 2018). It occurs in the western and central portions of the survey area along a gradual slope and at the top of the hill (see Figure 6). The eucalyptus woodland in the western portion of the survey area is dominated by mature gum trees with an understory of ornamental shrubs, while the understory of the eucalyptus woodland on the knoll in the central portion of the survey area is largely bare and appears to be used by park staff for vegetation maintenance, as vehicle tracks and piles of cut vegetation were present during the survey.

4.2.4 Non-native Woodland

Non-native woodland is dominated by exotic trees, which may have been intentionally planted but do not require maintenance or artificial irrigation (Oberbauer et al. 2008). Although characterized by exotic species, this community can include trees that provide suitable nesting habitat for raptors and other birds. Non-native woodland is considered a Tier IV (other uplands) vegetation community because it does not support native vegetation (City of San Diego 2018). This vegetation community occurs as multiple moderately-sized patches in the eastern half of the survey area (see Figure 6). It is characterized by mature non-native trees, including Brazilian pepper tree (*Schinus terebinthifolius*), olive, Canary Island date palm (*Phoenix canariensis*), and gum trees, as well as several planted Torrey pines (*Pinus torreyana* ssp. *torreyana*). The understory contains various non-native shrubs, such as Kei apple and Cape leadwort, and non-native grasses.

4.2.5 Non-native Vegetation

Non-native vegetation occurs in the northern portion of the survey area (see Figure 6). It is dominated by non-native shrubs with a sparse non-native understory or bare ground and does not appear to be maintained or irrigated. The dominant shrubs include Kei apple, Cape leadwort, and acacia. Occasional toyon, laurel sumac, and lemonade berry shrubs are also present. As this vegetation community is dominated by exotic plant species, it is considered a Tier IV (other uplands) vegetation community (City of San Diego 2018).

4.2.6 Disturbed Land

Disturbed land generally consists of areas altered by human activity, such as areas where soil or other materials have been dumped or where foot or vehicular traffic have altered natural species composition. Such areas have only

minimal value to native wildlife. These areas typically occur in highly populated areas and may receive water from precipitation or runoff (Oberbauer et al. 2008). It is considered a Tier IV (other uplands) vegetation community (City of San Diego 2018). Disturbed land occurs in small patches throughout the survey area (see Figure 6). It is characterized by bare ground, with an occasional sparse cover of non-native grasses or forbs. It is likely kept bare or sparse as a result of pedestrian traffic or frequent activity by park maintenance crews. Many of these areas occur along the margins of developed land, such as paved parking lots and roads, or are used as dirt trails.

4.2.7 Ornamental Plantings

Ornamental plantings are characterized by ornamental species that were historically installed for landscaping purposes. This land cover type is considered a Tier IV (other uplands) vegetation community (City of San Diego 2018). Ornamental plantings are the most abundant vegetation community in the survey area, occurring as large areas in the western and southern portions of the survey area and small patches in the northeastern portion (see Figure 6). These areas are characterized by planted, maintained vegetation, much of which is irrigated. Vegetation consists of ornamental trees and landscaped shrubs interspersed in a mowed lawn with areas of ornamental herbaceous species.

4.2.8 Urban/Developed

Urban/developed includes areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. It is characterized by permanent or semi-permanent structures and pavement or hardscape where no natural land is evident. This land cover type is not considered a sensitive vegetation community by the City (City of San Diego 2018). Areas mapped as urban/developed within the survey area includes the museum, as well as various paved parking lots, roads, trails, and other structures (see Figure 6).

4.3 Botany

A total of 120 plant species were recorded within the survey area, including 20 native species and 100 non-native species (Attachment 4). The plant species within the survey area include a mix of ornamental and invasive species typical in landscaped and other developed areas, with several relictual patches of native shrubs, trees, and wildflowers. The overall plant diversity within the survey area was moderate and reflects a locale that historically supported primarily native shrublands but where exotic species were historically planted and have been maintained for a long period of time.

4.4 Zoology

A total of 25 wildlife species were observed/detected within the survey area, including 8 invertebrates, 2 reptiles, 14 birds, and 1 mammal (Attachment 5). The overall wildlife species diversity was low and consists primarily of urban-adapted species that are common in urbanized and disturbed areas in the City.

5.0 Sensitive Biological Resources

For purposes of this report, species will be considered sensitive if they are (1) covered species under the City's MSCP Subarea Plan; (2) listed by state or federal agencies as threatened or endangered or are proposed for listing (CDFW 2024b, 2024c; 2024d); (3) on California Rare Plant Rank (CRPR) 1B (considered endangered throughout its range) or CRPR 2 (considered endangered in California but more common elsewhere), CRPR 3 (more information about the plant's distribution and rarity needed), and CRPR 4 (plants of limited distribution) of the CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS 2024); or (4) designated by the City as a narrow endemic species (City of San Diego 1997, 2018). Sensitive vegetation communities are those identified by the City (City of San Diego 1997, 2018).

The City's Biology Guidelines (City of San Diego 2018) and ESL Regulations define sensitive biological resources as those lands included within the MHPA as identified in the City's MSCP Subarea Plan (City of San Diego 1997), and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA or IIIB; habitat for rare, endangered, or threatened species; or narrow endemic species.

As stated in the City's Guidelines (2018), a project site is considered to contain sensitive biological resources if:

- The site has been identified as part of the MHPA by the City's MSCP Subarea Plan.
- The site supports or could support (e.g., in different seasons/rainfall conditions, etc.) Tier I, II, or III-A and -B vegetation communities (such as grassland, chaparral, coastal sage scrub, etc.). The CEQA determination of significant impacts may be based on what was on the site (e.g., if illegal grading or vegetation removal occurred), as appropriate.
- The site contains or comes within 100 feet of a natural or manufactured drainage (determine whether it is vegetated with wetland vegetation).
- The site does not support a vegetation community identified in Tables 2a, 2b or 3 (Tier I, II, IIIA or IIIB) of the Biology Guidelines; however, wildlife species listed as threatened or endangered or other protected species may use the site (e.g., California least terns [*Sterna antillarum browni*] on dredge spoil, wildlife using agricultural land as a wildlife corridor).

5.1 Sensitive Plant Species

No naturally occurring sensitive plant species were observed within the survey area. Torrey pine (CRPR 1B.2; MSCP covered species [natural populations]) was observed; however, the individuals appear to have been planted and would not be considered sensitive. The survey area is located outside of the known natural range of this species. No additional sensitive plant species are expected to occur within the survey area due to the project setting within improved parklands and lack of suitable habitat. Sensitive plant species known to occur within two miles of the survey area based on a database review are presented with an evaluation of their potential for occurrence in Attachment 6.

5.2 Sensitive Wildlife Species

One sensitive wildlife species, monarch butterfly (federal candidate for listing), was detected in the survey area. In addition, five sensitive wildlife species have a moderate to high potential to occur within the survey area. This includes Crotch's bumble bee (state candidate for listing), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*; CDFW watch list, MSCP covered), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*; CDFW species of special concern western bluebird (*Sialia mexicana occidentalis*; MSCP covered), and Cooper's hawk (*Accipiter cooperii*; CDFW watch list, MSCP covered). Each of these is discussed below. Sensitive wildlife species known to occur within two miles of the project boundary based on a database review are presented with an evaluation of their potential for occurrence in Attachment 7.

5.2.1 Monarch Butterfly

Monarch butterfly is a federal candidate for listing and has been assigned a conservation status of G4T1T2O by NatureServe, meaning global populations are secure, but the California overwintering population is imperiled or vulnerable. At their overwintering sites, monarchs seek out very specific microclimate conditions, including dappled sunlight, high humidity, access to fresh water, and the absence of freezing temperatures or high winds. Monarchs

begin arriving at these sites in October, forming winter aggregations. The butterflies cluster in dense groups on branches, leaves, and occasionally, on tree trunks.

Presidio Park contains a mapped monarch overwintering site totaling approximately 17.60 acres (Figure 7; CDFW 2024a; Xerces 2024b) and several known stands of roosting trees occur adjacent to Cosoy Way, outside of the project footprint (The Monarch Program 2019). Four monarch butterflies were observed flying in eucalyptus woodland, coast live oak woodland and ornamental plantings within the survey area during the biological survey in 2024, which occurred in late February. According to the tree survey letter report (see Attachment 2), the arborist survey area (project area and an approximate 50-foot buffer) encompasses 93 trees that are considered suitable for monarch roosting. These trees include healthy Canary Island pines and gum trees taller than 15 feet (see Attachment 2).

5.2.2 Crotch's Bumble Bee

Crotch's bumble bee is a candidate species for listing under the CESA (CDFW 2024b). This species is found in diverse habitats including open grasslands, chaparral, and semi-urban settings. Crotch's bumble bees are floral generalists, meaning that they gather pollen and nectar from a wide variety of flowering plants, but they have preferences for milkweed (*Asclepias* spp.), lupine (*Lupinus* spp.) and sage (*Salvia* spp.; Xerces Society 2024a).

Crotch's bumble bee was not observed during the three focused surveys conducted for the project and thus is considered to have a low potential to occur within the survey area (see Attachment 3). A majority of the survey area consists of maintained parkland subject to repeated mowing or closed-canopy woodland with limited floral resources in the understory to provide potential nectar sources to support foraging. Floral resources are generally limited to unmaintained areas in the western and eastern portions of the survey area, outside of the project footprint. More details about the result of the focused surveys can be found in Attachment 3.

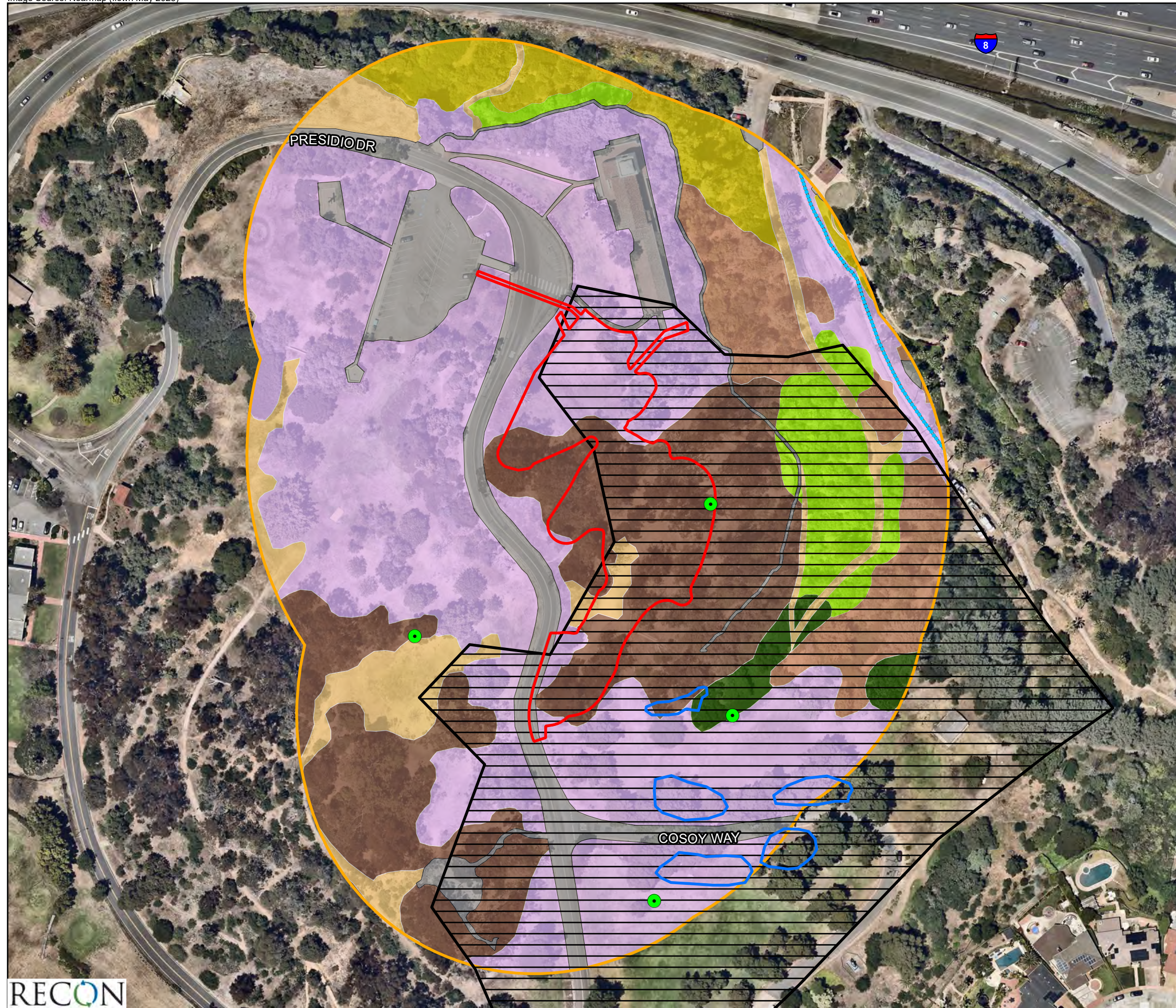
5.2.3 Belding's Orange-throated Whiptail

Belding's orange-throated whiptail is a CDFW watch list species and an MSCP covered species (CDFW 2024b; City of San Diego 2018). This species ranges from the coast to the Peninsular mountain ranges from Orange and southwestern San Bernardino counties to the tip of Baja California, Mexico (Stebbins 2003). It occurs in a variety of habitats and is most common in sandy areas of low, open sage scrub or chaparral, particularly where there is California buckwheat (*Eriogonum fasciculatum*), sage, or chamise (*Adenostoma fasciculatum*; Lemm 2006). This species feeds primarily on the western subterranean termite (*Reticulitermes hesperus*; Bostic 1966).

Belding's orange-throated whiptail was not observed during the biological survey; however, this species has moderate potential to occur in the canyon on the eastern portion of the survey area, particularly within and between the patches of disturbed southern mixed chaparral. It may also use vegetation along the edge of these habitats but is not expected to travel far from the disturbed southern mixed chaparral.

5.2.4 San Diegan Tiger Whiptail

San Diegan tiger whiptail is a CDFW species of special concern (CDFW 2024b). The San Diegan tiger whiptail ranges predominantly on the coastal slope from Santa Barbara County south into northwestern Baja California, Mexico (Stebbins 2003). In San Diego County, San Diegan tiger whiptail occurs in coastal sage scrub and chaparral, as well as in woodlands and streamsidings.



- ▭ Project Area
- ▭ Survey Area
- Monarch Overwintering Site (CDFW 2024a)
- Monarch Roosting Locations (Monarch Program 2019)
- Monarch Butterfly Observation (2024)
- - - - - Channelized Drainage
- Vegetation Communities**
 - ▭ Disturbed Southern Mixed Chaparral
 - ▭ Coast Live Oak Woodland
 - ▭ Non-native Woodland
 - ▭ Non-native Vegetation
 - ▭ Eucalyptus Woodland
 - ▭ Ornamental Plantings
 - ▭ Disturbed Land
 - ▭ Urban/Developed

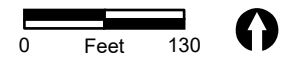


FIGURE 7
Impacts to Monarch Overwintering Site
(Presidio Park, Old Town)

This species has moderate potential to occur in the disturbed southern mixed chaparral along the canyon slopes in the eastern portion of the survey area. While it may use the adjacent habitats, it would not be expected to travel far from the edges of this native vegetation community.

5.2.5 Western Bluebird

Western bluebird is an MSCP covered species (City of San Diego 2018). This species occurs throughout the year in foothills and mountains of San Diego County and is a resident of the inland parts of the coastal lowland (Unitt 2004). Western bluebird breeds in open woodlands of oaks, riparian deciduous trees, or conifers with herbaceous understory and, in winter, uses more open habitats (Unitt 2004). This bird generally requires trees and shrubs for cover and will nest and roost in cavities of trees or snags (Unitt 2004). An increase in numbers of western bluebirds nesting in heavily developed areas of San Diego County suggests this species may be acclimating to urban areas (Unitt 2004).

Western bluebird was not observed within the survey area; however, it has moderate potential to nest in the eucalyptus woodland and non-native woodland throughout the survey area.

5.2.6 Cooper's Hawk

Cooper's hawk is a CDFW watch list species (nesting) and an MSCP covered species (CDFW 2024b; City of San Diego 2018). Its year-round range extends throughout most of the U.S. Breeding Cooper's hawks are widespread over San Diego County's coastal slope and most abundant in lowland and foothill canyons and in urban areas. It is a common breeder in both oak and willow riparian woodlands and urban environments, with gum trees used nearly as often as oaks (Unitt 2004). Additionally, this species has been known to nest within planted trees, including pines (*Pinus* spp.) and avocado trees (*Persea americana*; Unitt 2004). Breeding occurs from March to June, and nests are typically located high in the tree but under the canopy. Although urbanization and loss of habitat have contributed to the decline of this species, the Cooper's hawk's acclimation to city living has generously increased their numbers (Unitt 2004).

Cooper's hawk was not observed within the survey area; however, there is a high potential for Cooper's hawk to nest within the eucalyptus woodland, non-native woodland, and ornamental plantings throughout the survey area, due to the presence of tall, mature gum and other large non-native trees.

5.3 Jurisdictional Wetlands and Waters

A small ephemeral drainage occurs in the bottom of the canyon in the eastern portion of the survey area (see Figure 6). No water was flowing in the drainage at the time of the survey. This ephemeral drainage has been channelized with cobblestone masonry and empties into a storm drain to cross under Taylor Street and Interstate 8. It is assumed that this storm drain culvert then empties into the San Diego River, a Traditional Navigable Water, to the north. Because the drainage was likely naturally-occurring prior to channelization, it would likely be considered an ephemeral non-wetland waters of the state under the jurisdiction of the California Regional Water Quality Control Board (RWQCB) and a streambed under the jurisdiction of the CDFW. No City-defined wetlands were identified within the survey area.

5.4 Wildlife Movement Corridors

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors

are important, because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife movement corridors are considered sensitive by resource and conservation agencies. The survey area consists primarily of non-native and ornamental vegetation associated with Presidio Park, which is bounded by Interstate 8 to the north and dense residential and commercial development to the south and west. Land to the east, along the steep north-facing slopes between Mission Hills and Mission Valley, is undeveloped and has connectivity to an unnamed urban canyon complex to the east. This urban canyon complex consists of several finger canyons that are similarly located on steep slopes that are bounded by Interstate 8, roads and dense residential development to the north and south until reaching State Route 163 to the east (see Figure 2). While wildlife occurring in the canyon complex may utilize the woodland and chaparral habitat within the eastern survey area for home range and local movements, the project boundary is ultimately restricted by development to the north, south, and west and thus does not provide a throughway for wildlife movement by connecting larger expanses of habitat off-site. In addition, the survey area is not located within any core biological resource areas or linkages, as shown on Figure 2-2 of the Final MSCP Plan (County of San Diego 1998).

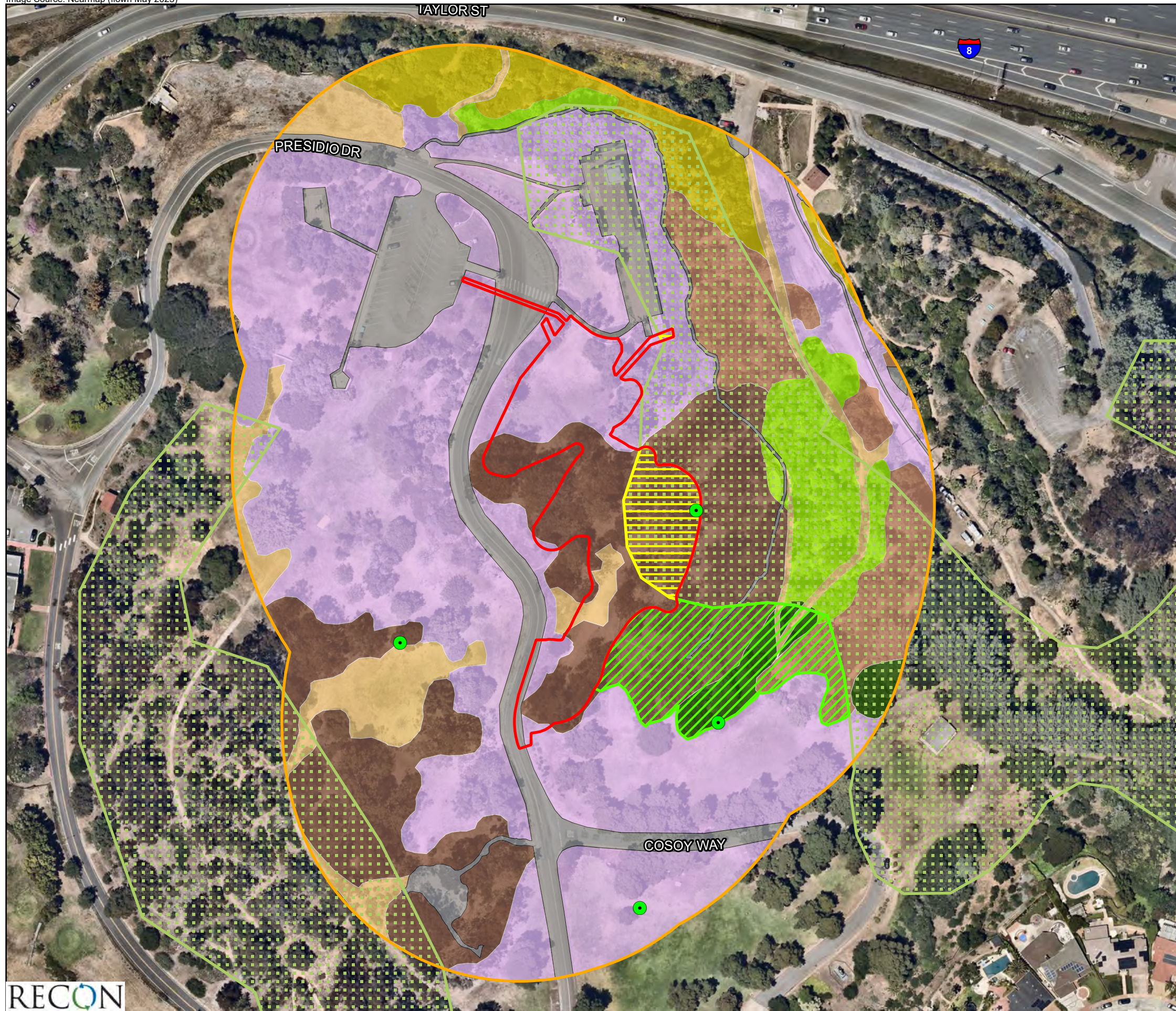
6.0 MSCP Consistency

This section discusses project consistency with the MSCP. It assesses the proposed MHPA BLA per Section 5.4.2 of the Final County of San Diego Multiple Species Conservation Program Plan (Final MSCP Plan; County of San Diego 1998) and addresses MHPA Land Use Adjacency Guidelines per Section 1.4.3 of the MSCP and General Management Directives per Section 1.5.2 of the MSCP (City of San Diego 1997).

6.1 MHPA Boundary Line Adjustment

A portion of the project (0.31 acre) occurs inside the existing MHPA boundary and thus would require an MHPA BLA. The BLA would result in the removal of 0.31 acre of eucalyptus woodland and ornamental plantings from the MHPA in an area subject to ongoing park maintenance activity. In exchange, 0.86 acre of coast live oak woodland, disturbed southern mixed chaparral, eucalyptus woodland, non-native woodland, disturbed land and urban/developed would be added to the MHPA, resulting in a net increase of 0.55 acre inside the MHPA. The MHPA encroachment and addition areas for the proposed BLA are shown on Figure 8, and the effect on vegetation community acreages is shown in Table 3.

Vegetation Community	City of San Diego Tier	MHPA Subtraction	MHPA Addition	Net Change
Coast live oak woodland	I	--	+0.21	+0.21
Disturbed southern mixed chaparral	IIIA	--	+<0.01	+<0.01
Eucalyptus woodland	IV	-0.31	+0.47	+0.16
Non-native woodland	IV	--	+0.15	+0.15
Non-native vegetation	IV	--	--	--
Disturbed Land	IV	--	+0.02	+0.02
Ornamental plantings	IV	-<0.01	--	-<0.01
Urban/Developed	None	--	+0.01	+0.01
Total		-0.31	+0.86	+0.55



- Project Area
 - Survey Area
 - City of San Diego MHPA
 - MHPA Addition (0.86 ac)
 - MHPA Subtraction (0.31 ac)
 - Monarch Butterfly Observation (2024)
- Vegetation Communities**
- Disturbed Southern Mixed Chaparral
 - Coast Live Oak Woodland
 - Non-native Woodland
 - Non-native Vegetation
 - Eucalyptus Woodland
 - Ornamental Plantings
 - Disturbed Land
 - Urban/Developed

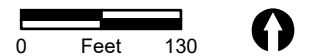


FIGURE 8
MHPA Boundary Line Adjustment

Section 5.4.2 of the Final MSCP Plan describes the process for adjustments to the MHPA boundary, establishing the "like or equivalent" exchange concept. Under this section, the MHPA boundary may be adjusted provided the adjustment will result in the same or higher biological value within the MHPA. This requires findings of equivalence for six biological factors, as discussed below.

1. *Effects on significantly and sufficiently conserved habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly and sufficiently conserved habitats, as defined in Section 4.2.4 [of the Final MSCP Plan]).*

The MHPA subtraction would remove 0.31 acre of eucalyptus woodland (Tier IV) and 0.004 acre of ornamental plantings (Tier IV) from the MHPA. No Tier I, II, or III sensitive uplands or wetlands would be removed from the MHPA. In addition, the BLA would add 0.86 acre of coast live oak woodland, disturbed southern mixed chaparral, eucalyptus woodland, non-native woodland, disturbed land and urban/developed, resulting in a net increase of 0.55 acre inside the MHPA. Of this addition, 0.21 acre would be Tier I-III sensitive uplands (i.e., coast live oak woodland). Therefore, the BLA would increase the area of conserved vegetation communities within the MHPA. In addition, the area added to the MHPA through the BLA is contiguous to the existing MHPA and as such, does not significantly alter the configuration of the MHPA.

2. *Effects on covered species (i.e., the exchange maintains or increases the conservation of covered species).*

No covered plant or animal species were detected in the survey area, but three covered wildlife species have moderate potential to occur (Belding's orange-throated whiptail, western bluebird, and Cooper's hawk). Belding's orange-throated whiptail is not expected to occur in the MHPA subtraction area, as the eucalyptus woodland and ornamental plantings do not provide suitable habitat for this species. Therefore, the BLA would not have an appreciable effect on this species. Western bluebird and Cooper's hawk both have moderate potential to nest in the eucalyptus woodland, non-native woodland, and coast live oak woodland in the addition and subtraction areas. As shown in Table 3, the BLA would result in a net increase of 0.21 acre of coast live oak woodland, 0.16 acre of eucalyptus woodland, and 0.15 acre of non-native woodland and would therefore increase potential habitat for western bluebird and Cooper's hawk inside the MHPA.

3. *Effects on habitat linkages and function of preserve areas (i.e., the exchange maintains or improves any habitat linkages or wildlife corridors).*

The proposed MHPA subtraction and addition areas are located along a generally north-facing slope that is part of an urban canyon complex that is designated as MHPA. As discussed in Section 5.4, the urban canyon complex is anticipated to support home range and local movements by wildlife but is not expected to function as a regional corridor as it is ultimately constrained by roads, highways, and dense urban development and does not provide a linkage to any regional wildlife corridors. The Final MSCP Plan identifies a habitat linkage that follows the San Diego River from Mission Trails Regional Park to the coast (County of San Diego 1998). This linkage is located north of the proposed MHPA subtraction and addition areas and is separated from them by Interstate 8 and Taylor Street. Therefore, the BLA is not anticipated to have an effect on any habitat linkages or wildlife corridors. However, the BLA would result in a net increase in the acreage of coast live oak woodland, eucalyptus woodland, and non-native woodland within the MHPA, which would increase the amount of suitable habitat for western bluebird and Cooper's hawk. Therefore, the BLA is expected to have a net positive effect on the value and function of habitat for MSCP-covered species in the MHPA.

4. *Effects on preserve configuration and management (i.e., the exchange results in similar or improved management efficiency and/or protection of biological resources).*

The MHPA addition and subtraction areas are both located on a small knoll in a public park which is managed by the City's Department of Parks & Recreation. The proposed addition areas are contiguous with existing MHPA located within the park and thus would not appreciably affect the overall preserve configuration or management.

5. *Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the preserve).*

The proposed MHPA subtraction area is situated on the top of a knoll and is mostly flat, with the eastern edge sloping gently to the east. It consists of eucalyptus woodland and ornamental plantings with very low species diversity, and the eucalyptus woodland has been used by park staff for staging and vegetation maintenance. The trees function primarily as perching and potential nesting habitat for raptors. The MHPA addition area contains gentle south and east-facing slopes contiguous with the existing MHPA. The larger addition area includes coast live oak woodland and a small area of disturbed southern mixed chaparral, which support native vegetation with higher species diversity. The coast live oak, eucalyptus, and non-native woodlands within the additional area further provide improved perching and nesting habitat for raptors. Thus, the BLA would increase the diversity and quality of vegetation communities and species in the MHPA.

6. *Effects on species of concern not on the covered species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either the federal or state Endangered Species Acts).*

In addition to the covered species discussed above, three other sensitive species occur or have potential to occur: monarch butterfly, Crotch's bumble bee, and San Diegan tiger whiptail. Monarch butterfly is known to overwinter in the eucalyptus woodland, non-native woodland, coast live oak woodland, and ornamental plantings which contain suitable trees for roosting within the park (see Attachment 2). As shown in Table 3, the BLA would result in an increase in eucalyptus woodland, non-native woodland, and coast live oak woodland, thus improving the overall preservation of roosting trees for monarch butterfly. In addition, all suitable roosting trees occurring within the subtraction area that would be temporarily impacted by the projects would be replaced on-site within the project footprint as a project design feature. Crotch's bumble bee was not observed during focused surveys in 2024 and has a low potential to occur in the subtraction area due to limited floral resources in this habitat. Specifically, the subtraction area mostly includes areas with 1-5% nectar source cover (see Attachment 3). The BLA would add areas with greater floral abundance and diversity to support native pollinators such as Crotch's bumble bee, as the addition area mostly includes areas with 26-50% nectar source cover and includes coast live oak woodland and disturbed southern mixed chaparral, along with eucalyptus and non-native woodlands (see Attachment 3). San Diegan tiger whiptail is not expected to occur in either the MHPA subtraction or addition areas, so the BLA would not affect this species. Therefore, the proposed BLA would not increase the likelihood that uncovered species will meet the criteria for listing under the federal or state Endangered Species Acts. Additionally, the project would be conditioned to include the maintenance requirements (120-day plant establishment period and maintenance for no less than 25 months) and 100% success criteria currently listed on the Planting Legend on Landscape Sheet L-8.

6.2 MHPA Land Use Adjacency Guidelines

Because the project would occur within and adjacent to the MHPA, it would be required to comply with the MHPA Land Use Adjacency Guidelines (City of San Diego 1997). Each of the Land Use Adjacency Guidelines is presented below, followed by a description of project consistency with each.

Prior to issuance of any construction permit or notice to proceed, Developmental Services Department/Land Development Review Division, and/or MSCP staff shall verify the Applicant has accurately represented the project's design in or on the Construction Documents in conformance with the associated discretionary permit conditions and Exhibit "A," and also the City's MSCP MHPA Land Use Adjacency Guidelines. The applicant shall provide an implementing plan and include references on/in the Construction Documents of the following, which are discussed in further detail below: drainage, toxics, lighting, noise, barriers, invasives, brush management, and grading/land development.

Drainage – *All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.*

The proposed project would be sited on the top and western side of a knoll, and all drainage from the proposed parking lot and other hardscape would be directed to the west, away from the MHPA. In addition, the proposed project includes storm water improvements such as a lined bioretention basin (12-by-52-foot), that would discharge to an existing rock swale located adjacent to Presidio Drive, and pervious pavers for portions of the walkways.

Toxics – *Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.*

The proposed project does not propose any new land uses that use or generate toxic byproducts. It would continue existing park uses, which currently includes vehicle parking facilities, and drainage would continue to flow west into an existing storm drain system so that it would not increase toxic runoff into the MHPA.

Lighting – *Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.*

Project lighting would be consistent with what is currently being used on-site, including in those areas already within and adjacent to the MHPA. Lighting for the proposed parking lot would be low illumination and would be shielded such that spill over into the MHPA would be minimized.

Noise – *Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.*

Construction noise that exceeds the maximum levels allowed shall be avoided during the breeding period (February 1 to September 15). The impact area is not adjacent to suitable habitat for coastal California gnatcatcher (*Poliioptila californica californica*) in the MHPA, so no indirect noise impacts to the coastal California gnatcatcher are anticipated. If construction is proposed during the general avian breeding season, then the avian protection measures contained in the City's Whitebook and described in Section 8.3 would be implemented to further protect avian species. Nest buffers would comply with those set forth in the MSCP and City's Biology Guidelines.

After construction is complete, operational noise from vehicles, people using the parking lot, and landscape maintenance equipment would occur directly adjacent to the MHPA. Noise levels associated with operation of the parking lot would be similar to the existing noise environment within and adjacent to the MHPA and would not be considered "excessively noisy." As such, noise impacts during operation of the parking lot within the MHPA would not be appreciably different from baseline conditions.

Barriers – *New development within or adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation; rocks/boulders; fences, walls; and/or signage) along the MHPA boundaries to direct public access to appropriate locations, reduce domestic animal predation.*

The proposed parking lot and walking path would include landscaping, curbs, and railings that would direct the public to remain on paved surfaces and outside of the MHPA.

Invasives – *No invasive non-native plant species shall be introduced into areas within or adjacent to the MHPA.*

While a large number of non-native plant species currently occur within the survey area, the proposed project is not expected to increase invasive species encroachment. Project landscaping plans would need to preclude any species identified as "high" on the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory Database (Cal-IPC 2019) or prohibited in the Land Development Manual or Municipal Code.

Brush Management – *New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zones 2 and 3 will be combined into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA. Zone 2 will be increased by 30 feet, except in areas with a low fire hazard severity rating where no Zone 2 would be required. Brush management zones will not be greater in size that is currently required by the City's regulations. The amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area will be the responsibility of a homeowners association or other private party.*

The proposed project would not include any structures that would require additional brush management within the MHPA.

Grading/Land Development – *Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.*

All grading and development areas have been included in the project impact footprint assessed in this report.

6.3 General Management Directives

Section 1.5.2 of the MSCP provides general management directives related to 1) mitigation; 2) restoration; 3) trails; public access, and recreation; 3) trash/litter and materials storage; 4) adjacency management issues; 5) invasive species control and removal; and 6) flood control. Project consistency with these guidelines is summarized and addressed below.

6.3.1 Mitigation

As discussed in Section 7.1 and 7.4 below, the project would not impact sensitive vegetation communities or potential jurisdictional waters. Mitigation for potential impacts to monarch, Crotch's bumble bee, and migratory and nesting birds would be required and are discussed in Sections 8.1, 8.2, and 8.3 respectively.

6.3.2 Restoration

No native vegetation communities would be impacted by the project, so no habitat restoration would be required. Any required revegetation would be implemented as identified on the landscape plans.

6.3.3 Public Access, Trails, and Recreation

MHPA areas within and adjacent to the project area largely consist of non-native vegetation communities (eucalyptus woodland, non-native woodland, disturbed land, and non-native vegetation), with a small portion of southern mixed chaparral.

Public access within the park is restricted to passive recreation uses in existing developed areas and on existing grass lawns and dirt trails with signage. No new equestrian trails, pedestrian trails, or off-road vehicle trails would be created. The proposed parking lot and ADA-compliant access path would not encourage unauthorized access into the MHPA.

6.3.4 Litter/Trash and Materials Storage

Trash storage and collection within the proposed parking lot and museum access path would be managed by park staff. The project would not alter existing trash and materials storage programs at the park,

6.3.5 Adjacency Management Issues

The MSCP provides guidelines related to management and monitoring requirements. Park staff would continue to enforce trespass and unauthorized off-trail intrusions into the other natural areas within the park, including within the MHPA. Park staff would continue to be responsible for educating visitors about environmental issues. As mentioned above, public access is restricted to existing developed areas and on existing grass lawns and dirt trails with signage.

6.3.6 Invasive Exotics Control and Removal

Non-native plant species are currently abundant within the survey area and the proposed project is not expected to increase invasive species encroachment. Project landscaping plans consist of native revegetation (see Attachment 1) and do not include any species identified as “high” on the Cal-IPC Invasive Plant Inventory Database (Cal-IPC 2019).

6.3.7 Flood Control

No existing flood control channels occur within the survey area. A channelized drainage occurs in the eastern portion of the survey area, outside of the project footprint. This channelized drainage flows from south to north into a storm drain underneath Taylor Street and Interstate 8 and empties into the San Diego River. The storm drain inlet is unvegetated and does not require major vegetation removal.

6.4 MSCP Conditions for Covered Species

Three MSCP covered species have a high to moderate potential to occur in the survey area: Belding’s orange-throated whiptail, western bluebird, and Cooper’s hawk. The MSCP does not include conditions for coverage of western bluebird, as large populations of this species are adequately conserved east of the MSCP plan area. Conditions for Belding’s orange-throated whiptail and Cooper’s hawk are presented below.

6.4.1 Belding’s Orange-throated Whiptail

The condition for coverage of Belding’s orange-throated whiptail under the MSCP requires area specific management directives to address edge effects. Presidio Park is situated within the Urban Area of the MSCP (Section 1.2.3; City of San Diego 1997). No specific management guidelines for the Urban Area apply to Presidio Park area or to the proposed project. In addition, the proposed parking lot and museum access path are not expected to increase edge effects, as no sensitive vegetation communities would be impacted.

6.4.2 Cooper’s Hawk

MSCP conditions for coverage for Cooper’s hawk require 300-foot impact avoidance areas around any active nests, and minimization of disturbance in oak woodlands and oak riparian forests. Project compliance with this condition for coverage is discussed in Section 7.

7.0 Impact Analysis

Construction of the proposed project would impact a total of 1.62 acres within the survey area (Table 4, see Figure 6). While it is not expected to impact sensitive vegetation communities, it would impact MHPA lands and has potential to impact sensitive wildlife species.

7.1 Vegetation Communities/Land Cover Types

Implementation of the proposed project would result in impacts to eucalyptus woodland, disturbed land, ornamental plantings, and urban/developed (see Table 4). No sensitive vegetation communities would be impacted. The nearest sensitive vegetation communities to the impact area are 1) a small stand of coast live oak woodland about 120 feet to the southeast and 2) a stand of disturbed southern mixed chaparral about 85 feet to the east.

Table 4 Impacts to Vegetation Communities/Land Cover Types ¹				
Community or Type (Holland/Oberbauer Code)	City of San Diego Tier	Inside MHPA	Outside MHPA	Total
Eucalyptus woodland (79100)	IV	0.31	0.69	1.01
Disturbed land (11300)	IV	--	0.07	0.07
Ornamental plantings (12000)	IV	<0.01	0.51	0.51
Urban/developed (12000)	None	--	0.04	0.04
Total		0.32	1.30	1.62
¹ Impacts are presented in acres, rounded to the nearest 0.01; any discrepancies are due to rounding.				

7.2 Sensitive Plant Species

No sensitive plant species are expected to occur within the survey area or to be impacted by the proposed project.

7.3 Sensitive Wildlife Species

As discussed above, one sensitive wildlife species was observed and five sensitive wildlife species have moderate or high potential to occur within the survey area. Of these, four have potential to occur within the project footprint. A discussion of the potential for impacts to all six species is presented below.

7.3.1 Monarch Butterfly

Four monarch butterfly individuals were observed on site during the general biological survey in 2024 and a portion of the project area is part of a known overwintering site (CDFW 2024a; Xerces 2024b). The project would result in impacts to 45 trees that are considered to be potentially suitable for monarch roosting (defined as healthy Canary Island pines and gum trees that are taller than 15 feet in height) to accommodate project grading. Of these, 41 trees are gum trees and four trees are Canary Island pines. As a project design feature, the project includes replacement of all potentially suitable roosting trees as shown on the project’s landscape plans (see Attachment 1) and as described below. The replacement trees would consist of coast live oak and Torrey pine, which would provide mid-story and over-story roosting habitat, with coyote brush (*Baccharis pilularis*), goldenbush (*Ericameria palmeri*), and California goldenrod (*Solidago velutina* ssp. *californica*) in the understory to provide fall and winter nectar sources. The revegetation would provide higher quality habitat for monarch than the existing non-native trees with limited understory nectar sources. In addition, tree removal would be limited to 1.01 acres of potentially suitable roosting habitat (eucalyptus woodland) within the 17.60-acre overwintering site (CDFW 2024a; Xerces 2024b) and would avoid the known roosting stands surrounding Cosoy Way (The Monarch Program 2019). Thus, suitable roosting habitat would remain within the surrounding area to support monarchs during construction and revegetation. In addition, the project would conserve 0.83 acres of potentially suitable roosting habitat (coast live oak woodland, eucalyptus woodland, and non-native woodland) through the project’s MHPA BLA. Nonetheless, the project has the potential for direct impacts to any individuals occurring within suitable roosting habitat. Tree removal activities would be required to avoid the overwintering period (October through March) to avoid direct impacts to monarchs. Therefore, impacts to overwintering monarch butterfly would be potentially significant and mitigation would be required, as described in Section 8.1 below.

7.3.2 Crotch's Bumble Bee

No Crotch's bumble bee was observed on-site during focused surveys conducted in 2024. As described above, Crotch's bumble bee has a moderate potential to forage and low potential to nest within the project impact area, which includes eucalyptus woodland, disturbed land, ornamental plantings, and urban/developed. These vegetation communities and land cover types contain limited potential nectar sources. Therefore, the project has the potential for direct impacts to any individuals occurring within suitable foraging habitat. A pre-construction survey would be required to verify no Crotch's bumble bee are present at the time of construction. Thus, impacts to Crotch's bumble bee would be potentially significant and mitigation would be required, as described in Section 8.2 below.

7.3.3 Belding's Orange-throated Whiptail

Belding's orange-throated whiptail has moderate potential to occur within the survey area, but is not expected to occur within the project footprint. Therefore, this species is not expected to be impacted by the proposed project.

7.3.4 San Diegan Tiger Whiptail

San Diegan tiger whiptail has moderate potential to occur within the survey area, but is not expected to occur within the project footprint. Therefore, this species is not expected to be impacted by the proposed project.

7.3.5 Migratory and Nesting Birds

Migratory and nesting birds covered under California Fish and Game Code Sections 3503 and 3503.5, including Cooper's hawk and western bluebird, may be directly impacted by the project if construction activities (i.e., clearing, grubbing, grading) occur during the nesting season of February 1 to September 15. Potential impacts to migratory and nesting birds, including Cooper's hawk and western bluebird, would be significant and mitigation would be required, as described in Section 8.3 below.

7.4 Jurisdictional Wetlands and Waters

The potentially jurisdictional cement and cobble channel is located within the canyon approximately 285 feet east of the impact footprint, which is located on the western portion of the knoll in the central portion of the survey area. As such, the project would not impact RWQCB or CDFW jurisdictional resources.

7.5 Wildlife Movement Corridors

The project would occur primarily within an existing maintenance area associated with Presidio Park. However, a portion of the project contains non-native woodland habitat, which may provide some opportunities for local wildlife movement through the unnamed urban canyon, though it does not function as a significant regional corridor. Furthermore, the project has also been designed to comply with the MSCP General Planning Policies and Design Guidelines and Land Use Adjacency Guidelines, which ensure no indirect impacts to the MHPA would result from the proposed project. As a result, the project would not cause any loss of functionality of a significant regional corridor or result in any indirect impacts to local wildlife movement inside the MHPA; thus, impacts would be less than significant, and no mitigation would be required.

8.0 Avoidance, Minimization and Mitigation Measures

8.1 Monarch Butterfly

To reduce impacts to monarch butterfly to less than significant, the following mitigation measures would be required.

Monarch Butterfly Overwintering. Prior to the Notice to Proceed for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, the Development Services Department (DSD) Director's Environmental Designee shall verify the following project requirements regarding monarch butterfly are shown on the construction plans:

- A. *Direct Impact Avoidance for Monarch Butterfly.* To avoid any direct impacts to overwintering monarch butterfly, clearing, grubbing, or removal of potentially suitable roosting trees in the proposed area of disturbance should occur outside of the overwintering season for this species (October 1 to March 31). If removal of habitat in the proposed area of disturbance must occur during the overwintering season, a Qualified Biologist shall conduct a pre-construction (precon) survey to determine the presence or absence of overwintering monarch in the proposed area of disturbance. The precon survey shall be conducted within 10 working days prior to the start of tree removal. The applicant shall submit the results of the precon survey to City DSD for review and approval prior to initiating any tree removal. If overwintering monarchs are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law shall be prepared and include proposed measures to avoid removal of trees within occupied areas (appropriate follow up surveys, monitoring schedules, etc.) until the overwintering monarchs have dispersed. The report or mitigation plan shall be submitted to the City DSD for review and approval and implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination Section or Resident Engineer (RE), and the Qualified Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. If monarchs are not detected during the precon survey, no further mitigation is required.
- B. Post-construction monitoring for monarch butterfly will be conducted in coordination with the Xerces Society and City Park and Recreation Open Space staff.

8.2 Crotch's Bumble Bee

To reduce impacts to Crotch's bumble bee to less than significant, the following mitigation measures would be required.

Direct Impact Avoidance for Crotch's Bumble Bee. Prior to the Notice to Proceed for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, the Development Services Department Director's Environmental Designee shall verify the following project requirements regarding the Crotch's bumble bee are shown on the construction plans:

- A. To avoid impacts to Crotch's bumble bee, removal of habitat in the proposed area of disturbance must occur outside of the Colony Active Period between April 1 through August 31. If removal of habitat in the proposed area of disturbance must occur during the Colony Active Period, a Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of Crotch's bumble bee within the proposed area of disturbance.

- B. Surveys must be conducted by a Qualified Biologist meeting the qualifications discussed in the CDFW guidance (i.e., Survey Considerations for CESA Candidate Bumble Bee Species, dated June 6, 2023). The Qualified Biologist shall send all photo vouchers to a CDFW-approved taxonomist to confirm the identifications of the bumble bees encountered during surveys.
- C. A Qualified Biologist must demonstrate the following qualifications: at least 40 hours of experience surveying for bee or other co-occurring aerial invertebrate species (such as Quino checkerspot butterfly) and who have completed a Crotch's bumble bee detection/identification training by an expert Crotch's bumble bee entomologist; or the biologist must have at least 20 hours of experience directly observing Crotch's bumble bee.
- D. The pre-construction survey shall be conducted during the colony active period between April 1 through August 31 by the Qualified Biologist prior to the issuance of Grading Permit, Demolition Plans/Permits and Building Plans/Permits and within one year prior to the initiation of project activities (including removal of vegetation). The pre-construction survey shall consist of photographic surveys following CDFW guidance (i.e., Survey CESA Candidate Bumble Bee Species, dated June 6, 2023). The surveys shall consist of passive methods unless a Memorandum of Understanding is obtained, as described below. The surveys shall consist of three separate visits spaced two to four weeks apart. Survey results will be considered valid until the start of the next colony active period.
- E. If additional activities (e.g., capture or handling) are deemed necessary to identify bumble bees of an unknown species that may be Crotch's bumble bee, then the Qualified Biologist shall obtain the required authorization via a Memorandum of Understanding or Scientific Collecting Permit pursuant to CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023). Survey methods that involve lethal take of species are not acceptable.
- F. The Qualified Biologist/owner permittee shall submit the results (including positive or negative survey results) of the pre-construction survey to City DSD (Mitigation Monitoring and Coordination) City Planning Department (MSCP) staff and CDFW for review and written approval prior to the issuance of Grading Permit, Demolition Plans/Permits and Building Plans/Permits.
- G. If pre-construction surveys identify Crotch's bumble bee individuals on-site, the Qualified Biologist shall notify CDFW and the Qualified Biologist shall notify and consult with CDFW to determine whether project activities would result in impacts to Crotch's bumble bee, in which case an Incidental Take Permit (ITP) may be required. If an ITP is required, it shall be obtained prior to issuance of Grading Permit, Demolition Plans/Permits and Building Plans/Permits and all necessary permit conditions shall be fulfilled prior to initiation of project activities. Take of any endangered, threatened, or candidate species that results from the Project is prohibited, except as authorized by State law (California Fish and Game Code §§ 86, 2062, 2067, 2068, 2080, 2085; California Code of Regulations, Title 14, § 786.9) under the CESA.
- H. Survey data shall be submitted by the Qualified Biologist to the CNDDDB in accordance with the Memorandum of Understanding with CDFW, or Scientific Collecting Permit requirements, as applicable.

8.3 Migratory and Nesting Birds

To reduce impacts to migratory and nesting birds, including Cooper's hawk and western bluebird, to less than significant, the following mitigation measure would be required.

Avian Protection Requirements. To avoid any direct impacts to migratory and nesting birds, including western bluebird and Cooper's hawk, clearing, grubbing, or removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, a Qualified Biologist or City representative shall conduct a pre-construction (precon) survey to determine the presence or absence of nesting birds in the proposed area of disturbance. The precon survey shall be conducted within 10 working days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the precon survey to the Engineering and Capital Projects Director's Environmental Designee (ED) for review and approval prior to initiating any construction activities. If nesting birds, including western bluebird and Cooper's hawk, are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law (appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. Nest buffers for Cooper's hawk within the MHPA shall comply with the provisions set forth in the MSCP (i.e., a 300-foot buffer). The report or mitigation plan shall be submitted to the City's ED for review and approval and implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination Section ED or Resident Engineer (RE), and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. If nesting birds are not detected during the precon survey, no further mitigation is required.

9.0 Conclusion

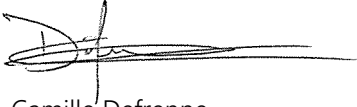
The City proposes a new parking lot and ADA-compliant path of travel to the main terrace of the Junípero Serra museum. The proposed project footprint totals 1.62 acres. An MHPA BLA would result in a net gain of 0.55 acre to the MHPA through conservation of habitats/land cover types east of the project footprint.

No sensitive vegetation communities, jurisdictional wetlands/waters, or wildlife movement corridors would be impacted. Six sensitive wildlife species are known or have potential to occur within the survey area: monarch butterfly, Crotch's bumble bee, Belding's orange-throated whiptail, San Diegan tiger whiptail, western bluebird, and Cooper's hawk. The project design includes native revegetation to offset the temporary loss of suitable trees for monarch roosting and conservation of 0.83 acre of potentially suitable roosting habitat through the project's 0.86-acre MHPA BLA addition. Tree removal would avoid the monarch overwintering period. If tree removal activities must occur during the monarch overwintering period, a preconstruction monarch survey and subsequent avoidance measures would be required. Crotch's bumble bee has moderate potential to forage and low potential to nest within the impact area, and a pre-construction survey to verify no individuals occur at the time of construction would be implemented. Western bluebird and Cooper's hawk have potential to nest in the impact area and the project vicinity. The proposed project includes avoidance and minimization measures to prevent direct impacts to nesting bird species, including western bluebird and Cooper's hawk. Pre-construction nest surveys would be implemented if construction occurs during the nesting season per the City's Whitebook, which contains specifications and provisions for public works construction projects, and implementation of avoidance buffers would conform to the MSCP and City's Biology Guidelines. Belding's orange-throated whiptail and San Diegan tiger whiptail would not be impacted.

Environmental and Permitting Support Staff
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April 23, 2026

If you have any questions on this letter report, or require additional information, please contact Cailin Lyons at clyons@reconenvironmental.com or (619) 308-9333 extension 108.

Sincerely,



Camille Defrenne
Biologist



Reviewed by: Cailin Lyons
Director, Biology Group

CED:CML:jg:sjg

cc: Nicole Fortier, Delfa Genova, and Jamie Kennedy, City of San Diego

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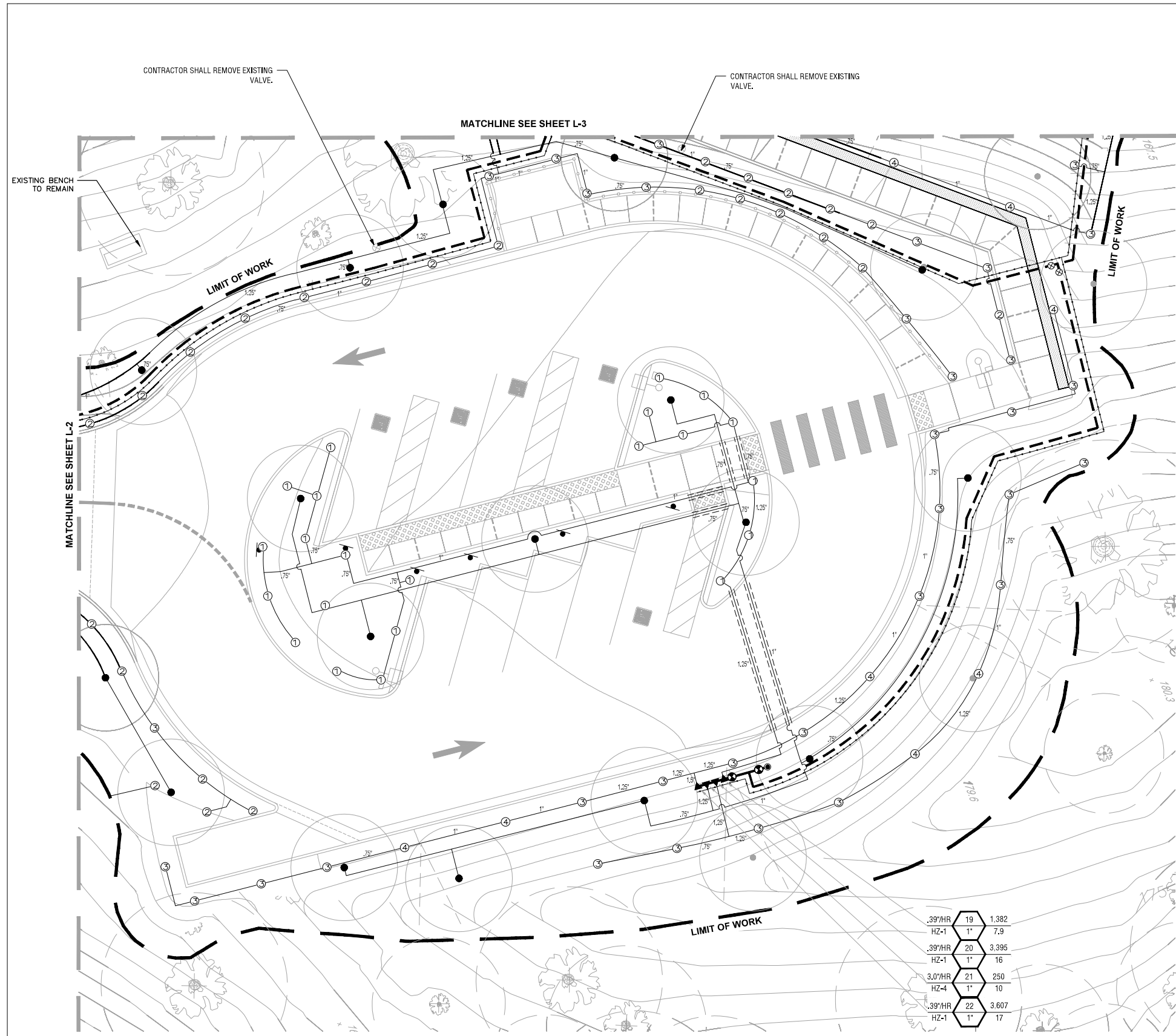
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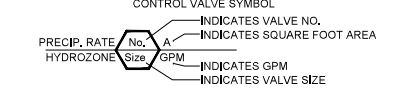
ATTACHMENTS

ATTACHMENT 1

Project Planting Plan



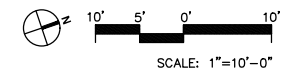
IRRIGATION EQUIPMENT LEGEND				
SYMBOL	MANUFACTURER/DESCRIPTION	PSI	RATE	DETAIL
①	RAINBIRD HUNTER RD12S-P45F 12" POPUP WITH A MP900S-0090 ADJUSTABLE NOZZLE	45	8-10	SD-103
②	RAINBIRD HUNTER RD12S-P45F 12" POPUP WITH A MP1000-WQ27H900 ADJUSTABLE NOZZLE	45	11-14	SD-103
③	RAINBIRD HUNTER RD12S-P45F 12" POPUP WITH A MP1000-WQ27H900 ADJUSTABLE NOZZLE	45	15-20	SD-103
④	RAINBIRD HUNTER RD12S-P45F 12" POPUP WITH A MP1000-WQ27H900 ADJUSTABLE NOZZLE	45	21-30	SD-103
⑤	HUNTER 130-345S-PRC-V 9" POPUP TURF ROTOR WITH MP9-25 NOZZLES	45	25	1-3, SD-103
⑥	HUNTER 130-345S-PRC-V 9" POPUP TURF ROTOR WITH MP9-25 NOZZLES	45	30	1, 4-5, SD-103
⑦	RAINBIRD 1401 BUBBLER NOZZLE WITH 1/2" PE TUBING RISER, SYMBOL REPRESENTS 1 PER SHRUB.	30	N/A	25
●	RAINBIRD HUNTER EACH TREE SHALL HAVE 1 (ONE) RD12S-P45F 12" POPUP WITH A M900H NOZZLE AND 1 (ONE) 1/2" NOZZLE ON RISER IN PERFORATED TUBE, INSTALL ON OPPOSITE SIDES	30	N/A	200, 10
⊗	CLOW VALVE, MODEL 28390-040 3/4" RESILIENT WEDGE GATE VALVE - SIDE TO MATCH MAINLINE			A
⊕	NIBCO 2" 1/4" GATE VALVE FOR VALVE MANFOLD SHUT OFF, INSTALLED IN A SLEEVE WITH Hinged LOCKING BRASS CAP			SD-106 SD-109
●	RAINBIRD 444-RC 1" QUICK COUPLER VALVE WITH LOCKING YELLOW COVER, INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.			SD-105 SD-108
▲	SUPERIOR 860W SERIES (1" 1/2") WITH PRS-MCO PRESSURE REGULATOR, BRASS REMOTE CONTROL VALVE, SIZE AS SHOWN			SD-114 SD-126
⊠	EXISTING IRRIGATION CONTROLLER TO BE UPGRADED TO A 54 STATION 80 ALTERNATE IRR-1 REMOVED AND REPLACED WITH HUNTER ICCC STAINLESS STEEL WALL MOUNT CONTROLLER 54 STATION, MODEL NUMBER 122-0055 ICCC CONTROLLER WITH FLOW MONITORING AND EXPANSION MODULES.			SD-118
---	PVC PIPE 3/4" 2" SCH. 40 AS LATERAL LINES 12" BELOW GRADE, AND ABOVE THE FIELD SUB DRAINS.			SD-110
---	PVC PIPE 4" CL. 200, AS MAINLINES, BELL AND GASKET WITH LEMCO DUCTILE IRON FITTINGS AND RESTRAINTS 12" BELOW GRADE, FOR BRASS MANIFOLD CONTRACTOR SHALL USE 2" BRASS PIPE WITH BRASS FITTINGS AS MAINLINES 18" BELOW GRADE, ALL MAINLINE FITTINGS SHALL BE INSTALLED WITH THRUST BLOCKS, REFER TO DETAILS AND MANUFACTURER'S RECOMMENDATIONS.			SD-110 SD-108 W-01 SD-108 W-100, 8 SD-108
---	PVC PIPE 80/40 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIES, MINIMUM 2" SLEEVE SIZE, PLACE BELOW ALL PAVING, HARDSCAPE ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.			SD-110
---	IRRIGATION CONTROL WIRE PATH			SD-119
---	SPREADS 0.98x0.98x0.030 DIRECT BURIAL WATERPROOF WIRE CONNECTORS AND 0.98x0.98 SEALANT FOR USE ON ALL WIRE CONNECTIONS (U.L. APPROVED).			SD-115
---	1/4" DIRECT BURIAL SOLID COPPER CORE DIRECT BURIAL IRRIGATION CONTROL WIRE WITH P.E. INSULATION (U.L. APPROVED).			SD-119
---	BROOKS CONCRETE BOXES WITH CAST IRON LIDS, REFER TO STANDARD CITY DETAILS FOR BOX SIZE PER EQUIPMENT INSIDE.			N/A
⊠	IRRIGATION CONTROL WIRE PULL BOX			SD-115



HYDROZONE	HYDROZONE DESCRIPTION
1	LOW WATER SHRUBS WITH ROTARY HEADS
2	HIGH SLA WATER TURF WITH SMALL ROTORS
3	MODERATE WATER BASIN WITH BUBBLERS
4	MIX WATER TREES WITH BUBBLERS

IRRIGATION NOTES:

- NOTE A:
MAINLINE AND RELATED EQUIPMENT SHOWN WITHIN PAVING FOR CLARITY ONLY. ACTUAL MAINLINE AND RELATED EQUIPMENT LOCATION TO BE WITHIN PLANTERS AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.
- NOTE B:
BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN PAVING FOR CLARITY ONLY. ACTUAL LOCATION TO BE WITHIN PLANTER. BUBBLERS SHALL BE ALIGNED WITH TREES AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.
- NOTE C:
I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN
- NOTE D:
CONTRACTOR SHALL ADJUST ALL OVERHEAD IRRIGATION, TO PREVENT OVER SPRAY ON TO HARDSCAPE AND STRUCTURES.
- NOTE E:
CONTRACTOR SHALL STAKE ALL VALVE LOCATIONS AND MAINLINE ROUTE, PRIOR TO INSTALLATION, FOR THE CITY INSPECTOR'S REVIEW.
- NOTE F:
REFER TO SHEET L-4 FOR IRRIGATION CALCULATION, EXISTING IRRIGATION NOTES, AND JOB SPECIFIC DETAILS.



L-2

PLANS FOR THE CONSTRUCTION OF:

**JUNIPERO SERRA MUSEUM
ADA IMPROVEMENT PROJECT
IRRIGATION PLAN**

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 12 OF 27 SHEETS

WBS TYPE S-15034

APPROVED FOR CITY ENGINEER	DATE	APPROVED BY	DATE
PRINT NAME	RCEN	DATE	FILMED
100% CD	NE	10/29/24	

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

40809-12-D

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

The City of **SAN DIEGO** Parks and Recreation

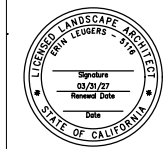
2122 Hancock Street
San Diego, CA 92110
619.681.0090
spurlock-land.com

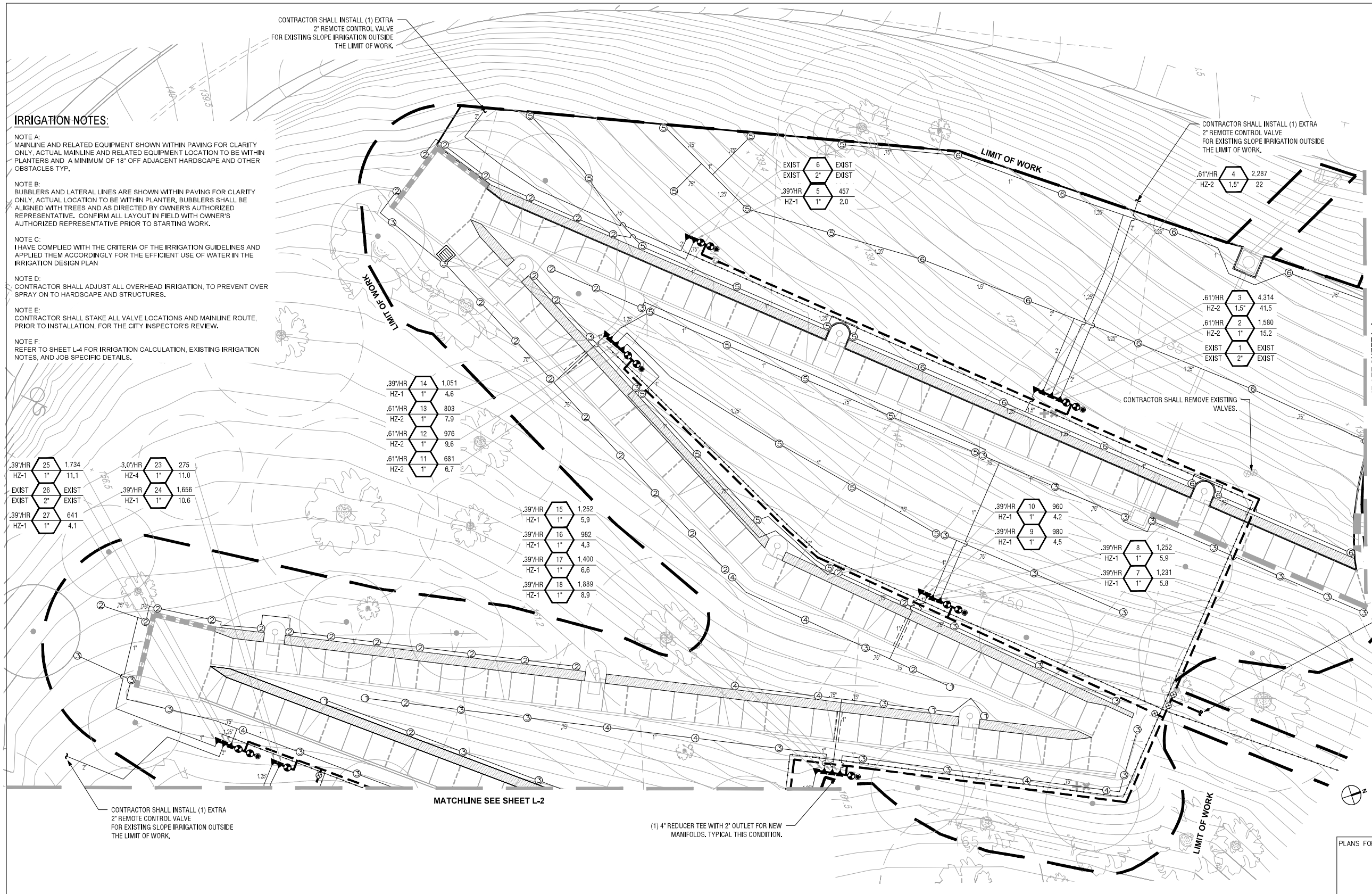
CONSULTANT

SPURLOCK
LANDSCAPE ARCHITECTS

2122 Hancock Street
San Diego, CA 92110
619.681.0090
spurlock-land.com

117-229.1





IRRIGATION NOTES:

- NOTE A:** MAINLINE AND RELATED EQUIPMENT SHOWN WITHIN PAVING FOR CLARITY ONLY. ACTUAL MAINLINE AND RELATED EQUIPMENT LOCATION TO BE WITHIN PLANTERS AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.
- NOTE B:** BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN PAVING FOR CLARITY ONLY. ACTUAL LOCATION TO BE WITHIN PLANTER. BUBBLERS SHALL BE ALIGNED WITH TREES AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.
- NOTE C:** I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN
- NOTE D:** CONTRACTOR SHALL ADJUST ALL OVERHEAD IRRIGATION, TO PREVENT OVER SPRAY ON TO HARDSCAPE AND STRUCTURES.
- NOTE E:** CONTRACTOR SHALL STAKE ALL VALVE LOCATIONS AND MAINLINE ROUTE, PRIOR TO INSTALLATION, FOR THE CITY INSPECTOR'S REVIEW.
- NOTE F:** REFER TO SHEET L-4 FOR IRRIGATION CALCULATION, EXISTING IRRIGATION NOTES, AND JOB SPECIFIC DETAILS.

IRRIGATION EQUIPMENT LEGEND					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	RAD.	GPM	DETAIL
①	RANBRO/HUNTER: RD124-4-45F 1/2" POP-UP WITH A MP1000ADJUSTABLE NOZZLE	45	8-10'	23-79	SD4-103
②	RANBRO/HUNTER: RD124-4-45F 1/2" POP-UP WITH A MP1000ADJUSTABLE NOZZLE	45	11-14'	23-88	SD4-103
③	RANBRO/HUNTER: RD124-4-45F 1/2" POP-UP WITH A MP1000ADJUSTABLE NOZZLE	45	15-20'	26-157	SD4-103
④	RANBRO/HUNTER: RD124-4-45F 1/2" POP-UP WITH A MP1000ADJUSTABLE NOZZLE	45	21-30'	30-136	SD4-103
⑤	HUNTER: L3204SS-PRBCV 6" POP-UP TURF ROTOR WITH MP125 NOZZLES	45	25'	11-382	SD4-103
⑥	HUNTER: L3204SS-PRBCV 6" POP-UP TURF ROTOR WITH MP125 NOZZLES	45	30'	14-478	SD4-103
⑦	RANBRO: 1401 BUBBLER NOZZLE WITH 1/2" PE TUBING RISER, SYMBOL REPRESENTS 1 PER SHRUB.	30	N/A	25	F-1
●	RANBRO/HUNTER: EACH TREE SHALL HAVE 1 (ONE) RD124-4-45F 1/2" POP-UP WITH A M1000ADJUSTABLE NOZZLE AND 1 (ONE) 1/2" NOZZLE ON RISER IN PERFORATED TUBE. INSTALL ON OPPOSITE SIDES	30	N/A	50(10)	SD4-103 SD4-104
⊗	CLOW VALVE: MODEL 25302540 3/4" RESILIENT WEDGE GATE VALVE - SIZE TO MATCH MAINLINE				A
⊕	MEDCO 2" 1-1/4" GATE VALVE FOR VALVE MANIFOLD SHUT OFF. INSTALLED IN A SLEEVE WITH HUBBED LOCKING BRASS CAP				SD4-106 SD4-107
⊙	RANBRO: 44-RC 1" GATE COUPLER VALVE WITH LOCKING YELLOW COVER. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.				SD4-105 SD4-106
▲	SUPERIOR: 6820N SERIES (1" 1.5" 2") WITH PR1600 PRESSURE REGULATOR. BRASS REMOTE CONTROL VALVE. SIZE AS SHOWN				SD4-114 SD4-126
⊞	EXISTING IRRICONTROL CONTROLLER TO BE UPGRADED TO A 24 STATION BEL ALTERNATE (R-2) REMOVED AND REPLACED WITH HUNTER I202 STAINLESS STEEL WALL MOUNT CONTROLLER 24 STATION, MODEL NUMBER I202-24-SS-R2 CONTROLLER WITH FLOW MOUNTING AND EXPANSION MODULES.				SD4-118
—	PVC PIPE 3/4" - 2" SCH. 40 AS LATERAL LINES 12" BELOW GRADE, AND ABOVE THE FIELD SUB DRAINS.				SD4-110
—	PVC PIPE 4" CL. 200 AS MAINLINES. BELL AND GASKET WITH LEMCO DUCTILE IRON FITTINGS AND RESTRAINTS 6" BELOW GRADE. FOR BRASS MANIFOLD, CONTRACTOR SHALL USE 2" BRASS PIPE WITH BRASS FITTINGS AS MAINLINES 18" BELOW GRADE. ALL MAINLINE FITTINGS SHALL BE INSTALLED WITH THRUST BLOCKS. REFER TO DETAILS AND MANUFACTURER'S RECOMMENDATIONS.				SD4-110 SD4-110 SD4-110 SD4-110 SD4-110 SD4-110
—	PVC PIPE SCH. 40 AS SLEEVING 2 TIMES THE DIAMETER OF PIPE OR IMPE RUNDIC CHASE. MINIMUM 2" SLEEVE SIZE. PLACE BELOW ALL PAVING, HARDSCAPE ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.				SD4-110
—	IRRIGATION CONTROL WIRE PATH				SD4-119
NO SYMBOL	SEPARATE DRINKAGE DS-100 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS AND DS-100 SEALANT FOR USE ON ALL WIRE CONNECTIONS (ALL APPROVED).				SD4-115
NO SYMBOL	1/4" DIRECT BURIAL SOLID COPPER CORE DIRECT BURIAL IRRIGATION CONTROL WIRE WITH P.E. INSULATION (ALL APPROVED).				SD4-119
NO SYMBOL	BROOKS CONCRETE BOXES WITH CAST IRON LIDS. REFER TO STANDARD CITY DETAILS FOR BOX SIZE PER EQUIPMENT INSIDE.				N/A
⊞	IRRIGATION CONTROL WIRE PULL BOX				SD4-115

HYDROZONE	HYDROZONE DESCRIPTION
1	LOW WATER SHRUBS WITH ROTARY HEADS
2	HIGH SLA WATER TURF WITH SMALL ROTORS
3	MODERATE WATER BASIN WITH BUBBLERS
4	MIX WATER TREES WITH BUBBLERS

POINT OF CONNECTION:
 CONTRACTOR SHALL CONNECT TO EXISTING 4" ASBESTOS COATED PIPE AND RUN NEW 4" PIPE CLASS 200 BELL AND GASKET PIPE. CONTRACTOR SHALL BID THE REMOVAL OF EXISTING 20" SECTION OF ASBESTOS COATED PIPE. WHEN WORKING WITH ASBESTOS, CONTRACTOR SHALL REFER TO CALIFORNIA CODE OF REGULATIONS TITLE 8, SECTION 1529-ASBESTOS. 75 PSI REQUIRED AT THIS LOCATION. IF ACTUAL PRESSURE ON SITE IS LOWER THAN 75 PSI, CONTRACTOR TO IMMEDIATELY NOTIFY CITY.



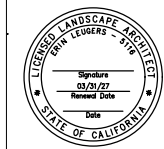
CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.



CONSULTANT

SPURLOCK
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 2122 Hancock Street
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117-229.1



PLANS FOR THE CONSTRUCTION OF:

**JUNIPERO SERRA MUSEUM
 ADA IMPROVEMENT PROJECT
 IRRIGATION PLAN**

CITY OF SAN DIEGO, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 SHEET 13 OF 27 SHEETS

WBS TYPE: S-15034

APPROVED FOR CITY ENGINEER: _____ DATE: _____

PROJECT MANAGER: NICOLE FORTIER

PROJECT ENGINEER: TRUC CHENH

CONTROL CERTIFICATION: NGVD 29

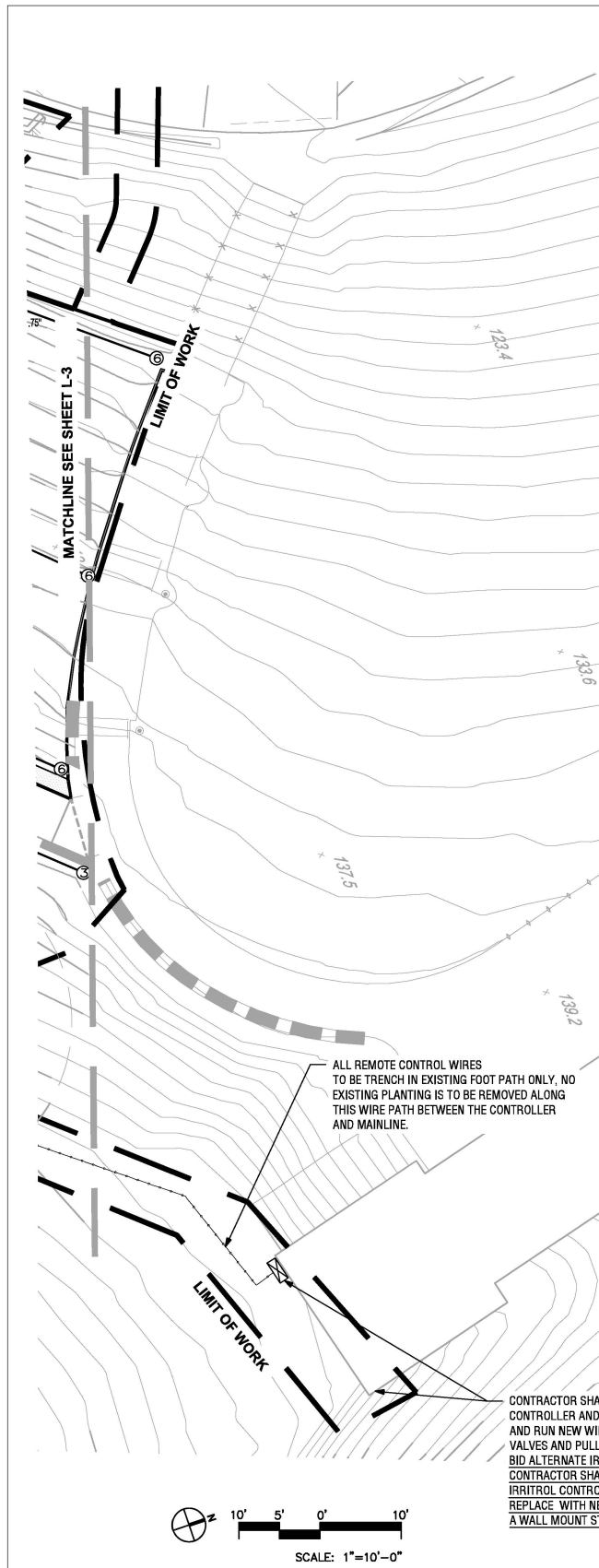
LAMBERT COORDINATES: 214-1707

CONTRACTOR: _____ DATE STARTED: _____

INSPECTOR: _____ DATE COMPLETED: _____

40809-13-D

L-3



JUNIPERO SERRA MUSEUM IRRIGATION SCHEDULE (MINUTES)

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
CYCLES PER WEEK - TURF	1	2	2	4	4	4	5	4	3	3	2	1
TURF CROP COEFFICIENT	.61	.64	.75	1.04	.95	.88	.94	.86	.74	.75	.69	.60
CYCLES PER WEEK-SHRUB	1	1	2	2	2	2	2	2	2	2	1	1
Eto DAILY AVERAGE	.07	.09	.11	.15	.16	.18	.18	.18	.14	.12	.08	.06

Turf Root Depth	4"
Shrub Root Depth	6"
Depletion Factor (MAD)	40%
Soil Type (Textural)	CLAY LOAM
Field Capacity	27%
Permanent Wilting Point	13%
Apparent Specific Gravity	1.35

Hydrozone	PLANT TYPE	Water Usage	Kc	SPRINKLER TYPE	EXPOSURE	EXPO FACTOR	PRECIP (in/hr)	SPKLR EFFIC.	ROOT DEPTH (in)	RUN TIME MULTIPLIER	IRRIGATION RUN TIMES											
											JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	SHRUB	LOW	0.20	ROTARY	FULL SUN	100%	0.39	75%	6	1.33	19	25	16	22	24	25	26	26	21	17	23	19
2	TURF	VARIABLE	Var	ROTORS	FULL SUN	100%	0.61	75%	4	1.33	38	25	38	37	36	36	32	36	32	27	25	36
3	SHRUB	MEDIUM	0.50	BUBBLER	FULL SUN	100%	2.41	75%	6	1.33	8	10	6	9	10	10	11	10	8	7	9	7
4	TREE	MEDIUM	0.50	BUBBLER	FULL SUN	100%	3.00	75%	6	1.33	6	8	5	7	8	8	9	8	7	5	7	6

EXISTING IRRIGATION NOTES:

- NOTE 1: CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.
- NOTE 2: ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO THE CONTROLLER. ANY NEW IRRIGATION CONTROL VALVES SHALL BE CONNECTED TO THE CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK AND UPON COMPLETION OF WORK.
- NOTE 3: CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS. IF NECESSARY, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.
- NOTE 4: CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO STARTING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO OWNER'S REPRESENTATIVE.
- NOTE 5: CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH OWNER'S REPRESENTATIVE PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.
- NOTE 6: EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXISTING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

CONTRACTOR SHALL REUSE EXISTING IRRITROL CONTROLLER AND EXPAND TO 54 STATIONS. AND RUN NEW WIRE FROM THE LOCATION TO NEW VALVES AND PULL BOX. BID ALTERNATE IRR-1: CONTRACTOR SHALL REMOVE EXISTING IRRITROL CONTROLLER, RELOCATE, AND REPLACE WITH NEW 54-STATION HUNTER ICC2 CONTROLLER IN A WALL MOUNT STAINLESS-STEEL ENCLOSURE.

IRRIGATION WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	160	WATER METER SIZE	INCHES
WATER METER ELEVATION (FT)	160	HIGHEST HEAD ELEVATION	142 FT
REMOTE CONTROL VALVE #	3	STATIC WATER PRESSURE	138 PSI
RCV DEMAND (GPM)	41.5	TOTAL DEMAND	41.5 GPM

SIZE (INCHES)	DESCRIPTION	GPM	PRESSURE LOSS
4	SERVICE LINE	41.5	0.1 PSI
3 (2)	WATER METER (DISC TYPE)	41.5	0.5 PSI
3 (2)	BACKFLOW PREVENTION ASSEMBLY (RPZ TYPE)	41.5	13.0 PSI
3 (2)	BACKFLOW ASSEMBLY PIPING	41.5	0.5 PSI
3 (2)	FILTRATION	41.5	0.5 PSI
3 (2)	PRESSURE REGULATOR	41.5	3.0 PSI
4.0	ISOLATION VALVE	41.5	0.5 PSI
4.0	PVC CL 200 MAINLINE (FT)	1260	41.5 x 0.6 PSI
1.5	REMOTE CONTROL VALVE ASSEMBLY	41.5	4.0 PSI
N/A	LATERAL LINE LOSSES	41.5	4.5 PSI
N/A	FITTING LOSSES	41.5	0.2 PSI

TOTAL PRESSURE LOSS OF ALL COMPONENTS	27.4 PSI
PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)	45.0 PSI
ELEVATION LOSS (FT)	-18
TOTAL PRESSURE REQUIRED	64.6 PSI
STATIC WATER PRESSURE	138.0 PSI
RESIDUAL WATER PRESSURE	73.4 PSI
SET PRESSURE REGULATOR OR MASTER CONTROL VALVE AT	74.6 PSI
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)	N/A PSI



2015 MWELO WATER EFFICIENT LANDSCAPE WORKSHEET

Project JUNIPERO SERRA MUSEUM, CITY OF SAN DIEGO, CA
Reference Evapotranspiration (ET0): 46.5

Hydrozone # / Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PFIE)	Landscaping Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ⁴
Regular Landscape Areas							
#1 low shrubs	0.2	Rotary	0.75	0.27	30,068	8,018.13	231,162.78
#3 med basin	0.5	Bubblers	0.75	0.67	624	416.00	11,993.28
#4 med trees	0.5	Bubblers	0.75	0.67	675	450.00	12,973.50
					Totals	31,367	8,884.13
Special Landscape Areas							
#2 turf rotors				1	10,641	10,641.00	306,780.03
					Totals	10,641	306,780.03
					ETWU Total		562,909.59
					Maximum Allowed Water Allowance (MAWA) ⁵		713,719.80

⁴ Refer to legend for Hydrozone description.

⁵ ETWU (Annual Gallons Required) = Eto x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

⁶ MAWA (Annual Gallons Allowed) = (Eto / 0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations	
Regular Landscape Areas	
Total ETAF x Area	8,884
Total Area	31,367
Average ETAF	0.28

All Landscape Areas Including SLA	
Total ETAF x Area	19,525.13
Total Area	42,008
Sitewide ETAF	0.46

IRRIGATION EQUIPMENT LEGEND

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	RAD.	GPM	DETAIL
1	RAINBIRD HUNTER RD12-S-45-F 12" POP-UP WITH A MP3000-400QTY960 ADJUSTABLE NOZZLE	45	8'-10"	25-78	SCA-103
2	RAINBIRD HUNTER RD12-S-45-F 12" POP-UP WITH A MP3000-400QTY960 ADJUSTABLE NOZZLE	45	11'-14"	23-88	SCA-103
3	RAINBIRD HUNTER RD12-S-45-F 12" POP-UP WITH A MP3000-400QTY960 ADJUSTABLE NOZZLE	45	15'-20"	46-157	SCA-103
4	RAINBIRD HUNTER RD12-S-45-F 12" POP-UP WITH A MP3000-400QTY960 ADJUSTABLE NOZZLE	45	21'-30"	90-336	SCA-103
5	HUNTER 1204S-SS-PRB-CV 6" POP-UP TURF ROTOR WITH MP300 NOZZLES	45	25'	14-578	SCA-103
6	HUNTER 1204S-SS-PRB-CV 6" POP-UP TURF ROTOR WITH MP300 NOZZLES	45	30'	14-578	SCA-103
7	RAINBIRD 1481 BUBBLER NOZZLE WITH 1/2" PE TUBING RISER. SYMBOL REPRESENTS 1 PER SHRUB.	30	NA	25	F-1
8	RAINBIRD HUNTER EACH TREE SHALL HAVE 1 (ONE) R004-S-30-F 4" POP-UP WITH A M83N-40H NOZZLE AND 1 (ONE) H402 NOZZLE ON RISER IN PERFORATED TUBE. INSTALL ON OPPOSITE SIDES	30	NA	50(1.0)	SCA-103 SCA-104
9	CLOW VALVE: MODEL 2638260 3/4" RESILIENT WEDGE GATE VALVE - SIZE TO MATCH MAINLINE				A
10	ISCO 2" T-115X GATE VALVE FOR VALVE MAINLINE SHUT OFF, INSTALLED IN A SLEEVE WITH HINGED LOCKING BRASS CAP				SCA-108 SCA-106
11	RAINBIRD 44LRIC 1" QUICK COUPLER VALVE WITH LOCKING YELLOW COVER. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.				SCA-105 SCA-106
12	SUPERIOR 660W SERIES (1", 1.5", 2") WITH PRS-MOD PRESSURE REGULATOR, BRASS REMOTE CONTROL VALVE, SIZE AS SHOWN				SCA-114 SCA-126
13	EXISTING IRRITROL CONTROLLER TO BE UPGRADED TO A 54 STATION BID ALTERNATE IRR-1: REMOVED AND REPLACED WITH HUNTER ICC2 STAINLESS STEEL WALL MOUNT CONTROLLER 54 STATION, MODEL NUMBER 100-8000-5022 CONTROLLER WITH FLOW MONITORING AND EXPANSION MODULES.				SCA-118
14	PVC PIPE 3/4" - 2" SCH. 40 AS LATERAL LINES 12" BELOW GRADE, AND ABOVE THE FIELD SUB DRAINS.				SCA-110
15	PVC PIPE 4" CL. 200, AS MAINLINES, BELL AND GASKET WITH LEMCO DUCTILE IRON FITTINGS AND RESTRAINTS 5'-3" BELOW GRADE. FOR BRASS MANIFOLD CONTRACTOR SHALL USE 2" BRASS PIPE WITH BRASS FITTINGS AS MAINLINES - 18" BELOW GRADE. ALL MAINLINE FITTINGS SHALL BE INSTALLED WITH THROUST BLOCKS. REFER TO DETAILS AND MANUFACTURER'S RECOMMENDATIONS.				SCA-110 SCA-103 SCA-101 SCA-108 SCA-106 SCA-105
16	PVC PIPE SCH. 40 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED, MINIMUM 2" SLEEVE SIZE. PLACE BELOW ALL PAVING, HARDSCAPE ETC. AND AS DIRECTED BY OWNERS AUTHORIZED REPRESENTATIVE.				SCA-110
17	IRRIGATION CONTROL WIRE PATH				SCA-119
18	SPEARS 05H-SPUCE 05-100 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS AND 05-000 SEALANT FOR USE ON ALL WIRE CONNECTIONS (ULL APPROVED).				SCA-115
19	1/4" GA DIRECT BURIAL SOLID COPPER CORE DIRECT BURIAL IRRIGATION CONTROL WIRE WITH P.E. INSULATION (ULL APPROVED).				SCA-119
20	BROOKS CONCRETE BOXES WITH CAST IRON LIDS. REFER TO STANDARD CITY DETAILS FOR BOX SIZE PER EQUIPMENT INSIDE.				NA
21	IRRIGATION CONTROL WIRE PULL BOX				SCA-115

PRECIP. RATE	No.	INDICATES VALVE NO.
HYDROZONE	Size	INDICATES SQUARE FOOT AREA
	GPM	INDICATES GPM
		INDICATES VALVE SIZE

HYDROZONE	HYDROZONE DESCRIPTION
1	LOW WATER SHRUBS WITH ROTARY HEADS
2	HIGH SLA WATER TURF WITH SMALL ROTORS
3	MODERATE WATER BASIN WITH BUBBLERS
4	MIX WATER TREES WITH BUBBLERS

L-4

PLANS FOR THE CONSTRUCTION OF:

JUNIPERO SERRA MUSEUM ADA IMPROVEMENT PROJECT IRRIGATION LEGEND

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 14 OF 27 SHEETS

APPROVED:	DATE:	ISSUED BY:	DATE:
FOR CITY ENGINEER:		PROJECT MANAGER:	
PRINT NAME:	RCEN:	PROJECT ENGINEER:	
DESCRIPTION:	BY:	APPROVED:	DATE:
100% CD	NE	10/29/24	

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

WBS TYPE: S-15034
NICOLE FORTIER
PROJECT MANAGER
TRUC CHENH
PROJECT ENGINEER
NGVD 29
CONTROL CERTIFICATION
1214-1707
LAMBERT COORDINATOR
40809-14-D

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

The City of **SAN DIEGO** Parks and Recreation

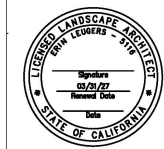
CONSULTANT

SPURLOCK

LANDSCAPE ARCHITECTS

2122 Hancock Street
San Diego, CA 92110
619.681.0090
spurlock-land.com

117-229.1

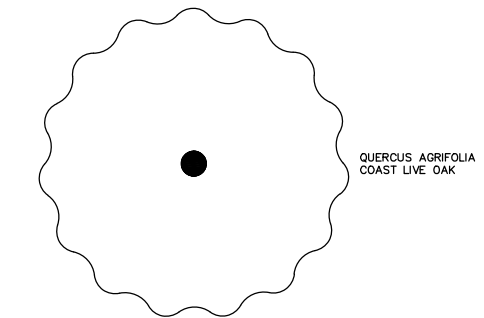
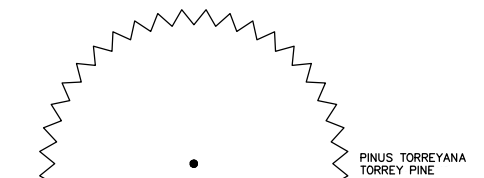


JUNIPERO SERRA MUSEUM ADA IMPROVEMENTS

PARTIAL PLANTING LEGEND

SYMBOL BOTANICAL / COMMON NAME

TREES

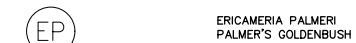


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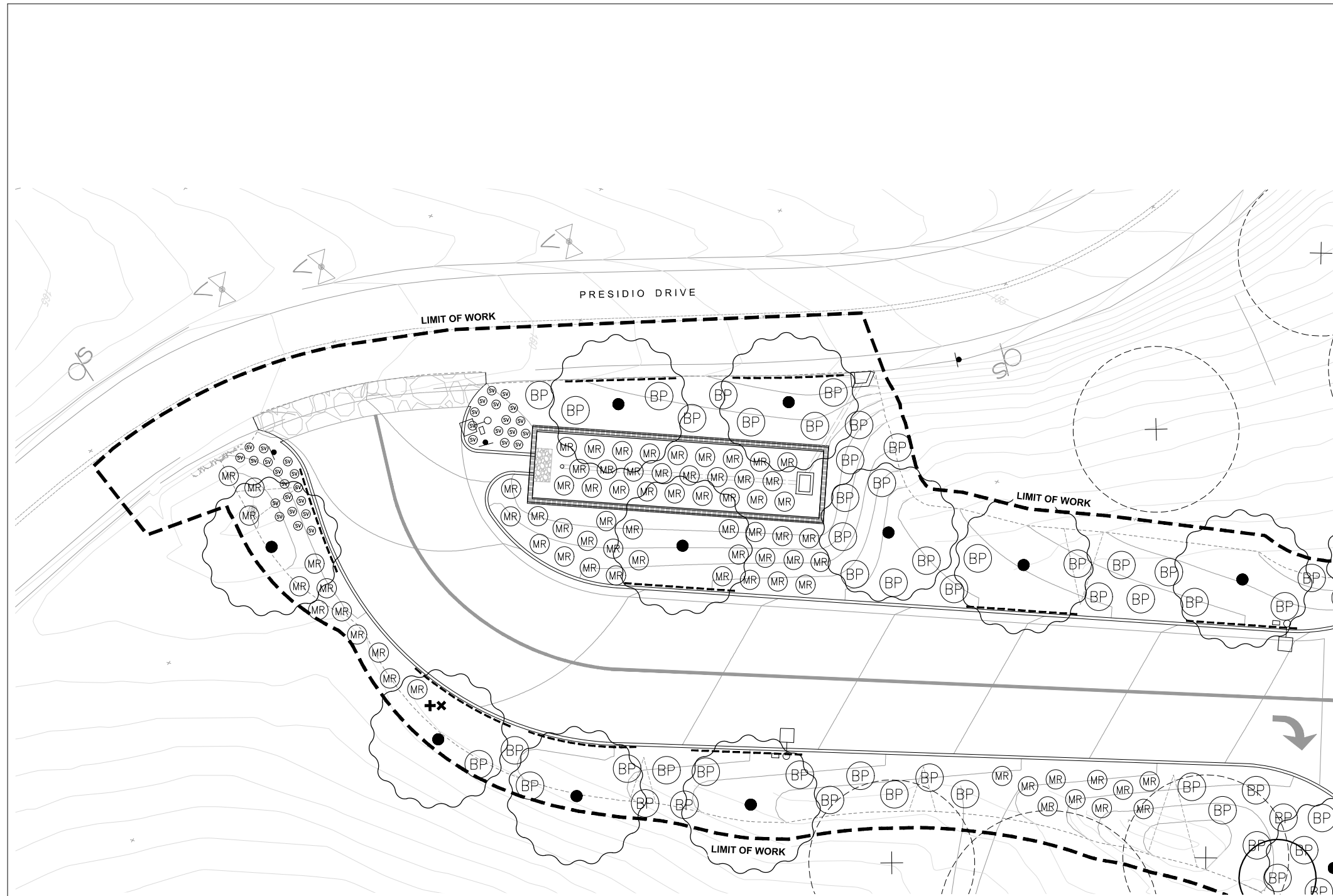


SYMBOL BOTANICAL / COMMON NAME

SHRUBS



GROUND COVERS



PLAN GRAPHIC

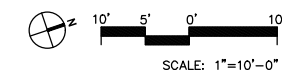
--- ROOT BARRIER INSTALL PER DETAIL SDL-106

+x PERCOLATION TEST LOCATION AND SOIL TEST LOCATIONS (TOTAL OF 3)

--- LIMIT OF WORK

NOTES

1. PROVIDE 3" BARK MULCH AT ALL PLANTING AREAS UNLESS INDICATED OTHERWISE ON PLANS.
2. ROOT BARRIERS TO BE INSTALL IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 10' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.



L-5

PLANS FOR THE CONSTRUCTION OF:

**JUNIPERO SERRA MUSEUM
ADA IMPROVEMENT PROJECT
PLANTING PLAN**

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 24 OF 27 SHEETS

WBS S-15034
TYPE

APPROVED FOR CITY ENGINEER		DATE		SUBMITTED BY	
PRINT NAME		RCE		NICOLE FORTIER PROJECT MANAGER	
DESCRIPTION	BY	APPROVED DATE	FILMED	TRUC CHENH PROJECT ENGINEER	
100% CD	NE	10/29/24		NGVD 29 CONTROL CERTIFICATION	
				214-1707 LAMBERT COORDINATES	
				40809-15-D	
CONTRACTOR		DATE STARTED			
INSPECTOR		DATE COMPLETED			

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.



CONSULTANT

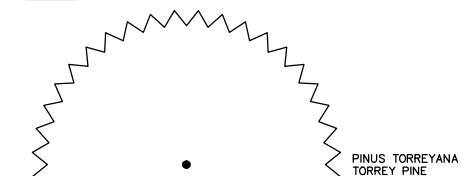
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619.681.0090
spurlock-land.com

117-229.1

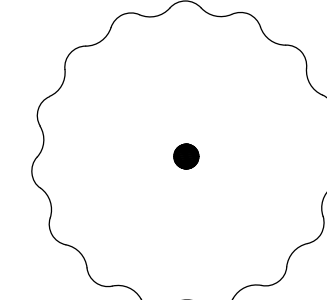
PARTIAL PLANTING LEGEND

SYMBOL BOTANICAL / COMMON NAME

TREES

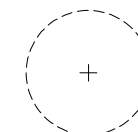


PINUS TORREYANA
TORREY PINE



QUERCUS AGRIFOLIA
COAST LIVE OAK

EXISTING TREE TO REMAIN



EXISTING TREE TO REMAIN

SYMBOL

BOTANICAL / COMMON NAME

SHRUBS



BACCHARIS PILULARIS 'PIGEON POINT'
PIGEON POINT COYOTE BRUSH



ERICAMERIA PALMERI
PALMER'S GOLDENBUSH



ERIOGONUM FASCICULATUM
CALIFORNIA BUCKWHEAT

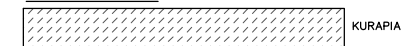


MUHLENBERGIA RIGENS
DEER GRASS



SOLIDAGO VELUTINA
VELVETY GOLDENROD

GROUND COVERS



KURAPIA

PLAN GRAPHIC

--- ROOT BARRIER INSTALL PER DETAIL SDL-106

+x PERCOLATION TEST LOCATION AND SOIL TEST LOCATIONS (TOTAL OF 3)

--- LIMIT OF WORK

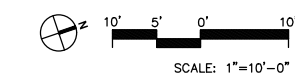
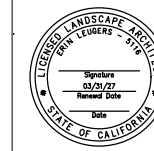
NOTES

1. PROVIDE 3" BARK MULCH AT ALL PLANTING AREAS UNLESS INDICATED OTHERWISE ON PLANS.
2. ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 10' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

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L-6

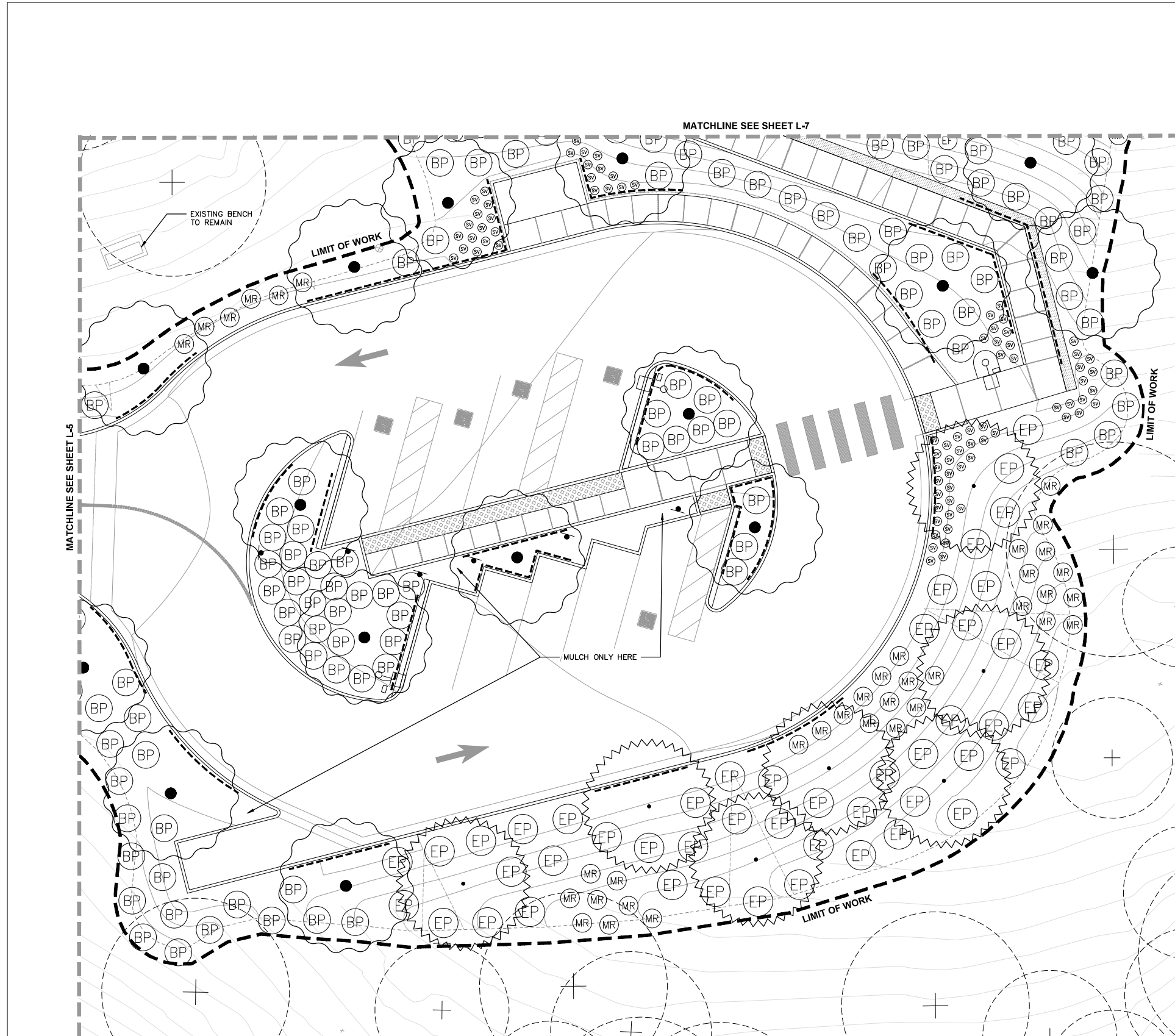
PLANS FOR THE CONSTRUCTION OF:

**JUNIPERO SERRA MUSEUM
ADA IMPROVEMENT PROJECT
PLANTING PLAN**

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 25 OF 27 SHEETS

WBS S-15034
TYPE

APPROVED FOR CITY ENGINEER		DATE		SUBMITTED BY	
PRINT NAME		RCE		NICOLE FORTIER PROJECT MANAGER	
DESCRIPTION	BY	APPROVED	DATE	FILED	TRUC CHENH PROJECT ENGINEER
100% CD	NE		10/29/24		NGVD 29
					CONTROL CERTIFICATION
					214-1707
					LAMBERT COORDINATES
					40809-16-D
CONTRACTOR		DATE STARTED			
INSPECTOR		DATE COMPLETED			



CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

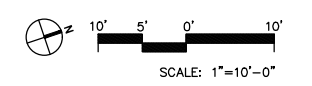




PARTIAL PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME	SYMBOL	BOTANICAL / COMMON NAME	SYMBOL	BOTANICAL / COMMON NAME
	PRINUS TORREYANA TORREY PINE		QUERCUS ARIFOLIA COAST LIVE OAK		BACCHARIS PILLULARIS PIGEON POINT COYOTE BRUSH
	EXISTING TREE TO REMAIN		ERICAMERIA PALMERI PALMER'S GOLDENBUSH		ERIODONUM FASCICULATUM CALIFORNIA BUCKWHEAT
	EXISTING TREE TO REMAIN		MULLENBERGIA ROGENS DEER GRASS		SOLIDAGO VELUTINA VELVET GOLDENROD
			MURRAYA		

- PLAN GRAPHIC**
- ROOT BARRIER INSTALL PER DETAIL SDL-106 OTHERWISE ON PLANS.
 - PERCOLATION TEST LOCATION AND SOIL TEST LOCATIONS (TOTAL OF 3)
 - LIMIT OF WORK
- NOTES**
- PROVIDE 3" BARK MULCH AT ALL PLANTING AREAS UNLESS INDICATED OTHERWISE ON PLANS.
 - ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 12" OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EXISTING VEGETATION TO REMAIN DURING CONSTRUCTION. IF EXISTING VEGETATION IS DAMAGED CONTRACTOR SHALL REPLACE IN KIND. IF EXISTING GRASS TO REMAIN IS DAMAGED CONTRACTOR SHALL REPAIR DAMAGED AREAS WITH SOG.



L-7

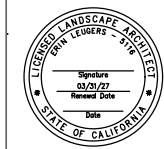
CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.



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PLANS FOR THE CONSTRUCTION OF:

**JUNIPERO SERRA MUSEUM
ADA IMPROVEMENT PROJECT
PLANTING PLAN**

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 26 OF 27 SHEETS

WBS TYPE: S-15034

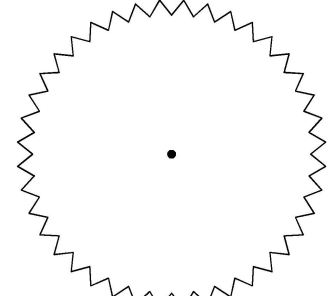
APPROVED: FOR CITY ENGINEER _____ DATE _____
PROJECT MANAGER: NICOLE FORTIER
CONTROL CERTIFICATION: TRUC CHENH
NGVD 29
214-1707
LAMBERT COORDINATES: 40809-17-D

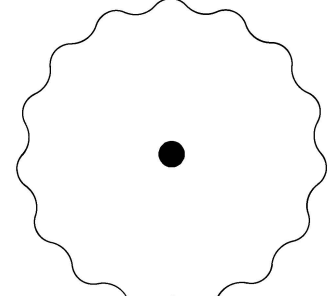
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

FULL PLANTING LEGEND

SYMBOL BOTANICAL / COMMON NAME CONTAINER DETAIL

TREES

	PINUS TORREYANA TORREY PINE	36" BOX	SDL-101
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
	QUERCUS AGRIFOLIA COAST LIVE OAK	36" BOX	SDL-101
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EXISTING TREE TO REMAIN

	EXISTING TREE TO REMAIN	N/A	
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SYMBOL BOTANICAL / COMMON NAME CONTAINER DETAIL

SHRUBS

	BACCHARIS PILULARIS 'PIGEON POINT' PIGEON POINT COYOTE BRUSH	5 GAL	SDL-102
	ERICAMERIA PALMERI PALMER'S GOLDENBUSH	5 GAL	SDL-102
	ERIOGONUM FASCICULATUM CALIFORNIA BUCKWHEAT	5 GAL	SDL-102
	MUHLENBERGIA RIGENS DEER GRASS	5 GAL	SDL-102
	SOLIDAGO VELUTINA VELVETY GOLDENROD	5 GAL	SDL-102

GROUND COVERS

	KURAPIA	SOD	
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MAINTENANCE REQUIREMENTS:

1. The 120 Day PEP will begin following successful completion of revegetation installation and acceptance by the city representative.
2. The maintenance period begins following completion and acceptance of the 120 day PEP and may be extended at the determination of the city representative. Revegetation area shall be maintained for a period of not less than 25 months. All revegetated areas shall be maintained by the contractor until final approval by the city.
3. Weeding shall be performed as needed by the contractor. Weed control activities should be limited to only what is necessary to meet success criteria and timing of weeding visits will be directed by the project biologist or city representative to minimize disturbance to monarch habitat as described below:
 - a. Only mechanical weed control will be allowed during the monarch overwintering period (estimated September 15 through March 15) under the supervision of a qualified biologist.
 - b. Herbicide application will be performed outside of the monarch overwintering period from March 16-September 14. Herbicide application will use targeted application methods to avoid blooming flowers and limit off-site movement (e.g., drift from wind and discharge from surface water flows).
 - c. Neonicotinoids or other systemic insecticides, including coated seeds, shall not be used at any time.
 - d. Weeds shall be properly disposed offsite.
4. Prior to final approval, the city representative may require corrective action including but not limited to re-planting and the repair of any soil erosion or slope slippage, in consultation with the project biologist.
5. The revegetation area should be evaluated by a biologist at 3, 6, 12, and 25 months following planting.
6. Corrective measures such as supplemental seeding and/or planting can be employed if the site is not on track to meet success criteria. Plant species may be substituted in coordination with the project biologist and city. Success criteria area shown in Table 1.

Table 1 Success Criteria			
Performance Standard			
	Percent Cover Nonnative Vegetation		Container Plant Survival
	Herbaceous	Cal-IPC Listed Species	
Year 1	<10%	0%	100% (trees & shrubs)
Year 2 (25-month)	<5%	0%	100% (trees); 80%* (shrubs)

*Final success criteria may be lowered by the project biologist if natural site conditions prevent the establishment of vegetation in the understory of trees.

PLAN GRAPHIC

-  ROOT BARRIER INSTALL PER DETAIL SDL-106
-  PERCOLATION TEST LOCATION AND SOIL TEST LOCATIONS (TOTAL OF 3)
-  LIMIT OF WORK

NOTES

1. PROVIDE 3" BARK MULCH AT ALL PLANTING AREAS UNLESS INDICATED OTHERWISE ON PLANS.
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CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.



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PLANS FOR THE CONSTRUCTION OF:

**JUNIPERO SERRA MUSEUM
ADA IMPROVEMENT PROJECT
PLANTING LEGEND**

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 27 OF 27 SHEETS

WBS _S-15034
TYPE

APPROVED FOR CITY ENGINEER	DATE	SUBMITTED BY
PRINT NAME	RCEN	NICOLE FORTIER PROJECT MANAGER
DESCRIPTION	BY	TRUC CHENH PROJECT ENGINEER
100% CD	NE	NGVD 29
	APPROVED	CONTROL CERTIFICATION
	DATE	214-1707
	FILED	LAMBERT COORDINATES
		40809-18-D
CONTRACTOR	DATE STARTED	
INSPECTOR	DATE COMPLETED	

ATTACHMENT 2

Tree Survey Letter Report



An Employee-Owned Company

October 7, 2025

Mr. Thomas Park
Associate Planner
City of San Diego
Engineering and Capital Projects Department
525 B Street, Suite 750, MS 908A
San Diego, CA 92101

Reference: Tree Survey Letter Report for the Junípero Serra Museum Americans with Disabilities Act (ADA) Improvements Project (WBS# S-15034.02.02; RECON Number 9087-1)

Dear Mr. Park:

This report summarizes the existing assets, including potential for monarch butterfly (*Danaus plexippus*) roosting on the proposed Junípero Serra Museum Americans with Disabilities Act (ADA) Improvements Project (project) site. It identifies the location and species of all existing trees within the proposed project site, evaluates the trees for the potential to support monarch butterfly roosting, and provides an analysis of impacts to the trees and potential roosting trees.

Project Location

The project site is located within the City of San Diego (City) owned Presidio Park, which includes the Junípero Serra Museum. It lies south of Interstate 8 and just south of Taylor Street, northeast of Old Town San Diego State Historic Park (Figure 1). The project site is shown on the U.S. Geological Survey (USGS) 7.5-minute topographic map, Point Loma and La Jolla quadrangles, within an unsectioned portion of the Pueblo Lands of San Diego Land Grant (Figure 2). The project site includes the Junípero Serra Museum and extends south to Cosoy Way. It is bounded on the west by a north-south portion of Presidio Drive and on the east by the canyon bottom in the eastern portion of Presidio Park.

The survey area for this study includes the project site and an approximate 50-foot buffer (Figure 3). The majority of the survey area consists of urban park land on a small knoll with a number of landscaped trees. The eastern portion of the survey area lies within the City's Multi-Habitat Planning Area (MHPA) (see Figure 3).

Project Description

The proposed project is the construction of an ADA-compliant parking lot that would expand available parking capacity and provide ADA-compliant access to the Junípero Serra Museum. The parking lot would include four standard diagonal parking spaces and five ADA-compliant diagonal parking spaces (nine total spaces) accessed by a new 28-foot-wide driveway that would connect the proposed parking lot with Presidio Drive. A 6-foot-wide ADA-compliant path constructed with permeable pavers (interlocking concrete blocks) would provide access to the existing lower parking lot and to the existing museum. The new parking lot would include a concrete sidewalk along its northwest side that would provide a pedestrian connection to the ADA-compliant path. A 12-foot-by-52-foot biofiltration basin, proposed at the base of the driveway near Presidio Drive, would collect and treat stormwater runoff from both the impervious surfaces (asphalt and concrete surfacing from the proposed parking lot and

sidewalk) and the permeable pavers of ADA-compliant path. The proposed project would impact a total area of 1.62 acres.

Tree Survey Methods

RECON Environmental, Inc. arborist, J.R. Sundberg conducted a tree survey for the project on May 5, 2024 to verify the results of the previous tree survey that was conducted on April 22, 2021. The tree survey area totaled 3.60 acres and included all trees within the project site plus an approximate 50-foot buffer .

During the 2021 survey, all trees with a diameter at breast height (DBH) greater than 5 inches were mapped with the assistance of a sub-meter-accurate global positioning system receiver. For each surveyed tree, the arborist identified the species, measured the DBH and height, and assigned a health score. The DBH was measured at approximately four feet above ground level, adjusting for flares of major branches, codominant trunks or unusual trunk growths, and tree height was estimated visually. The health score is a generalized ranking that takes into account overall vigor of the tree, evidence of disease or wounding, and structural issues (Table 1). The score is on a scale from 1 to 5, where a score of 5 indicates a healthy tree with good form, and a score of 1 indicates a tree with low vigor and/or with a high likelihood of failure in the next year (see Table 1). If a tree scored less than 5, notes were made indicating any outstanding issues.

Health Score	Description of Health Score
1	Low vigor; clear evidence of disease, wounding, or structural issues; failure likely within one year
2	Low vigor; some evidence or disease, wounding, or structural issues; may fail within one year
3	Low vigor; no evidence of disease or wounding; generally healthy but with serious structural issues
4	Generally healthy, some minor wounding, or may have structural issues.
5	Healthy, no disease, wounds, or significant structural issues

During the 2024 verification survey, the arborist checked all of the 109 trees that were mapped in 2021 and noted any significant discrepancies with the 2021 data. A subset of these trees (16 out of 109) was also remeasured for DBH. See Attachment 1 for detailed listing of the trees mapped in 2021 and checked in 2024.

Tree Survey Results

In 2021, 109 trees were mapped within the survey area, representing 16 species (see Figure 3). The most common tree species encountered was red gum (*Eucalyptus camaldulensis*). The most common health score was 4, typically due to codominant trunks, or dead branches in the canopy. The average DBH was 14 inches, and the average estimated height was 34 feet.

The majority of the 109 trees that were mapped in 2021 were in similar or better condition in 2024 (see Figure 3 and Attachment 1). A total of four trees naturally died or were removed since 2021 (Tree numbers 16, 20, 31, 100) and seven new trees were mapped in 2024 (Tree numbers 10, 111, 112, 113, 114, 115, 116; see Attachment 1 and Figure 3), for a grand total of 112 trees.

Out of these 112 trees, 53 are located within the project site, including 13 within the MHPA (see Figure 3 and Attachment 1). The trees that naturally died since 2021 included tree number 20 (*Eucalyptus camaldulensis*), which had a health score of 4 in 2021, tree number 31 (*Eucalyptus polyanthemos*), which had a health score of 1 in 2021 and tree

Mr. Thomas Park
Page 3
October 7, 2025

number 100 (*Pinus canariensis*), which had a health score of 4 in 2021. Tree number 16 (*Eucalyptus conferruminata*), which had a health score of 5 in 2021 was removed. The subset of trees that were re-measured for DBH in 2024 had slightly increased DBH, around +5-10 percent, which might be attributed to the good rain years that occurred between 2021 and 2024.

Monarch Butterfly Assessment

The proposed project site is known as a winter roosting site for monarch butterfly, and records from the California Natural Diversity Database note that this species roosts in lemon-scented gum (*Eucalyptus citriodora*) and Canary Island pine (*Pinus canariensis*) within the park (California Department of Fish and Wildlife 2024; Xerces Society 2024). For the current analysis, all Canary Island pines and gum (*Eucalyptus* sp.) trees taller than 15 feet with health scores of 3–5 are considered suitable for monarch roosting. Spider gum (*Eucalyptus conferruminata*) is a shrubby plant shorter than most gum trees and is not ideal for monarch roosting. Trees with scores of 1 and 2 are damaged or diseased and have a high likelihood of failure, so they are not considered suitable for monarch roosting in this analysis. Based on these criteria, out of the 112 trees within the survey area, 93 trees are considered suitable for monarch roosting (Figure 4). Of these, 45 trees that are suitable for monarch roosting would be impacted by the project, including 10 trees within the MHPA (Tree numbers 28, 29, 30, 44, 54, 57, 58, 59, 64, and 65). These 45 trees include 39 trees that are located inside the project impact footprint and six trees (Tree numbers 12, 32, 44, 54, 79, and 88) that are located on the edge of the project boundary (within 4 feet of the project boundary). Trees inside the project boundary are expected to be directly impacted by the project, and trees on the edge of the project boundary are expected to be indirectly impacted by ground disturbances near their root zones. The remaining 48 suitable trees for monarch roosting are not within the project boundary or on the edge of the project boundary and, thus, are not anticipated to be impacted.

If you have any questions about this letter report, or require additional information, please contact me at jrsundberg@reconenvironmental.com or (619) 308-9333 extension 131.

Sincerely,



J.R. Sundberg
Biologist, ISA Certified Arborist, WE-11900-A

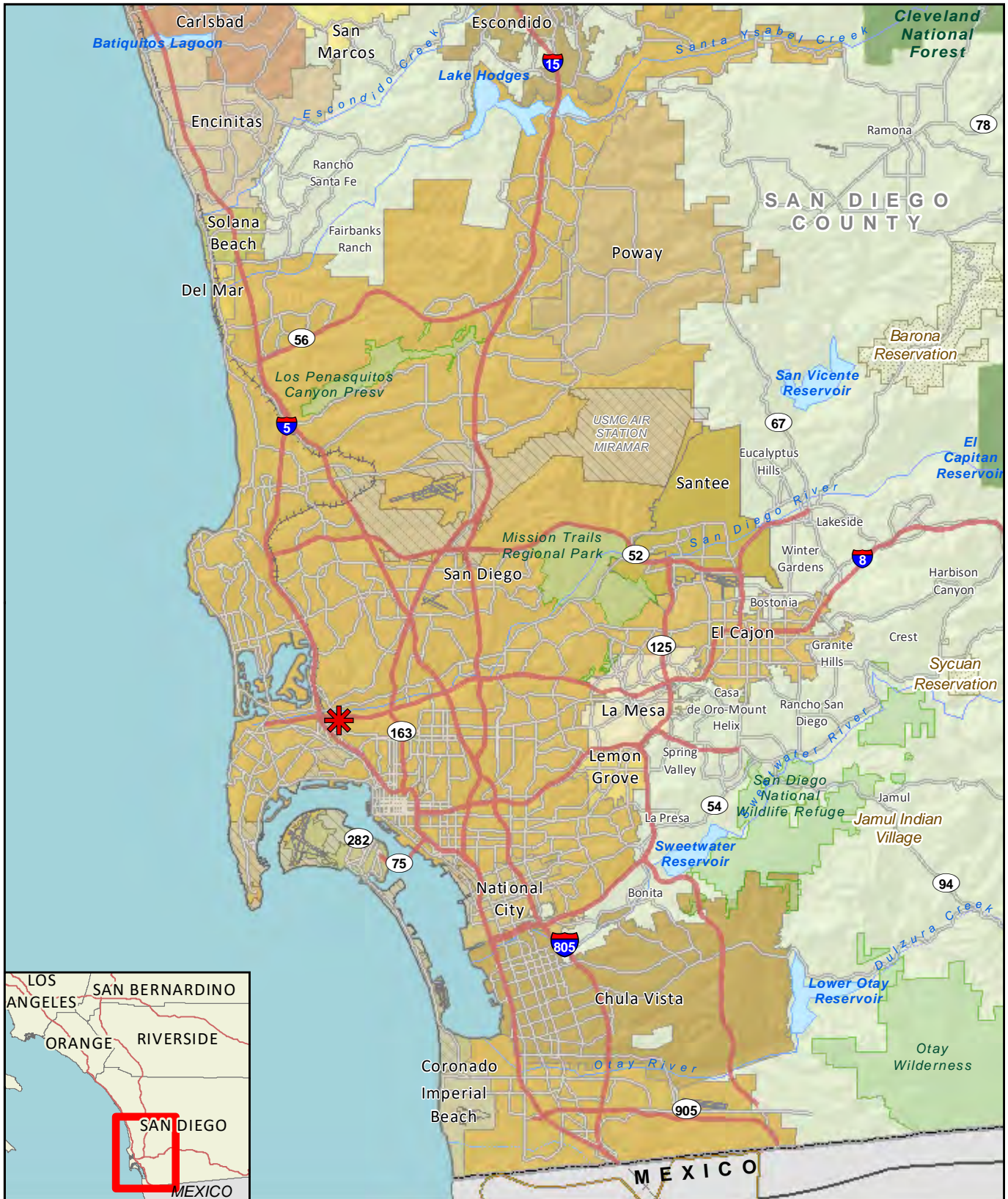
JRS:jg

cc: Nicole Fortier, Delfa Genova, and Jamie Kennedy, City of San Diego

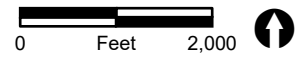
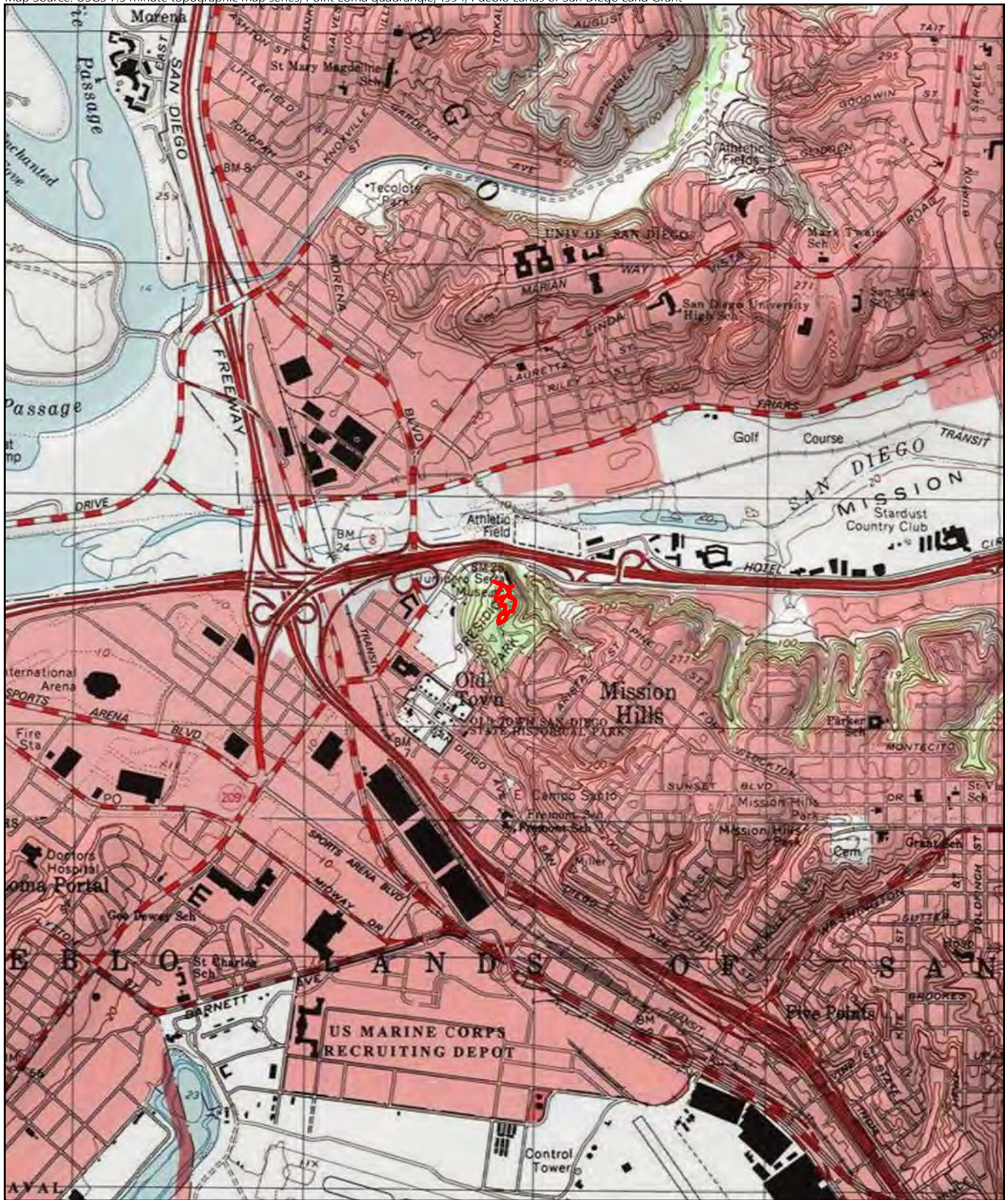
References Cited

California Department of Fish and Wildlife
2024 California Natural Diversity Database, a Natural Heritage Program. Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. Accessed July.

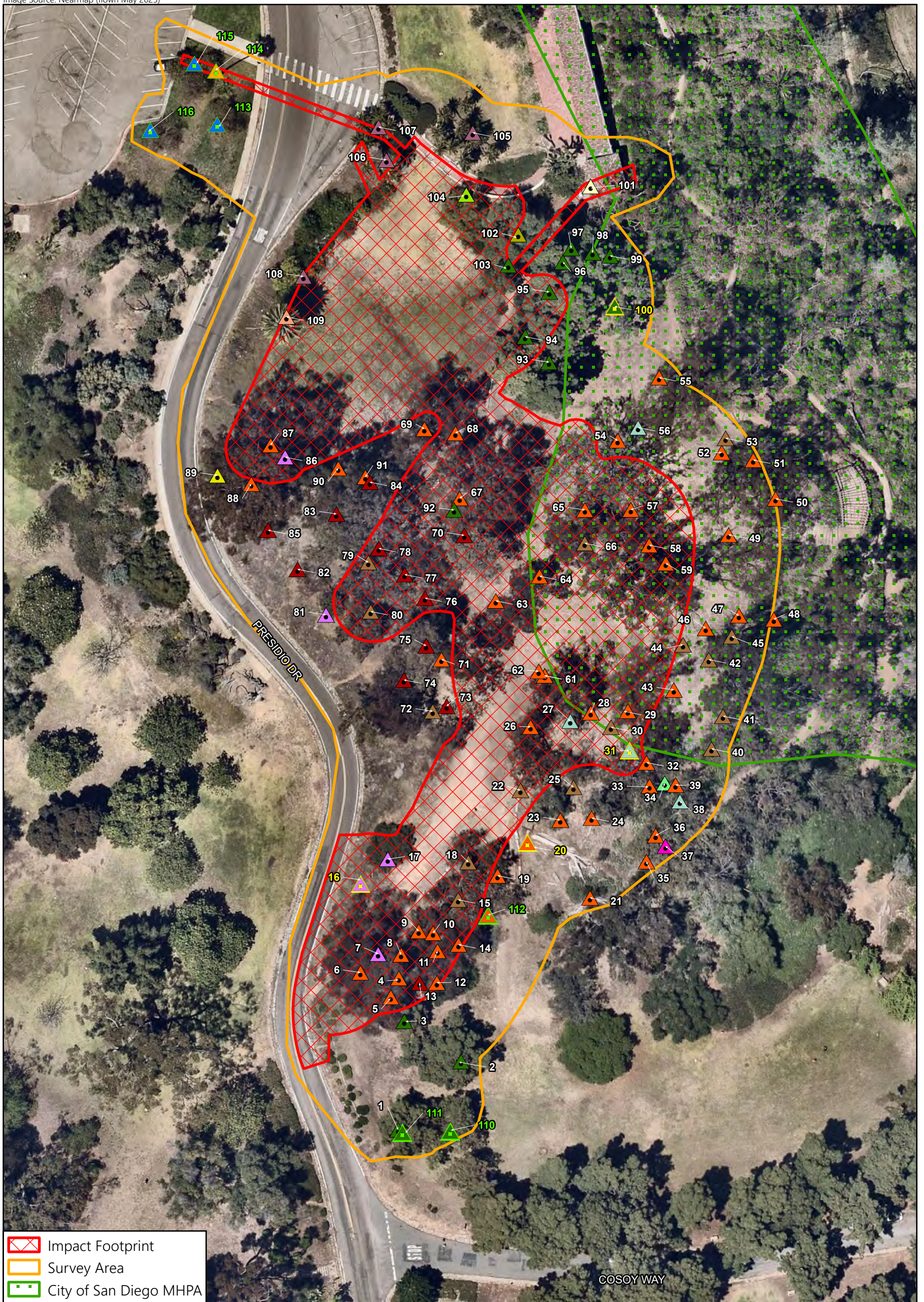
Xerces Society
2024 Map of Overwintering Sites. <https://westernmonarchcount.org>. Accessed July.



 Project Location



 Project Boundary



 Impact Footprint
 Survey Area
 City of San Diego MHPA

Tree Species

- | | |
|--|---|
| ▲ <i>Acacia cyclops</i> (Cyclops Acacia) | ▲ <i>Olea europaea</i> (Olive) |
| ▲ <i>Bauhinia x blakeana</i> (Hong Kong Orchid Tree) | ▲ <i>Phoenix canariensis</i> (Canary Island Date Palm) |
| ▲ <i>Ceratonia siliqua</i> (Carob Tree) | ▲ <i>Phoenix reclinata</i> (Senegal Date Palm) |
| ▲ <i>Eucalyptus camaldulensis</i> (Red Gum) | ▲ <i>Pinus canariensis</i> (Canary Island Pine) |
| ▲ <i>Eucalyptus citriodora</i> (Lemon Scented Gum) | ▲ <i>Quercus suber</i> (Cork Oak) |
| ▲ <i>Eucalyptus conferruminata</i> (Spider Gum) | ▲ <i>Schinus molle</i> (Peruvian Pepper Tree) |
| ▲ <i>Eucalyptus polyanthemus</i> (Silver Dollar Gum) | ▲ <i>Washingtonia robusta</i> (Mexican Fan Palm) |
| ▲ <i>Eucalyptus robusta</i> (Swamp Mohogany) | ▲ Dead Since 2021 (Four Trees) |
| ▲ <i>Eucalyptus sideroxylon</i> (Red Ironbark) | ▲ New in 2024 (Seven Trees) |

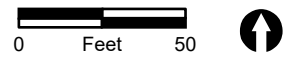
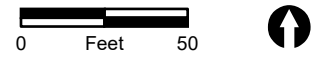
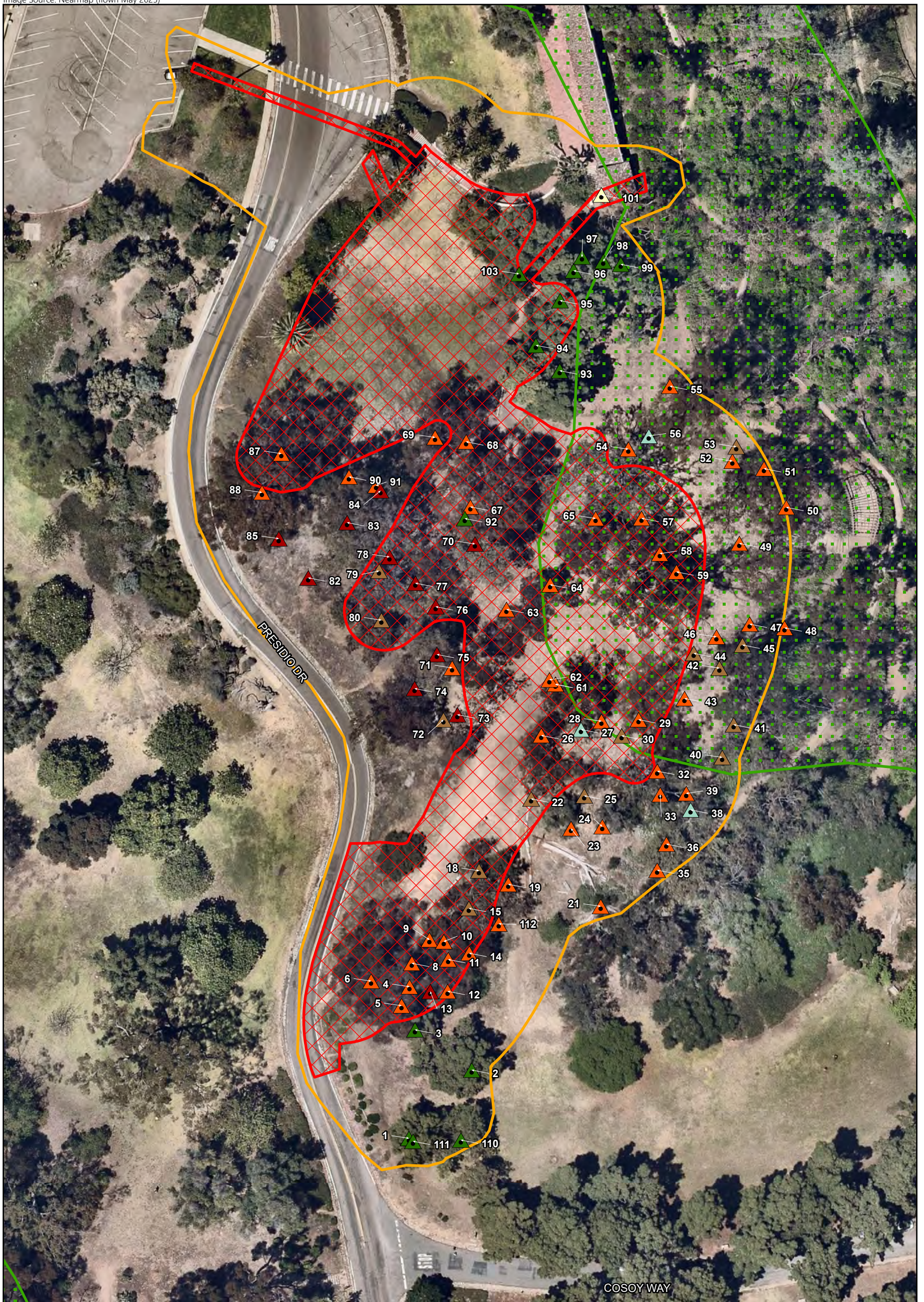


FIGURE 3
Tree Location Map



- | | |
|------------------------|--|
| Survey Area | Suitable Monarch Roosting Trees |
| Impact Footprint | <i>Eucalyptus camaldulensis</i> (Red Gum) |
| City of San Diego MHPA | <i>Eucalyptus citriodora</i> (Lemon Scented Gum) |
| | <i>Eucalyptus polyanthemos</i> (Silver Dollar Gum) |
| | <i>Eucalyptus robusta</i> (Swamp Mohagony) |
| | <i>Eucalyptus sideroxylon</i> (Red Ironbark) |
| | <i>Pinus canariensis</i> (Canary Island Pine) |

FIGURE 4
Suitable Monarch Roosting Trees

ATTACHMENT 1

Table of Trees within the Survey Area

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project ⁵
1	<i>Pinus canariensis</i>	Canary Island Pine	18	40	4	Some yellow needles, less vigorous candles	Yes		
2**	<i>Pinus canariensis</i>	Canary Island Pine	24	50	5		Yes		
3**	<i>Pinus canariensis</i>	Canary Island Pine	16	30	4	Some yellow needles, less vigorous candles	Yes		
4**	<i>Eucalyptus camaldulensis</i>	Red Gum	20	50	5		Yes		Yes
5**	<i>Eucalyptus camaldulensis</i>	Red Gum	17	40	4	Leaning, has vertical cracks in bark with resin	Yes		Yes
6	<i>Eucalyptus camaldulensis</i>	Red Gum	22	50	4	Large scars and peeling bark from losing limbs	Yes		Yes
7	<i>Eucalyptus conferruminata</i>	Spider Gum	8	15	5		*		Yes
8**	<i>Eucalyptus camaldulensis</i>	Red Gum	14	40	3	Leaning on Tree 9 to north, would likely fall if supporting tree is removed	Yes		Yes
9	<i>Eucalyptus camaldulensis</i>	Red Gum	11	40	4	Supports Tree 8, has some weeping holes near base	Yes		Yes
10**	<i>Eucalyptus camaldulensis</i>	Red Gum	9	35	4	Codominant branches at 7ft	Yes		Yes
11	<i>Eucalyptus camaldulensis</i>	Red Gum	8	25	3	Codominant branches at 10 ft, woodpecker holes	Yes		Yes
12	<i>Eucalyptus camaldulensis</i>	Red Gum	6	25	4	woodpecker holes	Yes		Yes
13	<i>Eucalyptus sideroxylon</i>	Red Ironbark	5	20	4	Stump sprout	Yes		Yes
14**	<i>Eucalyptus camaldulensis</i>	Red Gum	7	25	5		Yes		Yes
15	<i>Eucalyptus robusta</i>	Swamp Mahogany	15	45	5		Yes		Yes
(16)	<i>Eucalyptus conferruminata</i>	Spider Gum				This tree was removed			

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project ⁵
17	<i>Eucalyptus conferruminata</i>	Spider Gum	7	15	5	3 trunks, used largest for dbh	*		Yes
18	<i>Eucalyptus robusta</i>	Swamp Mahogany	8	25	5		Yes		Yes
19	<i>Eucalyptus camaldulensis</i>	Red Gum	8	30	5		Yes		
(20)**	<i>Eucalyptus camaldulensis</i>	Red Gum	34	65	0	This tree has fallen down and is dead.			
21	<i>Eucalyptus camaldulensis</i>	Red Gum	30	50	4	6 codominant trunks, some included bark	Yes		
22	<i>Eucalyptus robusta</i>	Swamp Mahogany	10	35	5		Yes		Yes
23	<i>Eucalyptus camaldulensis</i>	Red Gum	11	35	5		Yes		
24	<i>Eucalyptus camaldulensis</i>	Red Gum	14	35	4	Less vigorous new growth	Yes		
25	<i>Eucalyptus robusta</i>	Swamp Mahogany	8	25	5		Yes		
26	<i>Eucalyptus camaldulensis</i>	Red Gum	13	45	4	Has lean to south	Yes		Yes
27	<i>Eucalyptus polyanthemos</i>	Silver Dollar Gum	10	30	4	Dead branches	Yes		Yes
28	<i>Eucalyptus camaldulensis</i>	Red Gum	11	45	5		Yes	Yes	Yes
29**	<i>Eucalyptus camaldulensis</i>	Red Gum	17	50	5		Yes	Yes	Yes
30	<i>Eucalyptus robusta</i>	Swamp Mahogany	9	25	4	New growth not vigorous	Yes	Yes	Yes
(31)**	<i>Eucalyptus polyanthemos</i>	Silver Dollar Gum	7	25	0	Dead tree			
32	<i>Eucalyptus camaldulensis</i>	Red Gum	18	50	5		Yes		Yes
33**	<i>Eucalyptus camaldulensis</i>	Red Gum	30	55	5		Yes		
34	<i>Ceratonia siliqua</i>	Carob Tree	4	15	4	Resprouted, 3 trunks 4 inch dbh			
35	<i>Eucalyptus camaldulensis</i>	Red Gum	14	35	3	Less vigorous new growth, leaning, evidence of boring insects	Yes		
36	<i>Eucalyptus camaldulensis</i>	Red Gum	22	50	5		Yes		
37	<i>Schinus molle</i>	Peruvian Pepper Tree	8	20	4	3 trunks, dead stubs			

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project ⁵
38	<i>Eucalyptus polyanthemos</i>	Silver Dollar Gum	8	30	4	Low vigor	Yes		
39	<i>Eucalyptus camaldulensis</i>	Red Gum	5	20	5		Yes		
40	<i>Eucalyptus robusta</i>	Swamp Mahogany	10	25	4	New growth low vigor	Yes	Yes	
41	<i>Eucalyptus robusta</i>	Swamp Mahogany	16	40	5		Yes	Yes	
42	<i>Eucalyptus robusta</i>	Swamp Mahogany	12	40	5		Yes	Yes	
43	<i>Eucalyptus camaldulensis</i>	Red Gum	6	20	2	Top is dead, will lose branches soon		Yes	
44	<i>Eucalyptus robusta</i>	Swamp Mahogany	15	40	4	A few small weeping wounds	Yes	Yes	Yes
45	<i>Eucalyptus robusta</i>	Swamp Mahogany	15	40	4	Dead branches	Yes	Yes	
46	<i>Eucalyptus camaldulensis</i>	Red Gum	13	35	4	Woodpecker holes	Yes	Yes	
47	<i>Eucalyptus camaldulensis</i>	Red Gum	16	40	4	Codominant stems at 20 ft	Yes	Yes	
48	<i>Eucalyptus camaldulensis</i>	Red Gum	11	30	3	Low vigor	Yes	Yes	
49	<i>Eucalyptus camaldulensis</i>	Red Gum	14	35	5		Yes	Yes	
50	<i>Eucalyptus camaldulensis</i>	Red Gum	8	15	4	Codominant stems	Yes	Yes	
51	<i>Eucalyptus camaldulensis</i>	Red Gum	15	50	5		Yes	Yes	
52	<i>Eucalyptus camaldulensis</i>	Red Gum	13	40	5		Yes	Yes	
53	<i>Eucalyptus robusta</i>	Swamp Mahogany	11	35	4	Dead branches	Yes	Yes	
54	<i>Eucalyptus camaldulensis</i>	Red Gum	24	45	4	New growth low vigor. Compact soil	Yes	Yes	Yes
55	<i>Eucalyptus camaldulensis</i>	Red Gum	27	50	5		Yes	Yes	
56	<i>Eucalyptus polyanthemos</i>	Silver Dollar Gum	5	15	5		Yes	Yes	
57	<i>Eucalyptus camaldulensis</i>	Red Gum	24	45	4	New growth low vigor. Compact soil	Yes	Yes	Yes
58	<i>Eucalyptus camaldulensis</i>	Red Gum	30	50	4	A few dead branches in the canopy	Yes	Yes	Yes

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project ⁵
59	<i>Eucalyptus camaldulensis</i>	Red Gum	25	50	4	A few dead branches in the canopy	Yes	Yes	Yes
60	<i>Eucalyptus camaldulensis</i>	Red Gum	16	0	3	Injuries on trunk, low vigor growth	Yes		Yes
61	<i>Eucalyptus camaldulensis</i>	Red Gum	16	0	3	Injuries on trunk, low vigor growth	Yes		Yes
62	<i>Eucalyptus camaldulensis</i>	Red Gum	13	45	3	Injuries on trunk, low vigor growth	Yes		Yes
63	<i>Eucalyptus camaldulensis</i>	Red Gum	12	35	3	Injuries on trunk, low vigor growth, compact soil	Yes		Yes
64	<i>Eucalyptus camaldulensis</i>	Red Gum	17	45	3	Injuries on trunk, low vigor growth, compact soil	Yes	Yes	Yes
65	<i>Eucalyptus camaldulensis</i>	Red Gum	13	40	4	Injuries on trunk, low vigor growth, compact soil	Yes	Yes	Yes
66	<i>Eucalyptus robusta</i>	Swamp Mahogany	12	40	2	Injuries on trunk, dead branches, compact soil		Yes	Yes
67	<i>Eucalyptus camaldulensis</i>	Red Gum	24	50	4	Some resinous holes but vigorous	Yes		Yes
68	<i>Eucalyptus camaldulensis</i>	Red Gum	7	15	4	Dead branches, woodpecker holes	Yes		Yes
69	<i>Eucalyptus camaldulensis</i>	Red Gum	24	30	4	Codominant stem at 10 ft	Yes		
70	<i>Eucalyptus sideroxylon</i>	Red Ironbark	25	45	4	Dead branches	Yes		Yes
71	<i>Eucalyptus camaldulensis</i>	Red Gum	12	35	4	Injuries on trunk, compact soil	Yes		
72	<i>Eucalyptus robusta</i>	Swamp Mahogany	12	35	4	Dead branches	Yes		

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project [§]
73	<i>Eucalyptus sideroxylon</i>	Red Ironbark	13	25	4	Dead branches	Yes		
74	<i>Eucalyptus sideroxylon</i>	Red Ironbark	16	35	4	Dead branches	Yes		
75	<i>Eucalyptus sideroxylon</i>	Red Ironbark	12	35	4	Dead branches	Yes		
76	<i>Eucalyptus sideroxylon</i>	Red Ironbark	20	45	4	Trunk knobs	Yes		Yes
77	<i>Eucalyptus sideroxylon</i>	Red Ironbark	14	45	5	Has nest	Yes		Yes
78	<i>Eucalyptus sideroxylon</i>	Red Ironbark	18	45	4	Sparse canopy	Yes		Yes
79	<i>Eucalyptus robusta</i>	Swamp Mahogany	10	25	5		Yes		Yes
80	<i>Eucalyptus robusta</i>	Swamp Mahogany	18	35	5		Yes		Yes
81	<i>Eucalyptus conferruminata</i>	Spider Gum	8	15	4	Codominant stems	*		
82	<i>Eucalyptus sideroxylon</i>	Red Ironbark	5	15	4	Sparse canopy	Yes		
83	<i>Eucalyptus sideroxylon</i>	Red Ironbark	18	45	5		Yes		
84	<i>Eucalyptus sideroxylon</i>	Red Ironbark	18	45	5		Yes		
85	<i>Eucalyptus sideroxylon</i>	Red Ironbark	9	20	4	Poorly cut off stump	Yes		
86	<i>Eucalyptus conferruminata</i>	Spider Gum	10	20	4	Codominant stems	*		Yes
87	<i>Eucalyptus camaldulensis</i>	Red Gum	19	50	4	Codominant branches at 7 ft	Yes		Yes
88	<i>Eucalyptus camaldulensis</i>	Red Gum	38	50	4	Codominant branches at 15 ft	Yes		Yes
89	<i>Acacia cyclops</i>	Cyclops Acacia	9	15	5				
90	<i>Eucalyptus camaldulensis</i>	Red Gum	16	40	4	Codominant branches at 12 ft	Yes		
91	<i>Eucalyptus camaldulensis</i>	Red Gum	12	25	4	Codominant branches at 4 ft	Yes		
92	<i>Pinus canariensis</i>	Canary Island Pine	8	30	3	Eucalyptus nearby is damaging canopy	Yes		Yes
93	<i>Pinus canariensis</i>	Canary Island Pine	19	50	5		Yes		
94	<i>Pinus canariensis</i>	Canary Island Pine	19	50	5		Yes		Yes
95	<i>Pinus canariensis</i>	Canary Island Pine	15	45	5		Yes		Yes

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project ⁵
96	<i>Pinus canariensis</i>	Canary Island Pine	25	50	4	Codominant stems at 10 ft	Yes		
97	<i>Pinus canariensis</i>	Canary Island Pine	11	30	4	Codominant stems at 2 ft, largest 11-inch diameter	Yes		
98	<i>Pinus canariensis</i>	Canary Island Pine	15	45	4	Dead branches	Yes	Yes	
99	<i>Pinus canariensis</i>	Canary Island Pine	12	30	4	Dead branches	Yes	Yes	
(100)**	<i>Pinus canariensis</i>	Canary Island Pine	12	30	0	Dead tree was removed		Yes	
101**	<i>Eucalyptus citriodora</i>	Lemon Scented Gum	18	35	3	Sparse canopy	Yes		Yes
102	<i>Olea europeaea</i>	Olive	13	20	5	Tree health has improved since last survey			
103**	<i>Pinus canariensis</i>	Canary Island Pine	11	30	5		Yes		Yes
104**	<i>Quercus suber</i>	Cork Oak	20	25	5				Yes
105**	<i>Phoenix reclinata</i>	Senegal Date Palm	6	20	5	11 mature trunks			
106	<i>Phoenix reclinata</i>	Senegal Date Palm	6	25	5	6 mature trunks			
107	<i>Phoenix reclinata</i>	Senegal Date Palm	6	20	5	5 mature trunks			Yes
108	<i>Prunus caroliniana</i>	Carolina laurel cherry	5	15	5	Two trunks			
109	<i>Phoenix canariensis</i>	Canary Island Date Palm	27	45	5		Yes		
110	<i>Pinus canariensis</i>	Canary Island Pine	16	30	3	Not included in previous survey. Sparse canopy	Yes		
111	<i>Pinus canariensis</i>	Canary Island Pine	20	40	4	Not included in previous survey.	Yes		
112	<i>Eucalyptus camaldulensis</i>	Red Gum	8	25	5	Not included in previous survey.	Yes		

Attachment 1
Table of Trees within the Survey Area

Tree No.	Latin Name	Common Name	DBH (inches)	Height (feet)	Health Score	Notes	Potential Monarch Roosting Tree	Within the MHPA	Impacted by the Project [§]
113	<i>Bauhinia x blakeana</i>	Hong Kong orchid tree	14	25	5				
114	<i>Washingtonia robusta</i>	Mexican fan palm	24	70	5				Yes
115	<i>Bauhinia x blakeana</i>	Hong Kong orchid tree	22	28	5				Yes
116	<i>Bauhinia x blakeana</i>	Hong Kong orchid tree	12	21	5				

DBH = diameter at breast height; ft = feet; MHPA = Multi-Habitat Planning Area

[§]Bold indicates impact to suitable tree for monarch roosting.

*Spider gum (*Eucalyptus conferruminata*) is a shrubby plant shorter than most gum trees and is not ideal for monarch roosting.

**These trees were re-measured for DBH during the arborist verification survey conducted on May 5, 2024.

ATTACHMENT 3

Post-survey Notification of 2024 Crotch's Bumble Bee
Focused Surveys



An Employee-Owned Company

October 7, 2025

Mr. Justin Garcia
Senior Environmental Scientist
California Department of Fish and Wildlife; Wildlife Branch
P.O. Box 944209
Sacramento, CA 94244-2090

Reference: Post-survey Notification of 2024 Crotch's Bumble Bee Focused Surveys for the Junipero Serra Museum Americans with Disability Act Improvement Project (RECON Number 9087-1)

Dear Mr. Garcia:

This letter provides the California Department of Fish and Wildlife (CDFW) with the results of the habitat assessment and focused surveys for the California Endangered Species Act (CESA) Candidate Crotch's bumble bee (*Bombus crotchii*) conducted for the Junipero Serra Museum Americans with Disability Act Improvement Project (project). The focused surveys are authorized through a Memorandum of Understanding (MOU) issued on May 17, 2024, by CDFW to Principal Investigator, Wendy Loeffler (SC-182980003-19036-001). Other Independent Researchers authorized under the MOU include Alex Fromer (SC-192680001-19268-001), Anna Leavitt (SC-191060005-19106-001), Elizabeth Procsal (SC-190350007-19036-001), and Kathryn (Kayo) Valenti (SC-202320002-20245-001) with RECON Environmental, Inc. (RECON).

1.0 Project Location

The project is located in the city of San Diego, within Presidio Park, a City of San Diego (City) owned park situated south of Interstate 8, and northeast of Old Town San Diego State Historic Park (Figure 1). The project is shown on the U.S. Geological Survey (USGS) 7.5-minute topographic map, Point Loma and La Jolla quadrangles, within an unsectioned portion of the Pueblo Lands of San Diego Land Grant (Figure 2; USGS 1994 and 1996). The project is found on the City 800' Map Number 210-1701; it includes the Junipero Serra Museum and is bounded on the west by a north-south portion of Presidio Drive, on the east by the canyon bottom in the eastern portion of Presidio Park, and on the south by Cosoy Way (Figure 3).

2.0 Methods

A habitat assessment and focused surveys for Crotch's bumble bee were conducted in accordance with the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023) and the MOU.

2.1 Habitat Assessment

The habitat assessment consisted of a database search and three site visits, conducted concurrently with focused surveys, to evaluate the likelihood of Crotch's bumble bees to occur within the project site.

Prior to the site visits, historical and current records of Crotch's bumble bee occurrence within one mile of the project site were evaluated by consulting the California Natural Diversity Database (CDFW 2024) and the citizen science data platform iNaturalist (2024).

RECON conducted a habitat assessment for foraging, nesting, and overwintering habitat concurrently with focused surveys on June 20, July 9, and July 23, 2024, consistent with the Colony Active Period of Crotch’s bumble bee within the South Coast Region (April through August). The initial habitat assessment area covered 6.63 acres, which covered the proposed project area and a 100-foot buffer. The habitat assessment was conducted on-foot by meandering throughout the survey area. RECON recorded potential foraging, nesting (e.g., bare ground, rodent burrows), and/or overwintering resources (e.g., leaf litter, woody forest edge); documented general plant diversity; and estimated the absolute percent cover of nectar sources. The percent cover of nectar sources over the entire site fell within the following cover ranges: 0 percent (excluded from survey), 1-5 percent, 26-50 percent, and greater than 50 percent.

2.2 Focused Surveys

A total of three survey visits were conducted concurrent with the habitat assessment site visits. The surveys were conducted within a final survey area that encompassed 5.25 acres of suitable Crotch’s bumble bee habitat, excluding the developed areas from the initial habitat assessment area, such as the road, parking lot, and museum building (Figure 4). The surveys were conducted on warm, sunny days, with low wind; began no earlier than one hour after sunrise; and were completed at least two hours before sunset. Survey dates, surveyors, times, and weather conditions are provided in Table 1, below.

Table 1 2024 Crotch’s Bumble Bee Survey Dates, Personnel, Times, and Conditions					
Date	Survey #	Surveyor(s)	Beginning Conditions	Ending Conditions	Acres per Hour per Person
6/20/2024	1	Wendy Loeffler	11:24 a.m.; 75°F; winds 2 mph; 5% cloud cover	2:00 p.m.; 76°F; winds 2 mph; 0% cloud cover	2.0
7/9/2024	2	Wendy Loeffler	1:42 p.m.; 83°F; winds 1 mph; 5% cloud cover	3:33 p.m.; 79°F; winds 2 mph; 30% cloud cover	2.8
7/23/2024	3	Wendy Loeffler	10:42 a.m.; 83°F; winds 0-21 mph; 5% cloud cover	12:42 p.m.; 89°F; winds 1-3 mph; 2% cloud cover	2.6

°F = degrees Fahrenheit; mph = miles per hour

Foraging surveys were conducted at a surveyor rate of 2 to 3 acres per hour, which meets the survey protocol maximum rate of one person-hour of searching per 3 acres of suitable habitat. This does not include the time for capture or photographic documentation.

Prior to conducting the surveys, vials and nets were sterilized according to the methods described in the CDFW Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023) and the MOU. During each survey, surveyors walked large meandering transects that incorporated patches of floral resources and captured bumble bees with a net from blooms, avoiding damaging the flower, when possible.

It is standard procedure for each bee to be carefully transferred into its own sterile vial and kept at ambient temperature for no more than 10 minutes before being placed in a cooler on ice, at a temperature above 25 degrees Fahrenheit, for no more than 120 minutes. Photographs to capture the face, top of the head, banding on the abdomen, and color pattern on the thorax and hind leg for each bee netted are required. Additionally, each photograph is linked to the associated specimen using specimen numbers corresponding to the location of collection captured using a Global Positioning System (GPS) unit. All photographs of captured bees are submitted to the CDFW-approved taxonomist, Jaymee Marty from Marty Ecological Consulting, and archived for long-term storage.

Concurrently with foraging surveys, areas with potential nesting resources, identified during the habitat assessment, were systematically walked to try and detect nest activity (i.e., high levels of bee movements from a given location). Other pollinators and/or other bee use was also noted when encountered during the surveys.

3.0 Results

3.1 Habitat Assessment

One Crotch's bumble bee individual was reported in 2019, north of the San Diego River, within 0.25 mile of the project site in the California Natural Diversity Database (CDFW 2024). The project area is an urban park with several historic buildings and monuments. The majority of the habitat assessment area consists of developed land or areas with landscaping or non-native/ornamental vegetation. The following five vegetation communities/land cover types were mapped within the habitat assessment area: eucalyptus woodland, non-native woodland, disturbed land, ornamental plantings, and urban/developed. The urban/developed lands, comprising a museum building, roads, and parking lots, were excluded from survey based on a lack of available nectar, nesting, or overwintering resources. The project area is maintained as a public park with areas of open manicured lawns, ornamental landscaping along trails and roads, and eucalyptus woodlands with little flowering plants in the understory.

The observed nectar cover for the whole Crotch's bumble bee survey area ranged from 1-5 percent cover within the open lawns and eucalyptus woodland, to 26-50 percent cover along planted slopes adjacent to the lawns and along trails, to greater than 50 percent within the planted areas along the main access road. The 1-5 percent cover category supported scattered herbaceous weeds, such as clover (*Trifolium* sp.) and flowering trees like magnolia (*Magnolia* sp.). The 26-50 percent cover category predominately supported landscaped ornamentals such as Pride of Madeira (*Echium candicans*), lantana (*Lantana* sp.), and plumbago (*Plumbago auriculata*). The >50 percent cover category supported denser landscaping including coastal wattle (*Acacia cyclops*), crystalline iceplant (*Mesembryanthemum crystallinum*), garland (*Glebionis coronaria* [= *Chrysanthemum coronarium*]), lantana, and bottlebrush (*Callistemon* sp.). Representative photographs of the survey area are in Attachment 1.

Potential nesting resources for Crotch's bumble bee, such as old mammal burrows and bare ground were observed throughout the survey area. Overwintering resources are not currently well documented or defined (CDFW 2023). However, based on the information available, the survey area supports insulating leaf litter under areas of moderate tree and shrub cover that could potentially support overwintering of future queens (gynes).

3.2 Focused Surveys

A total of five bees were captured during two of the focused surveys. Table 2 provides a summary of the bumble bee identifications. Figure 4 provides a map showing the survey area and locations of where bees were captured. No bumble bee mortalities occurred during the surveys. All bees were processed in the vicinity of their capture or in a similar habitat and released in the shade and observed until they flew away.

Table 2 Results of the 2024 Crotch's Bumble Bee Focused Surveys				
Survey #	Specimen Identification	Collection Date	Collection Method	Nectar Source/ Habitat
1	yellow-faced bumble bee (<i>Bombus vosnesenskii</i>), female	6/20/2024	Hand Net	Coastal wattle (<i>Acacia cyclops</i>)
	yellow-faced bumble bee, male			Pride of Madeira (<i>Echium candicans</i>)
2	No bees collected	7/9/2024		
3	yellow-faced bumble bee, female	7/23/2024	Hand Net	Coastal wattle (<i>Acacia cyclops</i>)
	yellow-faced bumble bee, female			Lantana (<i>Lantana</i> sp.)
	yellow-faced bumble bee, male			Lantana (<i>Lantana</i> sp.)

No Crotch's bumble bees were detected during the course of the three surveys. Three yellow-faced bumble bees (*Bombus vosnesenskii*) were captured within the survey area and two additional yellow-faced bumble bees were detected just outside of the survey area on a patch of lantana that was still flowering during the third survey. All identifications were confirmed by a CDFW approved taxonomist, Jaymee Marty (Attachment 2). Representative photographs and a description of diagnostic characteristics of the identified bumble bees are shown in Attachment 2. Honey bees (*Apis mellifera*) and various other bee and wasp species were prevalent on nectar resources. One honey bee hive was observed in the ground below a plumbago (*Plumbago auriculata*) shrub.

If you have any questions concerning the contents of this post-survey letter, please contact me at (619) 308-9333, extension 113, or by e-mail at wloeffler@reconenvironmental.com.

Sincerely,



Wendy Loeffler
 Environmental Program Manager/Senior Biologist

WEL:jg

Attachments

- cc: Hillary Sardiñas, California Department of Fish and Wildlife
- Kyle Rice, California Department of Fish and Wildlife
- Hans Sin, California Department of Fish and Wildlife
- Larry Thornburgh, Nasland Engineering

References Cited

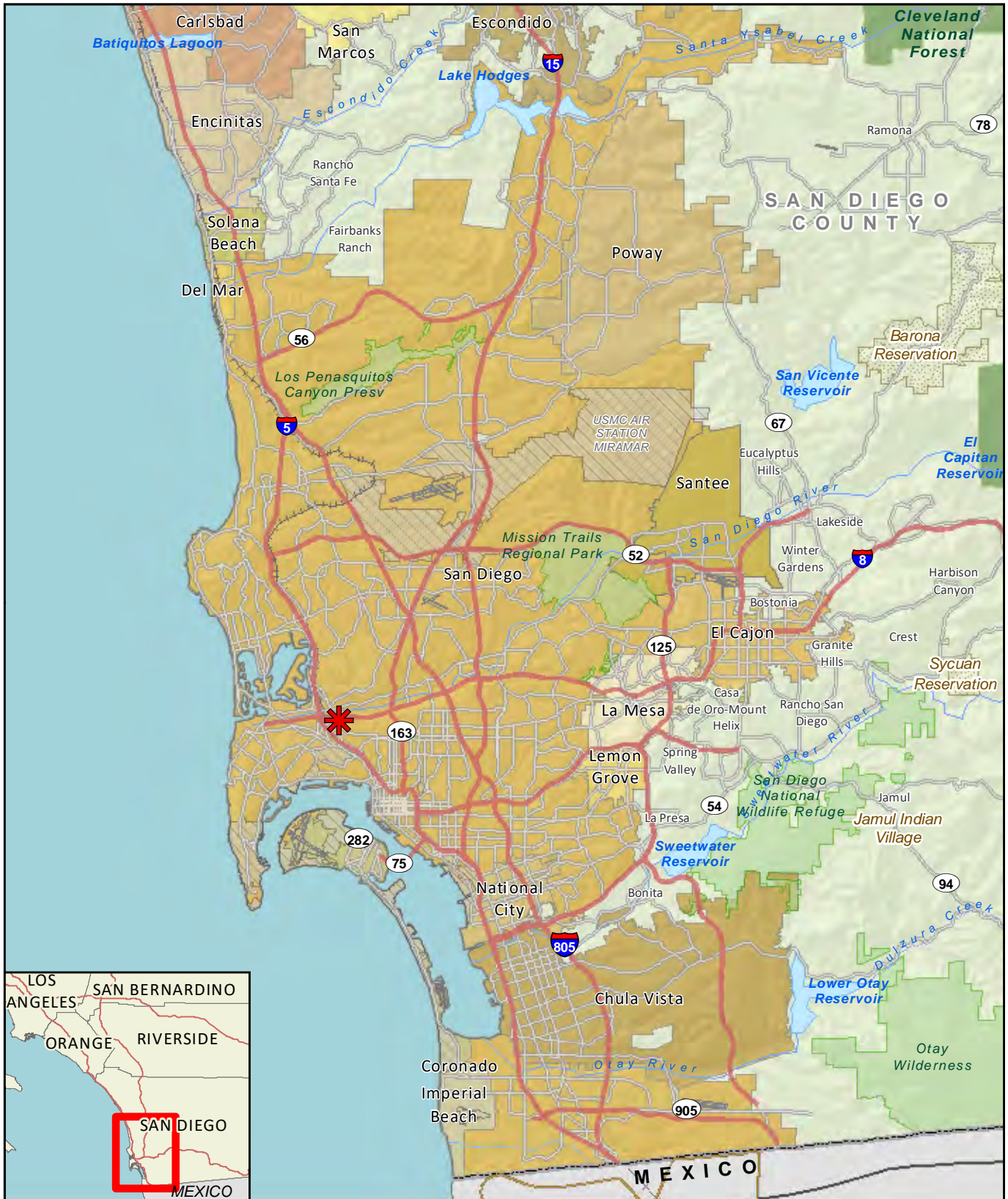
California Department of Fish and Wildlife (CDFW)
 2023 Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. June 6.
 2024 California Natural Diversity Database, a Natural Heritage Program. Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. Accessed June 6.

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Mr. Justin Garcia
Page 5
October 7, 2025

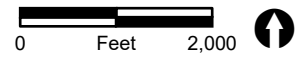
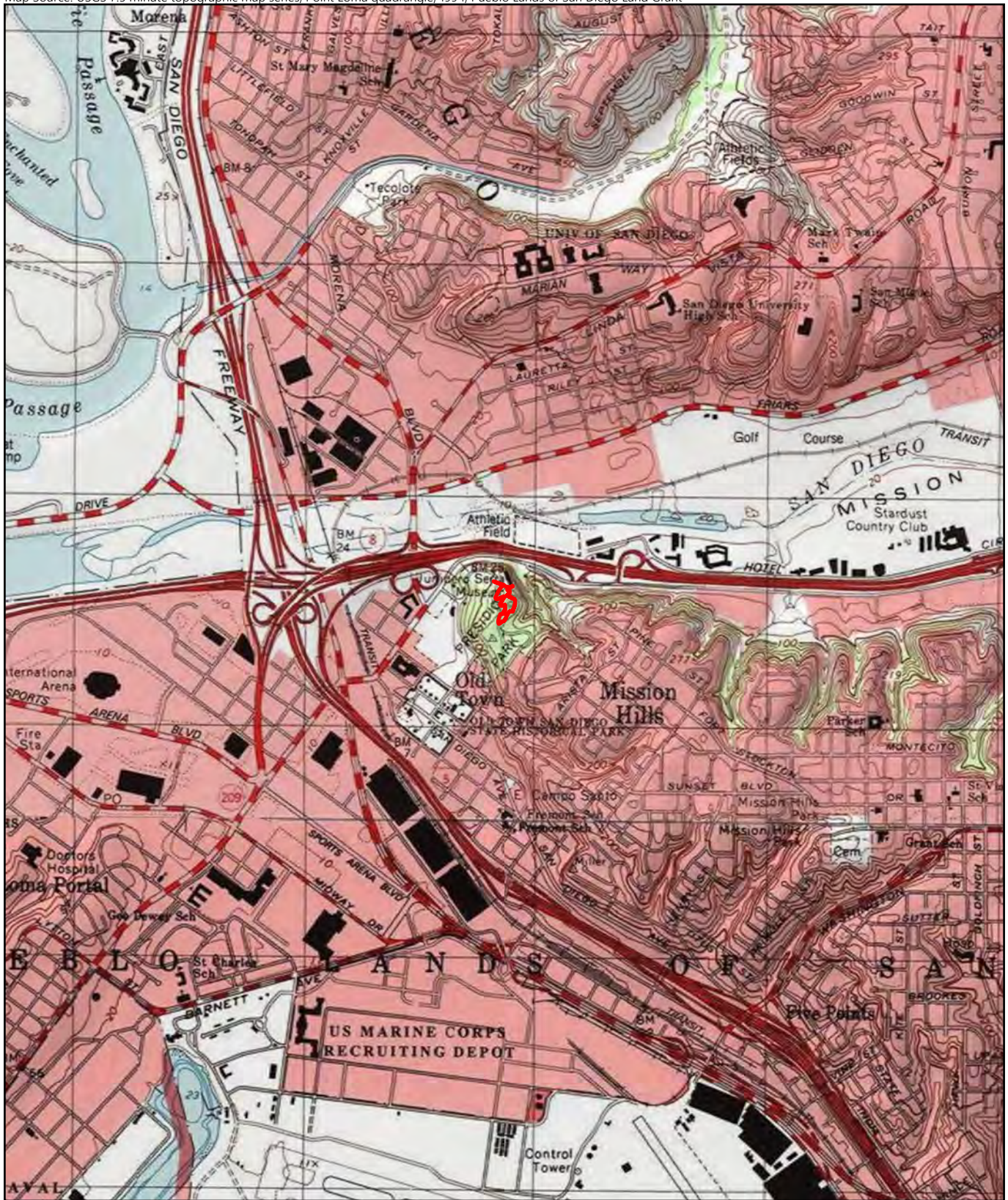
U.S. Geological Survey

- 1994 Point Loma, California 7.5-minute topographical map. Pueblo Lands of San Diego Land Grant.
- 1996 La Jolla, California 7.5-minute topographical map. Pueblo Lands of San Diego Land Grant.

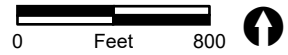
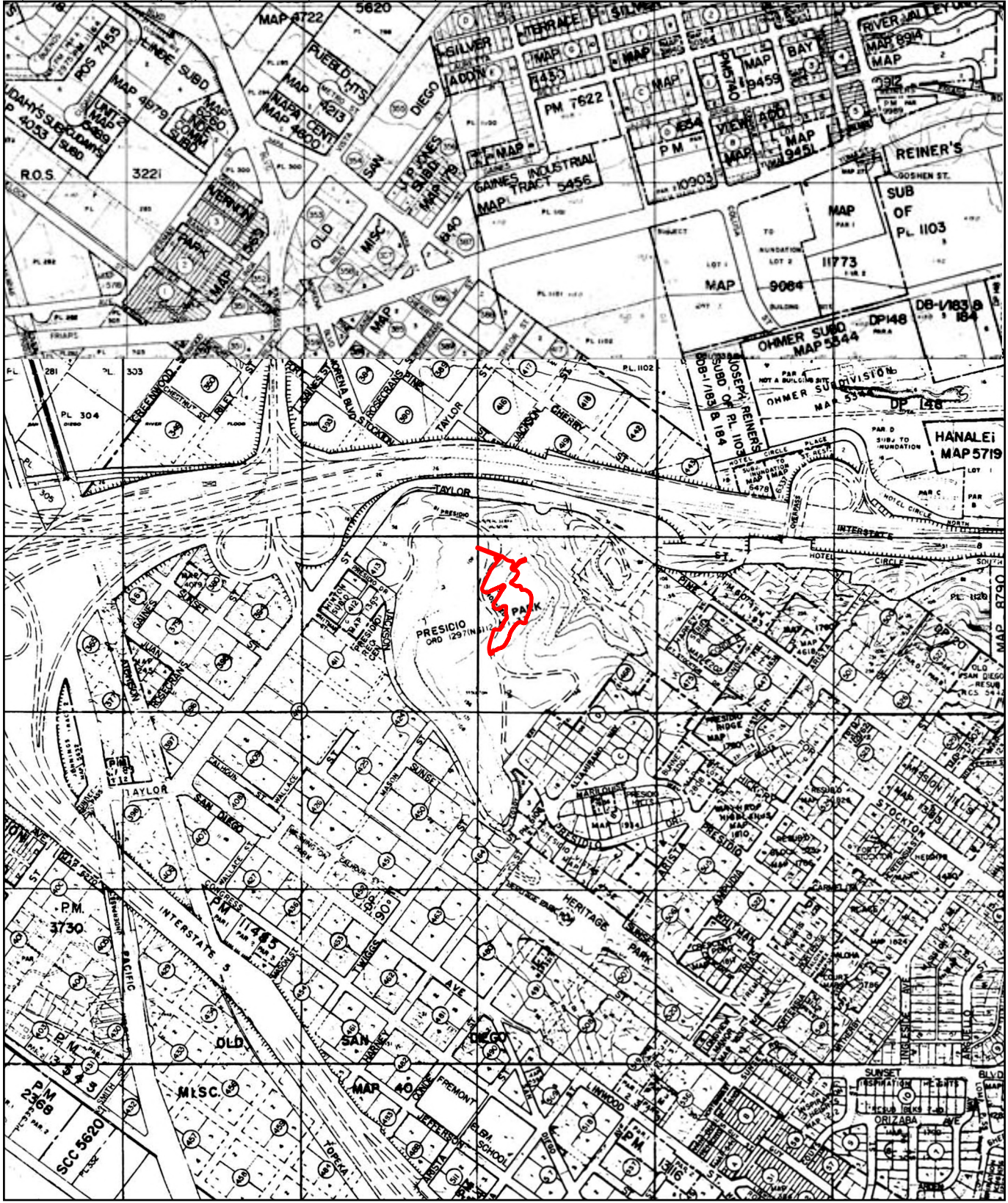


 Project Location

FIGURE 1
Regional Location



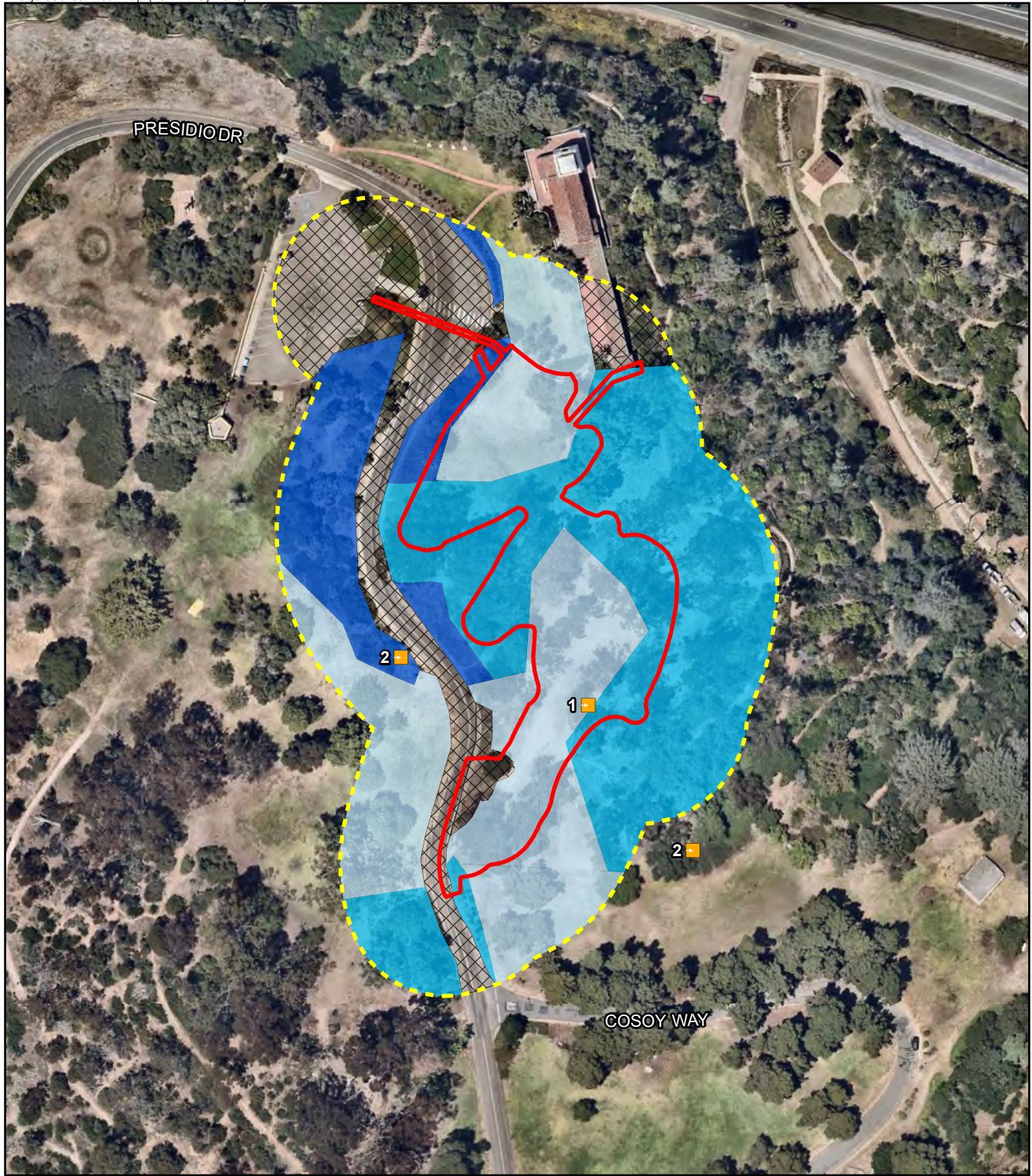
 Project Boundary










 Project Boundary

FIGURE 3
Project Location on City 800' Map





-  Project Boundary
-  Crotch's Bumble Bee Habitat Assessment Area
-  Yellow-faced Bumble Bee (*Bombus vosnesenskii*)

- Percent Nectar Source Cover**
-  Developed-Excluded from Survey
 -  1-5%
 -  26-50%
 -  >50%

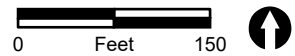


FIGURE 4
Habitat Assessment And Survey Results

ATTACHMENTS

ATTACHMENT 1

Representative Photographs of the Survey Area



PHOTOGRAPH 1
View of Landscaping on Slopes Along Main Access Road



PHOTOGRAPH 2
Example of Lawn and Ornamental Trees and Plants Throughout Park



PHOTOGRAPH 3
Lawn and Landscaping Near Museum



PHOTOGRAPH 4
Mix of Eucalyptus, Landscaping, and Native Plants

ATTACHMENT 2

Bumble Bee Identification for the Junípero Serra Museum
Americans with Disability Act Improvement Project

MARTY ECOLOGICAL CONSULTING, INC.

8925 Lanier Way
Sacramento, CA 95826

TECHNICAL MEMO

To: Anna Leavitt
Senior Biologist
RECON Environmental, Inc.
3111 Camino del Rio North, Suite 600, Ste 220
San Diego, CA 92108

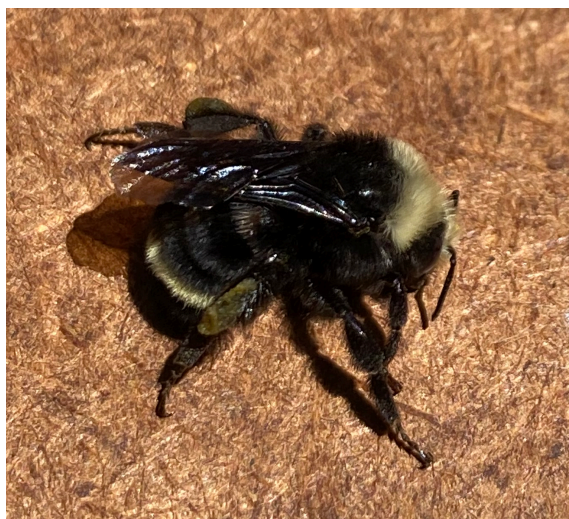
Date: 9/18/2024


From: Jaymee Marty


Subject: Bumble Bee Identification for Junipero Serra Museum ADA Trail Project (Project # 9087.1)


This memorandum presents the results of my identification of five bumble bee specimens shown in photographs sent to me on 9 August 2024 by Wendy Loeffler, Senior Biologist, RECON Environmental, Inc. Photos were taken by RECON biologists under an MOU issued to Wendy Loeffler per Scientific Collecting Permit S-182980003-19036-001.


I examined each photograph and made an identification following Williams et al. (2014), taking into consideration the date the photo was taken and the approximate location where the bee was seen. All photos were taken of bumble bees actively foraging on flowers at a site in Presidio Park, San Diego, California (Coordinates: 32.758, -117.193).

Specimen 1	Image #: RECON9087.1_062024_WEL_a7 (of 11 images) image cropped for detail
Date: 20 June 2024	ID: yellow-faced bumble bee (<i>Bombus vosnesenskii</i>) female.
	Based on the set of photos provided and the location, this bee is a yellow-faced bumble bee. Females of this species are distinguished from other similar bumble bee species by having a square cheek (malar space), yellow hair on the face and vertex, yellow hair on the scutum (front of thorax), and mostly black hair on the abdomen except for a yellow strip at the 4 th tergal segment (T4).

Specimen 2	Image # RECON9087.1_062024_WEL_b8 (of 9 photos), image cropped for detail
Date: 20 June 2024	ID: yellow-faced bumble bee (<i>Bombus vosnesenskii</i>) male.
	Based on the set of photos provided and the location, this bee is the common yellow-faced bumble bee. Males of this species are distinguished from other similar bumble bee species by having a square cheek (malar space), yellow hair on the face and vertex, yellow hair on its scutum (front of thorax), and mostly black hair on the abdomen except for a yellow strip at the 4 th tergal segment (T4) and some yellow hair at the side of T5.

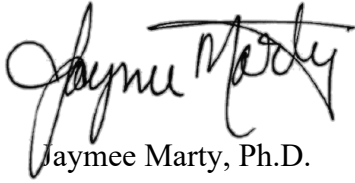
Specimen 3	Image # RECON9087.1_072324_WEL_a14 (of 15 photos), image cropped for detail
Date: 23 July 2024	ID: yellow-faced bumble bee (<i>Bombus vosnesenskii</i>) female.
	Based on the set of photos provided and the location, this bee is a yellow-faced bumble bee. Females of this species are distinguished from other similar bumble bee species by having a square cheek (malar space), yellow hair on the face and vertex, yellow hair on the scutum (front of thorax), and mostly black hair on the abdomen except for a yellow strip at the 4 th tergal segment (T4).

Specimen 4	Image # RECON9087.1_072324_WEL_b4 (of 6 photos)
Date: 23 July 2024	ID: yellow-faced bumble bee (<i>Bombus vosnesenskii</i>) female.
	Based on the set of photos provided and the location, this bee is a yellow-faced bumble bee. Females of this species are distinguished from other similar bumble bee species by having a square cheek (malar space), yellow hair on the face and vertex, yellow hair on the scutum (front of thorax), and mostly black hair on the abdomen except for a yellow strip at the 4 th tergal segment (T4).

Specimen 5	Image # RECON9087.1_072324_WEL_c3 (of 7 photos)
Date: 23 July 2024	ID: yellow-faced bumble bee (<i>Bombus vosnesenskii</i>) male.
	Based on the set of photos provided and the location, this bee is the common yellow-faced bumble bee. Males of this species are distinguished from other similar bumble bee species by having a square cheek (malar space), yellow hair on the face and vertex, yellow hair on its scutum (front of thorax), and mostly black hair on the abdomen except for a yellow strip at the 4 th tergal segment (T4) and some yellow hair at the side of T5.

Please let me know if you have any questions about any of the information in this document.

Sincerely,

A handwritten signature in black ink that reads "Jaymee Marty". The signature is written in a cursive style with a horizontal line above the name.

Jaymee Marty, Ph.D.

Ecologist

Reference

Williams, P. H., R. W. Thorp, L. L. Richardson, and S.R. Colla. 2014. *The Bumble Bees of North America: An Identification guide*. Princeton University Press, Princeton, NJ.

ATTACHMENT 4

Plant Species Observed

Attachment 4 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
GYMNOSPERMS			
CUPRESSACEAE	CYPRESS FAMILY		
<i>Juniperus chinensis</i>	chinese juniper	ORN	I
<i>Sequoia sempervirens</i>	redwood	ORN	I
<i>Taxodium mucronatum</i>	Montezuma cypress	NNW	I
GINKGOACEAE	GINKGO FAMILY		
<i>Ginkgo biloba</i>	maidenhair tree	ORN	I
PINACEAE	PINE FAMILY		
<i>Pinus canariensis</i>	Canary Island pine	ORN	I
<i>Pinus halepensis</i>	Aleppo pine	ORN	I
<i>Pinus pinea</i>	Italian stone pine	ORN	I
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	ORN, SMC-D, NNW	(I)
ANGIOSPERMS: MONOCOTS			
AGAVACEAE	AGAVE FAMILY		
<i>Agave americana</i>	American century plant	CLOW	I
<i>Yucca guatemalensis</i>	bluestem yucca	ORN	I
ARECACEAE	PALM FAMILY		
<i>Chamaerops humilis</i>	Mediterranean Fan Palm	ORN	I
<i>Phoenix canariensis</i>	Canary Island palm	ORN, EW, SMC-D, NNW	I
<i>Phoenix reclinata</i>	Senegal date palm	ORN	I
<i>Washingtonia robusta</i>	Mexican fan palm	ORN, NNW, DL	I
ASPARAGACEAE	ASPARAGUS FAMILY		
<i>Asparagus asparagoides</i>	florist's-smilax	EW	I
<i>Asparagus densiflorus</i>	Sprenger's asparagus-fern	ORN	I
ASPHODELACEAE	ASPHODEL FAMILY		
<i>Aloe</i> sp.	aloe	ORN, EW	I
COMMELINACEAE	SPIDERWORT FAMILY		
<i>Commelina communis</i>	Asiatic dayflower	ORN	I
CYPERACEAE	SEDGE FAMILY		
<i>Cyperus eragrostis</i>	tall flatsedge	ORN	N
<i>Cyperus rotundus</i>	purple nutsedge	ORN	I
IRIDACEAE	IRIS FAMILY		
<i>Dietes</i> sp.	butterfly iris	ORN	I
LILIACEAE	LILY FAMILY		
<i>Agapanthus</i> sp.	lily of the Nile	ORN	I
POACEAE	GRASS FAMILY		
<i>Bromus diandrus</i>	ripgut grass	CLOW, DL, SMC-D, NNW, NNV	I
<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome	SMC-D, NNV	I
<i>Cynodon dactylon</i>	Bermuda grass	ORN	I
<i>Digitaria</i> sp.	crab grass	ORN	I
<i>Distichlis spicata</i>	salt grass	ORN	N
<i>Festuca myuros</i>	rattail sixweeks grass	DH	I
<i>Paspalum dilatatum</i>	dallis grass	ORN	I

Attachment 4 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
<i>Pennisetum setaceum</i>	crimson fountain grass	CLOW	I
<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky blue grass	ORN	I
<i>Stipa miliacea</i> var. <i>miliacea</i>	smilo grass	EW, ORN, CLOW, NNW, DL, NNV	I
RUSCACEAE	BUTCHER'S-BROOM FAMILY		
<i>Dasyilirion</i> sp.	spoon yucca	ORN	I
AIZOACEAE	FIG-MARIGOLD FAMILY		
<i>Carpobrotus edulis</i>	freeway iceplant	SMC-D	I
<i>Malephora crocea</i>	crocea iceplant	EW	I
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		
<i>Malosma laurina</i>	laurel sumac	EW, SMC-D, NNV	N
<i>Rhus integrifolia</i>	lemonade berry	ORN, SMC-D, NNV	N
<i>Rhus ovata</i>	sugar bush	EW	N
<i>Schinus molle</i>	Peruvian pepper tree	ORN	I
<i>Schinus terebinthifolius</i>	Brazilian pepper tree	EW, NNW	I
APIACEAE	CARROT FAMILY		
<i>Foeniculum vulgare</i>	fennel	SMC-D, DL	I
APOCYNACEAE	DOGBANE FAMILY		
<i>Carissa macrocarpa</i>	natal plum	ORN, EW	I
<i>Vinca major</i>	greater periwinkle	DL, NNW	I
ARALIACEAE	GINSENG FAMILY		
<i>Hedera helix</i>	English ivy	ORN, CLOW	I
ASTERACEAE	SUNFLOWER FAMILY		
<i>Carduus pycnocephalus</i> .	Italian thistle	SMC-D	I
<i>Cirsium vulgare</i>	bull thistle	ORN	I
<i>Dimorphotheca fruticosa</i>	trailing African daisy	ORN, EW	I
<i>Encelia californica</i>	California brittlebush	SMC-D	N
<i>Erigeron bonariensis</i>	flax-leaved horseweed	ORN	I
<i>Glebionis coronaria</i>	garland, crown daisy	DH	I
<i>Isocoma menziesii</i>	coastal goldenbush	SMC-D	N
<i>Lactuca serriola</i>	prickly lettuce	ORN	I
<i>Senecio serpens</i>	blue chalksticks	EW	I
<i>Sonchus oleraceus</i> L.	common sow thistle	ORN	I
<i>Taraxacum officinale</i>	common dandelion	ORN	I
BRASSICACEAE	MUSTARD FAMILY		
<i>Sisymbrium irio</i>	London rocket	ORN, DH, SMC-D	I
CACTACEAE	CACTUS FAMILY		
<i>Cylindropuntia prolifera</i>	coast cholla	SMC-D	N
<i>Opuntia ficus-indica</i>	mission prickly-pear, Indian fig	ORN	I
<i>Opuntia littoralis</i>	coast prickly-pear, shore cactus	SMC-D	N
<i>Opuntia</i> sp.	prickly-pear	EW, NNW	I
CHENOPODIACEAE	GOOSEFOOT FAMILY		
<i>Chenopodium</i> sp.	goosefoot	ORN, EW	I
<i>Salsola tragus</i>	Russian thistle, tumbleweed	ORN	I

Attachment 4 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
CLEOMACEAE	SPIDERFLOWER FAMILY		
<i>Peritoma arborea</i>	bladderpod	SMC-D	N
CRASSULACEAE	STONECROP FAMILY		
<i>Aeonium arboreum</i>	Canary Island aeonium	SMC-D	I
<i>Crassula muscosa</i>	Princess pine	EW	I
<i>Crassula ovata</i>	jade plant	EW	I
<i>Dudleya edulis</i>	lady fingers	SMC-D	N
<i>Dudleya pulverulenta</i>	chalk lettuce, chalk dudleya	SMC-D	N
<i>Kalanchoe daigremontiana</i>	devil's backbone	EW	I
ERICACEAE	HEATH FAMILY		
<i>Xylococcus bicolor</i>	mission manzanita	SMC-D	N
EUPHORBIAEAE	SPURGE FAMILY		
<i>Euphorbia maculata.</i>	spotted spurge	ORN	I
FABACEAE	LEGUME FAMILY		
<i>Acacia</i> sp.	acacia	ORN, CLOW, NNV	I
<i>Acacia cultriformis</i>	knife acacia	ORN, NNV	I
<i>Acacia decurrens.</i>	green wattle	NNW	I
<i>Acacia paradoxa</i>	kangaroo thorn	SCM-D, NNV	I
<i>Acmispon glaber</i>	deerweed, California broom	SMC-D	N
<i>Bauhinia</i> sp.	orchid tree	ORN	I
<i>Parkinsonia aculeata.</i>	Mexican palo verde	SMC-D	I
<i>Trifolium repens</i>	white clover	ORN	I
FAGACEAE	OAK FAMILY		
<i>Quercus agrifolia</i>	coast live oak, encina	CLOW, ORN, NNW	N
<i>Quercus suber</i>	cork oak	CLOW	I
GERANIACEAE	GERANIUM FAMILY		
<i>Pelargonium</i> sp.	oakleaf garden geranium	ORN	I
LAMIACEAE	MINT FAMILY		
<i>Rosmarinus officinalis</i>	rosemary	ORN	I
<i>Salvia greggi</i>	autumn sage	ORN	I
<i>Salvia mellifera</i>	black sage	ORN	N
MAGNOLIACEAE	MAGNOLIA FAMILY		
<i>Magnolia grandiflora</i>	southern magnolia	ORN	I
MALVACEAE	MALLOW FAMILY		
<i>Brachychiton discolor</i>	lacebark tree	ORN	I
<i>Hibiscus</i> sp.	hibiscus	ORN	I
<i>Lagunaria patersonii</i>	primrose tree	ORN	I
MORACEAE	MULBERRY FAMILY		
<i>Ficus microphylla</i>	Indian laurel fig	ORN	I
<i>Ficus macrophylla</i>	Morton Bay fig	ORN	I
<i>Ficus</i> sp.	fig	ORN	I
MYRTACEAE	MYRTLE FAMILY		
<i>Eucalyptus</i> sp.	gum tree	ORN, SMC-D, NNW	I
<i>Eucalyptus citriodora</i>	lemon-scented gum	ORN	I

Attachment 4 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
<i>Eucalyptus globulus</i>	blue gum	ORN	I
<i>Melaleuca</i> sp.	bottlebrush	EW	I
NYCTAGINACEAE	FOUR O'CLOCK FAMILY		
<i>Bougainvillea</i> sp.	bougainvillea	ORN	I
OLEACEAE	OLIVE FAMILY		
<i>Olea europaea</i>	olive	ORN, EW, SMC-D, NNW	I
ONAGRACEAE	EVENING-PRIMROSE FAMILY		
<i>Oenothera elata</i> ssp. <i>hirsutissima</i> .	great marsh evening-primrose	ORN	N
PAPAVERACEAE	POPPY FAMILY		
<i>Romneya trichocalyx</i>	hairy matilija poppy	SMC-D	N
PHRYMACEAE	HOPSEED FAMILY		
<i>Buddleja</i> sp.	butterfly bush	ORN, CLOW	I
PITTOSPORACEAE	PITTOSPORUM FAMILY		
<i>Pittosporum phillyraeoides</i>	willow pittosporum	EW	I
<i>Pittosporum undulatum</i> .	Victorian box, mock orange	ORN	I
PLUMBAGINACEAE	LEADWORT FAMILY		
<i>Plumbago auriculata</i>	Cape leadwort	ORN, SMC-D, NNV, NNW	I
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Eriogonum fasciculatum</i>	California buckwheat	SMC-D	N
PORTULACACEAE	PURSLANE FAMILY		
<i>Portulaca oleracea</i>	purslane	ORN	I
RHAMNACEAE	BUCKTHORN FAMILY		
<i>Dovyalis caffra</i>	Kei apple	NNW, NNV, SMC-D	I
ROSACEAE	ROSE FAMILY		
<i>Heteromeles arbutifolia</i>	toyon, Christmas berry	ORN, EW, SMC-D, CLOW, NNW, NNV	N
<i>Prunus</i> sp.	cherry	EW, SMC-D	I
<i>Pyracantha coccinea</i> .	firethorn, scarlet firethorn	EW	I
<i>Rhaphiolepis indica</i>	Indian hawthorn	ORN, CLOW	I
<i>Rosa</i> sp.	cultivated rose	ORN	I
<i>Rubus armeniacus</i>	Himalayan blackberry	EW, SMC-D	I
SAPINDACEAE	SOAPBERRY FAMILY		
<i>Cupaniopsis anacardioides</i>	carrotwood	ORN	I
SCROPHULARIACEAE	FIGWORT FAMILY		
<i>Myoporum laetum</i>	ngaio tree	EW	I
SOLANACEAE	NIGHTSHADE FAMILY		
<i>Nicotiana glauca</i>	tree tobacco	ORN	I
<i>Solanum rantonnetii</i>	blue potatobush	ORN, EW	I
TROPAEOLACEAE	NASTURTIUM FAMILY		
<i>Tropaeolum majus</i>	garden nasturtium	CLOW	I
URTICACEAE	NETTLE FAMILY		
<i>Urtica urens</i>	dwarf nettle	ORN	I

Attachment 4 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
VERBENACEAE	VERVAIN FAMILY		
<i>Lantana camara</i>	lantana	ORN, EW	I
<p><i>Notes:</i> Scientific and common names were primarily derived from Jepson eFlora (Jepson Flora Project 2024). In instances where common names were not provided in this resource, common names were obtained from Rebman and Simpson (2014). Additional common names were obtained from the U.S. Department of Agriculture maintained database (USDA 2024), the Sunset Western Garden Book (Brenzel 2012), the Plant Finder (Missouri Botanical Garden 2024), or SelecTree (Urban Forest Ecosystems Institute at Cal Poly 2024) for ornamental/horticultural plants.</p>			
HABITATS		ORIGIN	
CLOW	= Coast live oak woodland	N	= Native to locality
DL	= Disturbed land	I	= Introduced species from outside locality
EW	= Eucalyptus woodland	(I)	= Introduced species in the survey area; however, native to other areas of San Diego County
NNW	= Non-native woodland		
NNV	= Non-native vegetation		
ORN	= Ornamental plantings		
SMC-D	= Disturbed southern mixed chaparral		

ATTACHMENT 5

Wildlife Species Observed

Attachment 5 Wildlife Species Observed			
Scientific Name	Common Name	Habitat	Evidence of Occurrence
INVERTEBRATES (Nomenclature from NatureServe 2024 and Evans 2008))			
APIDAE	HONEY BEES, BUMBLE BEES, AND ALLIES		
<i>Bombus vosnesenskii</i>	yellow-faced bumble bee	ORN	O
<i>Apis mellifera</i>	Honey bee	ORN	O
HESPERIIDAE	SKIPPERS		
<i>Hylephila phyleus muertovalle</i>	fiery skipper	ORN	O
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES		
<i>Danaus plexippus</i>	Monarch	ORN	O
PAPILIONIDAE	PARNASSIANS & SWALLOWTAILS		
<i>Papilio rutulus</i>	western tiger swallowtail	ORN	O
PIERIDAE	WHITES & SULPHURS		
N/A	unidentifiable sulphur	ORN	O
<i>Pieris rapae</i>	cabbage white (I)	ORN, DL	O
LYCAENIDAE	BLUES, COPPERS, & HAIRSTREAKS		
<i>Leptotes marina</i>	marine blue	ORN	O
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES		
<i>Nymphalis antiopa</i>	mourning cloak	DL, NNW	O
REPTILES (Nomenclature from Crother et al. 2017)			
PHRYNOSOMATIDAE	SPINY LIZARDS		
<i>Sceloporus occidentalis</i>	western fence lizard	DL	O
<i>Uta stansburiana</i>	common side-blotched lizard	ORN	O
BIRDS (Nomenclature from Chesser et al. 2023)			
PHASIANIDAE	PHEASANTS & GROUSE		
<i>Gallus gallus</i>	domesticated chicken (I)	DL	O
LARIDAE	GULLS, TERNS, & SKIMMERS		
<i>Larus sp.</i>	gull	F	O
COLUMBIDAE	PIGEONS & DOVES		
<i>Zenaidura macroura marginella</i>	mourning dove	EW	O
TROCHILIDAE	HUMMINGBIRDS		
<i>Calypte anna</i>	Anna's hummingbird	ORN, EW	O, V
PICIDAE	WOODPECKERS & SAPSUCKERS		
<i>Melanerpes formicivorus bairdi</i>	acorn woodpecker	EW, ORN	V
<i>Dryobates nuttallii</i>	Nuttall's woodpecker	ORN	O
TYRANNIDAE	TYRANT FLYCATCHERS		
<i>Sayornis nigricans semiatra</i>	black phoebe	ORN	V
ACCIPITRIDAE	HAWKS, KITES, & EAGLES		
<i>Buteo jamaicensis</i>	red-tailed hawk	F	O
CORVIDAE	CROWS, JAYS, & MAGPIES		
<i>Corvus brachyrhynchos hesperis</i>	American crow	F	O, V
TROGLODYTIDAE	WRENS		
<i>Thryomanes bewickii</i>	Bewick's wren	ORN	V
MIMIDAE	MOCKINGBIRDS & THRASHERS		
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	ORN	V, O

Attachment 5 Wildlife Species Observed			
Scientific Name	Common Name	Habitat	Evidence of Occurrence
PASSERELLIDAE	NEW WORLD PASSERINES		
<i>Melospiza [=Pipilo] crissalis</i>	California towhee	ORN	V, O
FRINGILLIDAE	FINCHES		
<i>Haemorhous [=Carpodacus] mexicanus</i>	house finch	ORN	O, V
<i>Spinus psaltria hesperophilus</i>	lesser goldfinch	ORN, NNW	V
MAMMALS (Nomenclature from Baker et al. 2014 and the American Society of Mammalogists 2024)			
SCIURIDAE	SQUIRRELS & CHIPMUNKS		
<i>Spermophilus beecheyi</i>	California ground squirrel	ORN, EW	O, V
(I) = Introduced species			
HABITATS		EVIDENCE OF OCCURRENCE	
DL	= Disturbed land	O	= Observed
EW	= Eucalyptus woodland	V	= Vocalization
F	= Flying overhead		
NNW	= Non-native woodland		
ORN	= Ornamental plantings		

ATTACHMENT 6

Sensitive Plant Species Observed or with the
Potential for Occurrence

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
LICHENS						
PHYSICIACEAE PHYSICIACE LICHEN FAMILY						
<i>Mobergia calculiformis</i> Light gray lichen	-/-	.3	-	Crustose lichen (saxicolous); coastal scrub; on rocks; elevation 35 feet. Known in San Diego County from the La Jolla and Point Loma quadrangles	Low	Light gray lichen was not observed during the biological survey. This species is known to occur within 2 miles of the survey area (CDFW 2024a). However, the location of the one CNDDDB record is vague, and more fieldwork is needed. Therefore, this species has a low potential to occur within the survey area.
GYMNOSPERMS						
<i>Pinus torreyana</i> ssp. <i>torreyana</i> Torrey pine (native pop.)	-/-	1B.2	MSCP	Evergreen tree; closed-cone coniferous forest, chaparral; sandstone; elevation 250–525 feet. San Diego County endemic. There are approximately 7,000 native trees, most in Torrey Pines State Reserve, others on private property. This species is widely planted as an ornamental in the region.	Observed	A number of individuals of this species occur throughout the survey area in ornamental plantings, non-native woodland, and disturbed southern mixed chaparral. Because all individuals within the survey area are not naturally occurring, they are not considered sensitive.

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
ANGIOSPERMS: DICOTS						
THEMIDACEAE BRODIAEA FAMILY						
<i>Bloomeria clevelandii</i> [= <i>Muilla clevelandii</i>] San Diego goldenstar	-/-	1B.1	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; clay soils; blooms May; elevation 170–1,500 feet.	Not expected to occur	Most areas with potential suitability for this species (chaparral) were accessed during the survey, and this perennial species would have been apparent if present. The chaparral areas would be unsuitable for San Diego goldenstar because the areas do not occur on clay soil. In addition, the one CNDDDB record within 2 miles of the survey area is outdated (from 1940) and no recent occurrences have been recorded (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	-/-	1B.1	MSCP	Perennial herb (bulbiferous); closed cone coniferous forest, chaparral, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay soil; blooms May-July; elevation less than 5,600 feet.	Not expected to occur	Most areas with potential suitability for this species (chaparral) were accessed during the surveys, and this perennial species likely would have been apparent if present. In addition, the chaparral areas would be unsuitable for Orcutt's brodiaea because they do not occur on clay soil. Additionally, the one CNDDDB record within 2 miles of the survey area is outdated (from 1940) and no recent occurrences have been recorded (CDFW 2024a).
ASTERACEAE SUNFLOWER FAMILY						
<i>Iva hayesiana</i> San Diego marsh-elder	-/-	2B.2	-	Perennial herb; marshes and swamps, playas, riparian areas; blooms April-October; elevation below 1,700 feet.	Not expected to occur	This species is not expected to occur within the survey area because there are no suitable habitats (wetland or riparian) to support it. This species is known to occur within 2 miles of the survey area in wetlands in Point Loma (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' Scientific Name Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
<i>Lasthenia glabrata ssp. coulteri</i> Coulter's goldfields	-/-	1B.1	-	Annual herb; coastal salt marsh, vernal pools, playas; blooms February-June; elevation less than 4,000 feet.	Not expected to occur	This species is not expected to occur within the survey area because there are no suitable habitats (salt marsh or vernal pools) to support it. This species is known to occur within 2 miles of the survey area in salt marshes along the San Diego River (CDFW 2024a).
<i>Stylocline citroleum</i> oil nest-straw	-/-	1B.1	-	Annual herb; chenopod scrub; potentially coastal sage scrub, valley and foothill grasslands; clay soils; blooms March-April; elevation less than 1,300 feet. California endemic. Known from San Diego (presumed extirpated) and Kern counties.	Not expected to occur	Oil nest-straw is not expected to occur within the survey area because the area lacks scrub and grasslands habitats. Additionally, the one CNDDDB record within 2 miles of the survey area is outdated (from 1883) and no recent occurrences have been recorded (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' Scientific Name Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i> beach goldenaster	-/-	1B.1	-	Perennial herb; chaparral (coastal), coastal dunes, coastal scrub; blooms March–December; elevation less than 4,000 feet. Known in California from 12 occurrences presumed to be extant in San Diego County. Additional populations occur in Baja California, Mexico.	Not expected to occur	Most areas with potential suitability for this species (chaparral) were accessed during the survey, and this perennial species likely would have been apparent if present. Portions of the survey area that were not accessed contained dense stands of non-native species and would not be suitable for beach goldenaster. Additionally, the one CNDDDB record within 2 miles of the survey area is outdated (from 1902) and no recent occurrences have been recorded (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
<i>Isocoma menziesii</i> var. <i>decumbens</i> decumbent goldenbush	-/-	1B.2	-	Perennial shrub; chaparral, coastal sage scrub; sandy soils, often in disturbed areas; blooms April–November; elevation less than 500 feet.	Low	Most areas with potential suitability for this species (chaparral and disturbed land) were accessed during the survey, and this perennial species likely would have been apparent if present. Portions of the survey area that were not accessed contained dense stands of non-native species and would not be suitable for decumbent goldenbush. Additionally, the two CNDDDB records within 2 miles of the survey area are outdated (from 1934). However, a recent occurrence has been recorded approximately 3.5 miles east of the site along the San Diego River (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' Scientific Name Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
<i>Leptosyne</i> [=Coreopsis] <i>maritima</i> sea-dahlia	-/-	2B.2	-	Perennial herb; coastal bluff scrub, Torrey pine forest, maritime chaparral, coastal sage scrub; blooms March–May; elevation less than 500 feet.	Low	Although the survey area contains mixed chaparral and areas dominated by Torrey pine trees, most areas are disturbed with an abundance of non-native shrubs and grasses. Frequent disturbance from pedestrian traffic occurs along the trails. A record of this species occurs within 2 miles of the survey area in undisturbed coastal sage scrub within Tecolote Canyon (CDFW 2024a).
BORAGINACEAE BORAGE FAMILY						
<i>Harpagonella palmeri</i> Palmer's grapplinghook	-/-	4.2	-	Annual herb; chaparral, coastal sage scrub, valley and foothill grasslands; clay soils; blooms March–May; elevation less than 3,200 feet. Inconspicuous and easily overlooked.	Not expected to occur	A record of this species occurs within 2 miles of the survey area in Tecolote Canyon in sandy loam soil (CDFW 2024a). Although the survey area also contains sandy loam soil, most of the ground surface within the survey area is either developed or disturbed as a result of pedestrian traffic, erosion, and/or non-native species invasion. Palmer's grapplinghook is not expected as this species generally prefers undisturbed soils.

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' Scientific Name Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
BRASSICACEAE		MUSTARD FAMILY				
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's peppergrass	-/-	4.3	-	Annual herb; coastal sage scrub, chaparral; blooms January-July; elevation less than 2,900 feet.	Not expected to occur	Two records of this species occur within 2 miles of the survey area in dune habitat on Fiesta Island (CDFW 2019a). However, this species tends to prefer volcanic substrates (Reiser 2001). This species is not expected to occur within the survey area due to the lack of suitable soils and frequent disturbance from pedestrian traffic and non-native plant species.
CACTACEAE		CACTUS FAMILY				
<i>Ferocactus viridescens</i> San Diego barrel cactus	-/-	2B.1	MSCP	Perennial stem succulent; chaparral, coastal sage scrub, valley and foothill grasslands, vernal pools; blooms May-June; elevation less than 1,500 feet.	Not expected to occur	Most portions of the survey area were accessed during the survey, and this species would have been apparent if present. Portions not accessed contain dense vegetation dominated by non-native shrubs and trees that are unsuitable for this species. Records of this species occur within 2 miles of the survey area in undisturbed areas within Tecolote Canyon (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
CHENOPODIACEAE GOOSEFOOT FAMILY						
<i>Suaeda esteroa</i> estuary seablite, estuary suaeda	-/-	1B.2	-	Perennial herb; coastal salt marshes and swamps; blooms May–January; elevation less than 20 feet.	Not expected to occur	This species is not expected to occur within the survey area because there are no suitable habitats (salt marsh and swamp) to support it. This species is known to occur within 2 miles of the survey area in wetlands of Mission Bay, Mission Valley, and Point Loma (CDFW 2024a).
CRASSULACEAE STONECROP FAMILY						
<i>Dudleya variegata</i> variegated dudleya	-/-	1B.2	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms April–June; elevation less than 1,900 feet.	Not expected to occur	Most areas with potential suitability for this species (chaparral) were accessed during the surveys, and this perennial species likely would have been apparent if present. Additionally, the one CNDDDB (CDFW 2024a) record within 2 miles of the survey area is outdated (from 1936) and no recent occurrences of this species have been recorded (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' Scientific Name Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
FABACEAE LEGUME FAMILY						
<i>Acmispon prostratus</i> [= <i>Lotus nuttallianus</i>] Nuttall's lotus	-/-	1B.1	MSCP	Annual herb; coastal dunes, coastal sage scrub; sandy substrate; blooms March- June; elevation less than 50 feet.	Low	Records of this species occur within 2 miles of the survey area in sandy areas around Mission Bay and San Diego International Airport (CDFW 2024a). Although the survey area contains sandy soil, it is subject to frequent disturbance from pedestrian traffic and from non-native plant invasion. Therefore, there is a low potential for this species to occur.
FAGACEAE OAK FAMILY						
<i>Quercus dumosa</i> Nuttall's scrub oak	-/-	1B.1	-	Perennial evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub; sandy and clay loam soils; blooms February-March; elevation less than 1,300 feet.	Low	Although records of this species occur in canyons within 2 miles of the survey area (CDFW 2024a), this large perennial species would have been apparent at the time of the survey.

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' Scientific Name Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
HYDROPHYLLACEAE WATERLEAF FAMILY						
<i>Phacelia stellaris</i> Brand's star phacelia, Brand's phacelia	-/-	1B.1	-	Annual herb; coastal scrub, coastal dunes; blooms March-June; elevation less than 1,300 feet. Known from approximately 10 occurrences in San Diego, Riverside, San Bernardino, Los Angeles (presumed extirpated), and Orange counties. Additional populations occur in Baja California, Mexico.	Not expected to occur	This species is not expected to occur within the survey area because the area lacks coastal scrub and dune habitats. This species is known to occur within 2 miles of the survey area in sandy areas along the San Diego River (CDFW 2024a). However, the CNDDDB record is outdated (from 1882) and no recent occurrences have been recorded.
LAMIACEAE MINT FAMILY						
<i>Acanthomintha ilicifolia</i> San Diego thornmint	SE/FT	1B.1	NE, MSCP	Annual herb; chaparral, coastal sage scrub, and grasslands; friable or broken clay soils; blooms April-June; elevation less than 3,200 feet.	Not expected to occur	San Diego thornmint is not expected to occur within the survey area because there are no friable or broken clay soils or native grasslands to support it. This species is known to occur within 2 miles of the survey area in clay depressions (CDFW 2024a).
<i>Pogogyne abramsii</i> San Diego mesa mint	SE/FE	1B.1	NE, VPHCP	Annual herb; vernal pools; blooms March-July; elevation 300-700 feet. San Diego County endemic.	Not expected to occur	San Diego mesa mint is not expected to occur within the survey area because there are no vernal pools to support it. This species is known to occur within 2 miles of the survey area in vernal pools (CDFW 2024a).

Attachment 6

Sensitive Plant Species Observed or with the Potential to Occur

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS: CRPR Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed/Potential to Occur	Basis for Determination of Occurrence Potential
POLYGONACEAE BUCKWHEAT FAMILY						
<i>Nemacaulis denudata</i> var. <i>denudata</i> coast woolly-heads	-/-	1B.2	-	Annual herb; coastal dunes; blooms April–September; elevation less than 330 feet.	Not expected to occur	Records of this species occur within 2 miles of the survey area in sandy areas around Mission Bay and San Diego International Airport (CDFW 2024a). The survey area lacks the coastal dune habitat required by this species.

STATE STATUS

SE = Listed as endangered by the state of California

FEDERAL STATUS

FE = Federally listed endangered

FT = Listed as threatened by the federal government

CALIFORNIA NATIVE PLANT SOCIETY (CNPS): CALIFORNIA RARE PLANT RANKS (CRPR)

1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.

2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

.1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat).

.2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat).

.3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known).

CITY OF SAN DIEGO

NE = Narrow endemic

MSCP = Multiple Species Conservation Program covered species

VPHCP = City of San Diego Vernal Pool Habitat Conservation Plan covered species.

ATTACHMENT 7

Sensitive Wildlife Species Occurring or with the
Potential to Occur

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
INVERTEBRATES (Nomenclature from NatureServe 2024 and Evans 2008)					
APIDAE HONEY BEES, BUMBLE BEES, AND ALLIES					
Crotch's bumble bee <i>Bombus crotchii</i>	SCE	Coastal areas, open grasslands, shrub habitats.	No	Moderate (foraging) Low (nesting)	This species was not detected during the 2024 Crotch's bumble bee focused surveys. Nonetheless, this species has a moderate potential to forage within the survey area due to available nectar sources and known foraging locations in the project vicinity (Mission Valley Preserve, CDFW 2024a). In addition, this species has a low potential to nest within the survey area (including within the project area).
BRANCHINECTIDAE FAIRY SHRIMP					
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE, VPHCP	Vernal pools	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of vernal pools. This species is known to occur within 2 miles of the survey area in vernal pools in Linda Vista (CDFW 2024a).
HESPERIIDAE SKIPPERS					
Wandering skipper, salt marsh skipper <i>Panoquina errans</i>	MSCP	Salt marshes. Host plant is salt grass (<i>Distichlis spicata</i>).	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of salt marshes. Although salt grass occurs within the survey area, it only occurs in ornamental plantings, which is not sufficient to support wandering skipper. This species is known to occur within 2 miles of the survey area in wetlands in Point Loma (CDFW 2024a).

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
NYMPHALIDAE BRUSH-FOOTED BUTTERFLIES					
Monarch (overwintering sites) <i>Danaus plexippus</i>	FC	Wide variety of habitats, including urban areas. Host plant is milkweed (<i>Asclepias</i> sp.)	Yes	Present	Four monarch butterflies were observed flying in eucalyptus woodland, coast live oak woodland and ornamental plantings during the biological survey. Although this species is fairly common in urban areas around San Diego, roosting colonies are rare. The lemon-scented gum trees (<i>Eucalyptus citriodora</i>) and Canary Island pine trees (<i>Pinus canariensis</i>) within the survey area site have reportedly been used as monarch winter roosting sites since the 1920s. The onsite winter population has been monitored since 1984 and ranged from a high of 500 in 1986 to a low of 5 in 2009 (Xerces 2024a; CDFW2024a).
AMPHIBIANS (Nomenclature from Crother et al. 2017)					
PELOBATIDAE SPADEFOOT TOADS					
Western spadefoot <i>Spea hammondi</i>	FPT, SSC	Vernal pools, floodplains, and alkali flats within areas of open vegetation.	No	Not expected to occur	This species is not expected to occur within the survey area due to the lack of vernal pools. This species is known to occur within 2 miles of the survey area along the San Diego River (CDFW 2024a).

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
REPTILES (Nomenclature from Crother et al. 2017)					
PHRYNOSOMATIDAE SPINY LIZARDS					
Coast horned lizard <i>Phrynosoma blainvillii</i> [= <i>P. coronatum</i> coastal population]	SSC, MSCP	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	No	Not expected	Disturbed and marginally suitable chaparral occurs within the survey area. However, the survey area and surrounding park are subject to frequent disturbances caused by human and domestic animal visitation; therefore, this species is not expected to occur as it is sensitive to disturbances. Additionally, no harvester ants were noted during the survey. This species is known to occur within 2 miles of the survey area around Misson Bay (County of San Diego 2024).
TEIIDAE WHIPTAIL LIZARDS					
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	WL, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	No	Moderate	Potentially suitable chaparral and disturbed land occur within the survey area. Although the survey area and surrounding park are subject to disturbances from frequent human and domestic animal visitation, this species may be able to persist because of its low sensitivity to disturbances. In addition, this species is known to occur within 2 miles of the survey area in Tecolote canyon (CDFW 2024a).
San Diegan tiger whiptail <i>Aspidoscelis tigris stejnegeri</i>	SSC	Coastal sage scrub, chaparral, woodlands, and streamsid es where plants are sparsely distributed.	No	Moderate	Potentially suitable chaparral and disturbed land occur within the survey area. Although the survey area and surrounding park are subject to disturbances from frequent human and domestic animal visitation, this species may be able to persist because of its low sensitivity to disturbances.

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
ANNIELLIDAE LEGLESS LIZARDS					
San Diegan [=silvery] legless lizard <i>Anniella stebbinsi</i> [=Anniella pulchra]	SSC	Herbaceous layers with loose soil in coastal scrub, chaparral, and open riparian. Prefers dunes and sandy washes near moist soil. Sometimes found in suburban gardens in Southern California.	No	Low	The survey area lacks dunes and sandy washes, which are the preferred habitats for legless lizards. However, chaparral with sandy soil occurs within the survey area, north of the project area. Therefore, there is a low potential for this species to occur within the survey area. In addition, it is known to occur within 2 miles of the survey area (CDFW 2024a).
BIRDS (Nomenclature from Chesser et al. 2023)					
ACCIPITRIDAE HAWKS, KITES, & EAGLES					
Cooper's hawk <i>Accipiter cooperii</i>	WL, MSCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	No	High	There is a high potential for Cooper's hawk to nest within the eucalyptus woodland and/or non-native woodland due to the presence of tall, mature trees.
FALCONIDAE FALCONS					
Peregrine falcon <i>Falco peregrinus anatum</i>	(State Delisted), CFP, MSCP	Open coastal areas, mud flats. Rare inland. Rare fall and winter resident, casual in late spring and early summer.	No	Low	This species does not commonly nest in San Diego but is occasionally found foraging in urban areas along the coast. Therefore, there is a low potential for this species to occur within the survey area and it is not expected to nest within the survey area. This species is known to occur within 2 miles of the survey area in Point Loma 2(CDFW 2024a).
RALLIDAE RAILS, GALLINULES, & COOTS					
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST, CFP, MSCP	Tidal marshes, grassy marshes. Resident populations extirpated.	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of marshes. Two occurrences of this species were recorded within 2 miles of the survey area around Mission Bay (CDFW 2024a).

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
Light-footed Ridgway's [=clapper] rail <i>Rallus obsoletus [=longirostris] levipes</i>	FE, SE, CFP, MSCP	Salt marshes supporting California cordgrass (<i>Spartina foliosa</i>). Localized resident.	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of salt marshes. An occurrence of this species was recorded within 2 miles of the survey area around Mission Bay (CDFW 2024a).
CHARADRIIDAE LAPWINGS & PLOVERS					
Western snowy plover (coastal population)	FT, SSC, MSCP	Sandy beaches, lagoon margins, tidal mud flats. Migrant and winter resident. Localized breeding.	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of beaches, lagoon margins, and tidal mud flats. An occurrence of this species was recorded within 2 miles of the survey area at San Diego International Airport (CDFW 2024a).
LARIDAE GULLS, TERNS, & SKIMMERS					
California least tern <i>Sternula =[Sterna] antillarum browni</i>	FE, SE, CFP, MSCP	Bays, estuaries, lagoons, shoreline. Resident. Localized breeding.	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of bays, estuaries, lagoons, and shoreline. This species is known to occur within 2 miles of the survey area around Mission Bay and San Diego International Airport (CDFW 2024a).
STRIGIDAE TYPICAL OWLS					
Burrowing owl <i>Athene cunicularia</i>	SSC, MSCP	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	No	Not expected to occur	This species is not expected to occur within the survey area due to the lack of grassland, agricultural land, and coastal dunes. One occurrence of this species was recorded within 2 miles of the survey area on Fiesta Island (CDFW 2024a).
VIREONIDAE VIREOS					
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE, SE, MSCP	Willow riparian woodlands. Summer resident.	No	Not expected to occur	This species is not expected to occur within the survey area due to the absence of willow riparian woodlands. Occurrences of this species were recorded within 2 miles of the survey area along the San Diego River and in Tecolote creek (CDFW 2024a).

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
TROGLODYTIDAE WRENS					
Coastal cactus wren <i>Campylorhynchus brunneicapillus sandiegensis</i>	SSC, MSCP	Maritime succulent scrub, coastal sage scrub with <i>Opuntia</i> thickets. Rare, localized resident.	No	Not expected to occur	This species is not expected to occur within the survey area, despite the presence of several <i>Opuntia</i> species, due to the lack of thickets. This species is known to occur within 2 miles of the survey area in Mission Hills (CDFW 2024a).
POLIOPTILIDAE GNATCATCHERS					
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT, SSC, , MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	No	Not expected to occur	This species was not expected to occur within the survey area. The chaparral within the survey area is dense and contains large shrubs and occasional trees and, therefore, would be unsuitable for this species. This species is known to occur within 2 miles of the survey area in Tecolote Canyon (CDFW 2024a).
TURDIDAE THRUSHES					
Western bluebird <i>Sialia mexicana occidentalis</i>	MSCP	Open woodlands, farmlands, orchards.	No	Moderate	This species has a moderate potential to occur within the survey area due to the presence of eucalyptus woodland, non-native woodland, and ornamental plantings. Although no tree cavities suitable for nesting were noted during the survey, suitable cavities may occur within the survey area.
PASSERELLIDAE NEW WORLD PASSERINES					
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	SE, MSCP	Salt marshes, lagoons dominated by pickleweed (<i>Salicornia</i> sp.). Resident.	No	Not expected to occur	This species is not expected to occur within the survey area due to the lack of salt marshes and lagoons. This species is known to occur within 2 miles of the survey area along the San Diego River, south of Mission Bay (CDFW 2024a).

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
ICTERIDAE BLACKBIRDS & NEW WORLD ORIOLES					
Tricolored blackbird <i>Agelaius tricolor</i>	ST, SSC, MSCP	Freshwater marshes, agricultural areas, lakeshores, parks. Localized resident.	No	Not expected to occur	This species is not expected to occur within the survey area due to the lack of freshwater marshes and agricultural areas. One occurrence of this species was recorded within 2 miles of the survey area along the San Diego River (CDFW 2024a).
MAMMALS (Nomenclature from Bradley et al. 2014 and the American Society of Mammalogists 2024)					
PHYLLOSTOMIDAE NEW WORLD LEAF-NOSED BATS					
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	SSC	Desert scrub, grassland, and oak-conifer woodlands near riparian areas. Roosts in crevices, caves, mines, and buildings. Feeds on nectar and pollen of night- blooming flowers like Agave, Increased presence in San Diego may be due to use of nectar plants landscaping (Western Bat Working Group 2017).	No	Low	Although occurrences of this species have been recorded within 2 miles of the survey area (CDFW 2024a), they are outdated (from 1984) and this species is very rare in San Diego. However, the landscaped areas within the survey area contain some night-blooming agave and cactus species which are the preferred food source (nectar and pollen) for this species.
MOLOSSIDAE FREE-TAILED BATS					
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	SSC	Roosts in crevices in vertical cliffs and quarries. Forages over a variety of habitats for flying beetles and large moths.	No	Low	Although occurrences of this species have been recorded within 2 miles of the survey area (CDFW 2024a), they are outdated (from the 1980s) and the site does not contain suitable rock crevices for roosting. However, there is a low potential for this species to roost in buildings in the vicinity of the survey area.

Attachment 7

Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
Big free-tailed bat <i>Nyctinomops macrotis</i>	SSC	Ranges from South America up into the southwestern United States. Primarily a winter migrant to San Diego County. Roosts in crevices in vertical cliffs in scrub, riparian, and forest habitats. Feeds on moths.	No	Not expected to occur	Although an occurrence of this species has been recorded within 2 miles of the survey area (CDFW 2024a), it is outdated (from 1981). Additionally, this species is very rare in San Diego and the survey area does not contain the arid, rocky terrain preferred by this species.

STATUS CODES

Federal Status

- FE = Listed as endangered by the federal government
- FPT = Federally proposed threatened
- FT = Listed as threatened by the federal government
- FC = Federal candidate for listing (taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list as endangered or threatened; development and publication of proposed rules for these taxa are anticipated)

State Status

- CFP = California fully protected species
- SE = Listed as endangered by the state of California
- ST = Listed as threatened by the state of California
- SCE = State candidate for listing as endangered
- SSC = California Department of Fish and Wildlife species of special concern
- WL = California Department of Fish and Wildlife watch list species

City of San Diego

- MSCP = City of San Diego MSCP Subarea Plan covered species
- VPHCP = City of San Diego Vernal Pool Habitat Conservation Plan covered species