Biological Assessment in Support of CEQA Compliance for the Police Station Project

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
City	City of Santa Barbara
CNDDB	California Natural Diversity Database
CRPR	California Rare Plant Rank
CWA	Clean Water Act
FESA	Federal Endangered Species Act
IPaC	Information for Planning and Conservation
LEED	Leadership in Energy and Environmental Design
MBTA	Migratory Bird Treaty Act
MM	mitigation measure
Project	Police Station Project
RWQCB	Regional Water Quality Control Board
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1 Introduction

Dudek prepared this Biological Assessment on behalf of the City of Santa Barbara (City) to identify the potential for biological resources to occur within and adjacent to the proposed Police Station Project (Project) on the City's Cota Commuter Parking Lot property. The Project involves developing a police station and associated parking structure. This report's primary intent is to support the City's California Environmental Quality Act (CEQA) reporting and review process and for the Project. The report also provides recent data and analysis that will be useful in future consultation and/or permit application review by other applicable regulatory resource agencies, including the U.S. Fish and Wildlife Service (USFWS), the U.S. Army Corps of Engineers (USACE), the Central Coast Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW).

1.1 Site Location and Land Use Designation

The Project site is located at 119 East Cota Street (Assessor's Parcel Number 031-151-018), the northwest corner of Cota Street and Santa Barbara Street, as shown in Figure 1. The site is a 1.61-acre City-owned parking lot within the Central Business District. The site is 90% paved, with landscaping interspersed throughout the site, primarily with tipu (*Tipuana tipu*) trees. The existing surface parking lot is for commuters with permits during weekdays, and for the public during evenings and weekends. The site is used as a Certified Farmers' Market location on Saturdays. Surrounding land uses in the area include commercial and residential uses along the Santa Barbara Street and Anacapa Street frontages of this block, and a pre-school and public park (Plaza de Vera Cruz) across Cota Street.

The General Plan land use designation is Commercial Industrial/Medium High Residential (15–27 dwelling units per acre). It is also in the Priority Housing Overlay (49–63 dwelling units per acre) area of the Average Unit-Size Incentive Program Map. The Project site zoning designation is Manufacturing Commercial. The Manufacturing Commercial zone is intended to accommodate a wide range of limited industrial, residential, retail service, office, and research and development uses. A "Public Facility" is an allowed use in the Manufacturing Commercial zone. The Santa Barbara City Council selected the site in September of 2019 as the preferred police station location for purposes of conducting the environmental review.

1.2 Proposed Project Description

The Project involves the removal of the existing surface parking lot and the construction of a three-story, ±70,000-square-foot new police station, a ±115,000-square-foot secure parking structure to accommodate 253 parking spaces (128 for police department vehicles and 125 for employee vehicles). There will be limited, non-secure surface public parking and bicycle parking on site off of Santa Barbara Street. Both structures will have a subterranean level below (E) finish grade. Approximately 22,000 cubic yards of grading export is anticipated to accommodate the necessary excavation.

The existing City police operations, currently located at four separate sites (215 East Figueroa Street Police Station, 222 East Anapamu Street Police Station Annex, 1200 Anacapa Street Dispatch Center, and 415 East Sola Street Animal Control), would be consolidated at the new Project site. Police operations would remain the same as presently exist at the current locations, including Investigative/Internal Operations Division, Field Operations Division, Community Support Services Division, and Common Areas (public lobby, multipurpose meeting rooms, staff break rooms, fitness room, and locker rooms). The public lobby area would be separated from the secure staff areas.

This Project site has a total of 44 trees, including 32 tipu trees, 9 coast live oak (*Quercus agrifolia*) trees, and 3 southern live oak (*Quercus virginiana*) trees. The Project would require the removal of 35 trees, including 23 tipu trees, 9 coast live oak trees, and 3 southern live oak trees. A total of 10 tipus will be preserved on site along the west and north property line. The parking lot area of the site plan contains 32 tipu, 4 coast live oak, and 2 southern live oak trees. A total of 5 coast live oak and 1 southern live oak trees are located in the planter strip between the sidewalk and parking lot wall along the Cota Street and Santa Barbara Street perimeter. The parkways along Cota Street and Santa Barbara Street contain 17 palm trees, which are not identified in the arborist report but will remain on-site. The existing MTD bus stop shelter on Cota Street would be removed and most likely relocated for the Project. The existing plaques commemorating the old Lincoln School would be incorporated into the relocation.

The site elevation increases 5 vertical feet from the corner of Cota Street and Santa Barbara Street to the northern property line. As a result, the drainage for the property is naturally southward toward Cota Street. The proposed Project has less impervious areas than the existing site, which will help greatly with detention requirements of peak flows. Primary strategies for stormwater quality measures include permeable paving with stormwater chambers underneath, as well as the possibility of stormwater chambers located in the right-of-way. Additional strategies may include bio-retention or swales on the eastern side, and bio-retention planters on the upper floors. A preliminary concept for the Storm Water Management Plan was included in the Pre-Application Review Team plan submittal and variations are being studied by the engineer.

The site preparation and construction process is estimated to take approximately 28 months, including approximately 3 months for the earthwork phase and approximately 25 months for the construction phase.

The Project site, structures, and construction process would be designed to conform to applicable City and other agency regulations and policies, including measures for minimizing environmental effects. The Project is being designed to meet Leadership in Energy and Environmental Design (LEED) Silver certification standards with the goal of being a zero-net-carbon building.

SOURCE: CIRGIS 2017

DUDEK

0 500 1,000 Feet

FIGURE 1

Project Location

Biological Assessment in Support of CEQA Compliance for the Police Station Project

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2 Regulatory Framework

This section outlines the federal, state, and local regulations pertinent to the biological resources located on the Project site. Some of the biological resources that could be affected by the Project are regulated by resource agencies, which often overlap in jurisdiction. This section identifies and discusses the various programs regulating federally and/or state-listed threatened or endangered plants and wildlife, sensitive vegetation communities, and jurisdictional aquatic/hydrological features, such as drainages, streambeds, riparian habitat, and wetlands.

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973, as amended, (16 USC 1531 et seq.) serves as the enacting legislation to list, conserve, and protect threatened and endangered species, and the ecosystems on which they depend, from extinction. In addition, for those wildlife species listed as federally endangered, FESA provides for the ability to designate critical habitat, defined as that habitat considered "essential to the conservation of the species" and that "may require special management considerations or protection." Under FESA Section 7, if a project that would potentially result in adverse impacts to threatened or endangered species includes any action that is authorized, funded, or carried out by a federal agency, that agency must consult with the USFWS to ensure that any such action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat for that species. FESA Section 9(a)(1)(B) prohibits the taking, possession, sale, or transport of any endangered fish or wildlife species. "Take" is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC 1532 [19]). With respect to any endangered species of plant, Sections 9(a)(2)(A) and 9(a)(2)(B) prohibit the possession, sale, and import or export, of any such species, and prohibits any action that would "remove and reduce to possession any such species from areas under federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law." Pursuant to FESA Section 10(a)(1)(B), the USFWS may issue a permit for the take of threatened or endangered species provided that such taking is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50, Section 10.13 of the Code of Federal Regulations. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50, Section 20 of the Code of Federal Regulations. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). In late December 2017, the Department of Interior issued an opinion that interprets the above prohibitions as only applying to direct and purposeful actions of which the intent is to kill, take, or harm migratory birds; their eggs; or their active nests. Incidental take of birds, eggs, or nests that are not the purpose of such an action, even if there are direct and foreseeable results, is not prohibited.

2.1.3 Clean Water Act – Section 404

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, the USACE has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The USACE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

2.1.4 Clean Water Act – Section 401

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The Central Coast RWQCB has authority for Section 401 compliance in the Project area. A request for certification is submitted to the regional board at the same time that an application is filed with the USACE.

2.2 State

2.2.1 California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Fish and Game Commission has the responsibility of maintaining a list of threatened and endangered species. CESA prohibits the take of state-listed threatened or endangered animals and plants unless otherwise permitted pursuant to CESA. Take under CESA is defined as any of the following: "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code, Section 86). Unlike FESA, CESA does not include harassment or harm (e.g., habitat degradation) in its definition of take. Species determined by the State of California to be candidates for listing as threatened or endangered are treated as if listed as threatened or endangered and are, therefore, protected from take. Pursuant to CESA, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species, or candidate species, could be potentially impacted by that project.

2.2.2 California Department of Fish and Wildlife Special-Status Plants

For this analysis, special-status plant species are defined as plants that are legally protected or that are otherwise considered sensitive by federal, state, or local resource conservation agencies. These species fall into one or more of the following categories:

- Listed by the federal government under FESA or the state under CESA as endangered, threatened, or rare.
- A candidate for federal or state listing as endangered or threatened.
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation.

- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California.
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats).

Taxa considered to be "rare, threatened, or endangered in California" as defined by CDFW and assigned a California Rare Plant Rank (CRPR). The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, as follows:

- CRPR 1A – Plants presumed extirpated in California and either rare or extinct elsewhere
- CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere
- CRPR 2A – Plants presumed to be extinct in California, but more common elsewhere
- CRPR 2B – Plants that are rare, threatened, or endangered in California, but more common elsewhere
- CRPR 3 – Plants about which more information is needed (a review list)
- CRPR 4 – Plants of limited distribution (a watch list)

Plants ranked as CRPR 1A, 1B, 2A, or 2B may qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that potential impacts to CRPR 1 and 2 species be evaluated in CEQA review documents. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380, but these species may be evaluated on a case-by-case basis.

2.2.3 California Department of Fish and Wildlife Species of Special Concern

The CDFW maintains a list of vertebrate animal species considered of "special concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. A Species of Special Concern is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the state or, in the case of birds, is in its primary seasonal or breeding role
- Is listed as threatened or endangered federally, but not by the state
- Meets the state definition of threatened or endangered, but has not formally been listed
- Is experiencing, or formerly experienced, serious noncyclical population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for threatened or endangered status by the state
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for threatened or endangered status by the state

Impacts to Species of Special Concern are typically evaluated and mitigated within the context of an environmental impact report or other document prepared pursuant to CEQA.

2.2.4 Fish and Game Code Section 1600 – Lake and Streambed Alteration Agreement

Under Sections 1600–1616 of the California Fish and Game Code, CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the "bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit" (Section 1601). In practice, CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

2.2.5 California Department of Fish and Wildlife – Wetlands Protection Regulations

CDFW derives its authority to oversee activities that affect wetlands from state legislation. This authority includes California Fish and Game Code Sections 1600–1616 (lake and streambed alteration agreements), CESA (protection of state-listed species and their habitats, which could include wetlands), and the Keene–Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, CDFW asserts authority over wetlands within the state through any of the following: review and comment on USACE Section 404 permits, review and comment on CEQA documents, preservation of state-listed species, or lake and streambed alteration agreements.

2.2.6 California Fish and Game Code, Section 1940 – Sensitive Natural Communities

California Fish and Game Code Section 1940 requires CDFW to develop and maintain a vegetation mapping standard for the state. More than half of the vegetation communities in the state have been mapped through the Vegetation Classification and Mapping Program.

Natural vegetation communities are evaluated by CDFW and are assigned global (G) and state (S) ranks based on rarity of and threats to these vegetation communities in California. Natural communities with ranks of S1 through S3 (S1: critically imperiled; S2: imperiled; S3: vulnerable) are considered sensitive. Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitats. For purposes of this assessment, sensitive natural communities include vegetation communities listed in CDFW's California Natural Diversity Database (CNDDB) and communities listed in the Natural Communities List with a rarity rank of S1, S2, or S3. Additionally, all vegetation associations within the alliances with ranks of S1 through S3 are considered sensitive habitats. CEQA requires that impacts to sensitive natural communities be evaluated and mitigated to the extent feasible.

2.2.7 California Fish and Game Code, Sections 3503, 3511, 3513

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

2.2.8 California Fish and Game Code, Section 4150

California Fish and Game Code Section 4150 states a mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a non-game mammal. A non-game mammal may not be taken or possessed under this code. All bat species occurring naturally in California are considered non-game mammals and are therefore prohibited from take as stated in California Fish and Game Code Section 4150.

2.2.9 Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act established the State Water Resources Control Board and each RWQCB as the principal state agencies responsible for the protection of water quality in California. As noted under the discussion of the CWA, the Central Coast RWQCB has regulatory authority over the Project area.

The Porter–Cologne Water Quality Control Act provides that "[a]ll discharges of waste into the waters of the State are privileges, not rights." Waters of the state are defined in Section 13050(e) of the Porter–Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." All dischargers are subject to regulation under the Porter–Cologne Water Quality Control Act, including both point and nonpoint source dischargers. The San Francisco Bay RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction. As noted in the discussion of the CWA, the Central Coast RWQCB is the appointed authority for Section 401 compliance in the Project area.

2.2.10 California Environmental Quality Act

CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been generally modeled after the definition in FESA and Chapter 1.5 of the California Fish and Game Code that addresses rare or endangered plants and animals. Appendix G of the CEQA Guidelines requires a lead agency to determine whether or not a project would "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service." CEQA Guidelines Section 15065 requires that a lead agency find an impact to be significant if a project would "substantially reduce the number or restrict the range of an endangered, rare, or threatened species."

2.3 Local

2.3.1 City of Santa Barbara's General Plan

The City's General Plan (City of Santa Barbara 2011) identifies goals, policies, and implementation actions to protect the City's natural resources including air quality, biology, surface and ground water resources, noise, and visual resources. Policies are set forth for the protection of these resources accordingly. The relevant General Plan policies are as follows.

Biological Resources Policies

ER11. Native and Other Trees and Landscaping. Protect and maintain native and other urban trees, and landscaped spaces, and promote the use of native or Mediterranean drought-tolerant species in landscaping to save energy and water, incorporate habitat, and provide shade.

Hydrology, Water Quality, and Flooding Policies

ER19. Creek Resources and Water Quality. Encourage development and infrastructure that is consistent with City policies and programs for comprehensive watershed planning, creeks restoration, water quality protection, open space enhancement, storm water management, and public creek and water awareness programs.

ER20. Storm Water Management Policies. The City's Storm Water Management Program's policies, standards and other requirements for low impact development to reduce storm water run-off, volumes, rates, and water pollutants are hereby incorporated into the General Plan Environmental Resources Element.

2.3.2 Urban Forest Management Plan

The City, in its Urban Forest Management Plan (City of Santa Barbara 2014), recognizes the important environmental, economic, and social benefits trees provide, including energy conservation, stormwater reduction, air quality improvement, social health, and aesthetics. City management of the urban forest involves a number of City departments, including Parks and Recreation, Public Works, Community Development, and Fire. The mission of the Parks and Recreation Department's Forestry Program is to plant and maintain City public street, park, and facility trees for the benefit of residents, and to ensure a safe and healthy community forest. The Forestry Program administers the tree removal permit application and review process in accordance with Santa Barbara Municipal Code Chapter 15.20 and Chapter 15.24. The review of tree removal application includes site visits and discussion with the Street Tree Advisory Committee and presenting to the Parks and Recreation Commission.

2.3.3 Street Tree Ordinance

Municipal Code 15.20.110 Permit Required for Planting, Maintaining, or Removing any Tree Growing Within a Street Right-of Way or Public Area.

A. **PERMIT REQUIRED.** Except for persons acting at the direction of the Director, a written permit shall be required for any person to plant, prune, trim, perform maintenance on, or remove any tree planted in a parkway strip, tree well, public area or street right-of-way.

B. **APPLICATION**. Whenever a person desires to plant, prune, trim, perform maintenance on, or remove any tree planted in a parkway strip, tree well, public area or street right-of-way, an application shall be filed with the Parks and Recreation Department on forms provided for such purpose. The application shall show clearly, by diagram or plot plan and photograph(s), the location and identity of the tree or trees sought to be planted, maintained or removed; the name and address of the applicant; and such other information as indicated on the form provided.

C. **PLANTING**. When an application proposes the planting of a tree in a parkway strip, tree well, public area or street right-of-way, the Director shall consider whether the proposed planting conforms to the Master Street Tree Plan. The Director may designate the species, kind, number, spacing, and method of planting of such trees and may require in the inclusion of root inhibiting barriers as necessary to conform to the Master Street Tree Plan. The Director may approve, conditionally approve, or deny the application. If the application does not conform to the Master Street Tree Plan, or the applicant does not agree to the Director's conditions of approval, the Director shall deny the application.

D. **MAINTENANCE**. When an application is submitted for maintenance of a tree planted in a parkway strip, tree well, public area or street right-of-way, the Director shall consider whether proposed maintenance will benefit the state of the urban forest and may improve, conditionally approve, or deny the application on the basis of that consideration in the sole discretion of the Director. The Director may require written specifications for the work proposed as part of the permit application.

E. **REMOVAL**. When an application is submitted for the removal of a tree planted in a parkway strip, tree well, public area or street right-of-way, the application shall be processed in accordance with the following procedures:

1. **Notice**. Any tree for which a removal permit has been requested must be posted with notice of the permit request by the Parks and Recreation Department for at least 10 days prior to issuing a permit for removal.

2. **Administrative Review**. The application shall first be reviewed by the Director to consider whether the removal would benefit the state of the urban forest considering the factors specified in paragraphs 3 and 4 below. If the Director finds that the removal is either: (a) beneficial to the state of the urban forest, or (b) necessary for public safety, the Director may issue the permit. If the Director finds that the removal will not benefit the state of the urban forest and is not necessary for safety, the Director may deny the application. The Director may also refer the application to the Street Tree Advisory Committee for further review consistent with this section. Except in cases where the Director finds removal is necessary for public safety, the applicant or any interested person may request review of the application by the Street Tree Advisory Committee and the Parks and Recreation Commission as provided in this section.

3. **Street Tree Advisory Committee**. If the application is referred to the Street Tree Advisory Committee by the Director or at the request of the applicant or any interested person, the application shall be presented to the Street Tree Advisory Committee at the next available meeting of the Committee. The Street Tree Advisory Committee shall consider the application and make a recommendation to the Parks and Recreation Commission to approve, conditionally approve, or deny the application. When making its recommendation, the Street Tree Advisory Committee shall consider the following factors:

   a. Whether such tree is designated as an historic or specimen tree;

   b. Whether the tree species and placement conform to the "Master Street Tree Plan";

   c. The condition and structure of the tree and the potential for proper tree growth and development of the tree canopy;

d. The number and location of adjacent trees on City property and the possibility of maintaining desirable tree density in the area through additional planting on City property; and

e. Any beneficial effects upon adjacent trees to be expected from the proposed removal.

4. **Parks and Recreation Commission**. Once the Street Tree Advisory Committee has made its recommendation, the application and the Street Tree Advisory Committee's recommendation shall be presented to the Parks and Recreation Commission at the next available meeting of the Commission. After receiving the recommendation of the Street Tree Advisory Committee and a recommendation from the Director, the Parks and Recreation Commission shall approve, conditionally approve, or deny the application. When making its decision, the Parks and Recreation Commission shall consider the following factors:

   a. Whether such tree is designated as an historic or specimen tree;

   b. Whether the tree species and placement conform to the "Master Street Tree Plan";

   c. The condition and structure of the tree and the potential for proper tree growth and development of the tree canopy;

   d. The number and location of adjacent trees on City property and the possibility of maintaining desirable tree density in the area through additional planting on City property; and

   e. Any beneficial effects upon adjacent trees to be expected from the proposed removal. (Ord. 5505, 2009; Ord. 5312, 2004; Ord. 4327, 1985; Ord. 4245, 1983)

3 Methodology

3.1 Literature Review

The location of documented sensitive vegetation communities, special-status plant species, and special-status wildlife species present in the vicinity of the Project and that have potential to occur on site were identified through a query of the CNDDB. Six U.S. Geological Survey (USGS) 7.5-minute quadrangles were selected: Carpinteria, Goleta, Hildreth Peak, Little Pine Mountain, San Marcos Pass, and Santa Barbara (CDFW 2020). Additional data sources were also referenced, including the California Native Plant Society's online Inventory of Rare and Endangered Plants (CNPS 2020), and the online database Calflora: Information about California Plants for Education, Research and Conservation (Calflora 2020). Note: six quadrangles were queried instead of the standard nine as the property is along the Pacific Ocean and there are no quadrangles to the southwest, south, or southeast of the Project. Additionally, USFWS Information for Planning and Conservation (IPaC) was queried for species and other resources such as critical habitat under the USFWS jurisdiction (USFWS 2020a).

In addition, Dudek reviewed the following resources to assess the potential for aquatic resources: USGS National Hydrography Dataset (USGS 2020) and USFWS National Wetlands Inventory (USFWS 2020b).

3.1.1 Project Information from the City of Santa Barbara

Dudek reviewed the City-provided Summary of Preliminary Environmental Review, Commuter Parking Lot Site Alternative, City of Santa Barbara Police Station Project – Comparative Evaluation of Five Alternatives (City of Santa Barbara 2019), which reviewed potential environmental impacts and associated significance levels.

3.1.2 Tree Report

Dudek reviewed the Bill Spiewak Consulting Arborist (2021) Tree Report, which documented trees present within the Project site. In May 2017, a tree survey was performed to identify tree species, diameter at breast height (measured at 54 inches aboveground), approximate height (estimated in 5-foot increments), approximate spread (estimated in 5-foot increments), health (good, fair, poor), structure (good, fair, poor), average condition (good, fair, poor), potential Project impacts, and comments.

3.2 Reconnaissance-Level Biological Survey

Dudek conducted a site visit on February 18, 2020, to perform a reconnaissance-level biological survey to assess the existing biological conditions, including vegetation community and land cover mapping, a habitat assessment for special-status plant and special-status wildlife species, and an assessment of potential aquatic resources, as shown in Table 1. The survey consisted of documenting biological resources within the Project site. During the survey, Dudek biologist Heather Moine documented plant species and wildlife species that were found to occur within the Project site.

Table 1. Summary of Reconnaissance-Level Biological Survey Personnel, and Conditions

Date	Time	Personnel	Weather Conditions
2/18/2020	1030–1052	Heather Moine	61°F to 62°F, 70–90% cloud cover, 1–2 mile per hour winds

3.3 Tree Inventory

Dudek International Society of Arboriculture Certified Arborists performed a tree inventory on February 20, 2020, as shown in Table 2, to collect updated tree measurements (diameter at breast height [inches] and approximate height [feet]) since the data in the Bill Spiewak Consulting Arborist (2021) Tree Report was collected in May 2017. During the tree inventory, additional tree measurements were recorded as need for inputs to i-Tree, including tree crown health (percent dieback), tree crown base height (feet), and approximate tree canopy spread for both north/south and west/east tree canopy cross-sections (feet).

Table 2. Summary of Tree Inventory Personnel and Conditions

Date	Time	Personnel	Weather Conditions
2/20/2020	1020–1120	Scott Eckhart* Heather Moine Ryan Munnikhuis*	67°F to 68°F, 10% cloud cover, 1–2 mile per hour winds

Note:
* International Society of Arboriculture Certified Arborist

3.4 i-Tree Carbon Storage and Sequestration

Dudek uploaded the February 2020 tree inventory parameters into i-Tree Eco to calculate the total carbon stored by each tree and annual carbon sequestration by each tree. Carbon sequestration totals reflect the amount of carbon a trees pulls in from the atmosphere in a given year. Carbon stored reflects the total amount of all carbon held in the tree. i-Tree Eco uses tree size, species, and location data to calculate the environmental services and economic values for individual trees. i-Tree is a state-of-the-art, peer-reviewed software suite from the U.S. Department of Agriculture Forest Service that provides urban and rural forestry analysis and benefits assessment tools.

The ecoSmart Landscapes online suite of tools was used to calculate the carbon storage and sequestration totals for potential placement tree species. This tool was developed in collaboration between the California Department of Forestry and Fire Protection, U.S. Department of Agriculture Forest Service, University of California–Davis, and EcoLayers. Tree carbon stored and sequestration totals were calculated by analyzing the species and growth rate over an identified growing timeframe. The results of the analysis provides a baseline of the annual increase in carbon storage and sequestration for the proposed replacement tree species. The annual increases in carbon storage and sequestration was compared to impacted carbon storage and sequestration totals to determine how many growing years are necessary to replace the current levels of carbon storage and sequestration.

3.5 Limitations

The reconnaissance-level biological survey was conducted on a habitat suitability level (i.e., potential to occur) and did not follow established guidelines or focus on a particular species. Additionally, protocol surveys or guidelines developed by responsible or trustee agency (e.g., USFWS, USACE, CDFW) were not conducted as part of this biological assessment survey. However, the Project site is located in a parking lot surrounding by urban development, so the likelihood of special-status plant and wildlife species to be present, even seasonally, is extremely low. Surveys were conducted during daylight hours under weather conditions that allowed for quality biological observations (e.g., surveys were not conducted during heavy fog or rain); however, the winter time of surveys precluded the observation of many species not active (e.g., breeding birds, herpetofauna) or evident (e.g., annual plants).

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4 Results

4.1 Vegetation Communities and Land Cover Types

The CNDDB query (CDFW 2020) returned one sensitive vegetation community that has been documented within the surrounding six quadrats of the Project (Figure 2). Southern coastal salt marsh was documented approximately 8.1 miles to the west in the Goleta Slough and approximately 8.5 miles to the east in the Carpinteria Salt Marsh. The Project site does not support salt marsh habitat.

During the site visit, the vegetation communities and land cover types were documented. The Project site is dominated by ornamental vegetation and impervious surfaces. A total of one general land cover type was mapped during the field survey: parks and ornamental plantings/developed, as shown in Table 3, Figure 3, and Appendix A. This land cover type is not identified in *A Manual of California Vegetation* (Sawyer et al. 2009) or California Natural Community List (CDFW 2019); therefore, there is no sensitivity status. Additionally, the City does not identify parks and ornamental vegetation or developed as a sensitive vegetation community.

Table 3. Summary of Vegetation Communities and Land Cover Types

Physiognomic Category	Vegetation Community/Land Cover Type	Rarity Ranking State/Local	Area (acres)
Other Habitats	Parks and Ornamental Plantings (ORN)/ Developed (DEV)	NA/NA	1.61

4.1.1 Parks and Ornamental Plantings/Developed

Parks and ornamental plantings refers to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential property/park. This habitat type typically supports myriad ornamental species. Within the Project site, the ornamental plant species include tipu and southern live oak.

Developed areas are those that are absent of vegetation and contain impervious development surfaces such as paved surfaces, facility buildings, and administrative buildings, and paved roads.

Neither parks and ornamental plantings nor developed are listed as vegetation communities under the California Natural Community List (CDFW 2019), but these land cover types were used in this report because they best describe what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community. Additionally, the City does not identify parks and ornamental vegetation or developed as a sensitive vegetation community.

Within the Project site, parks and ornamental plantings/developed occupy the entire site. This land cover occupies 1.61 acres of the Project site.

4.2 Plant Species

The CNDDB (CDFW 2020), CNPS (2020), and IPaC (USFWS 2020a) literature views resulted in 45 special-status plant species that have been documented within the surrounding six quadrats of the Project (Figure 2). Based on Dudek's habitat suitability analysis, none of the 41 special-status plant species are expected to occur based on lack of suitable vegetation and being outside of species' known elevation range. Appendix B includes a table of the 41 special-status plant species and their potential to occur.

During the February 18, 2020, reconnaissance-level biological survey, a total of 20 plant species were documented, as shown in Appendix C. In all, 2 (10%) were native and 18 (90%) were non-native. All of the species documented are common to the Santa Barbara area and none of them are special-status species.

4.3 Trees

4.3.1 Tree Inventory

In May 2017, Bill Spiewak Consulting Arborist performed a tree survey (Bill Spiewak Consulting Arborist 2021; included as Appendix D to this report) to identify trees present within the Project Site, as presented in Appendix D. On February 20, 2020, Dudek performed a tree inventory to collect updated tree measurements and additional parameter inputs needed for i-Tree. A total of 44 trees were documented, including 32 tipu, 9 coast live oak, and 3 southern live oak trees, as shown in Table 4 and Figure 3.

Table 4. Dudek Tree Inventory February 20, 2020

Tree Number	Tree Species	Diameter at Breast Height (inches)	Approximate Height (feet)	Approximate Spread Northwest/ Southeast (feet)	Approximate Spread Southwest/ Northeast (feet)	Crown Base Height (feet)	Crown Health (percent dieback)
1	Tipu (*Tipuana tipu*)	17	35	40	35	15	20
2	Tipu (*Tipuana tipu*)	13	30	30	30	15	20
3	Tipu (*Tipuana tipu*)	11	20	25	15	10	15
4	Tipu (*Tipuana tipu*)	13	30	25	30	15	20
5	Tipu (*Tipuana tipu*)	14	30	30	30	15	15
6	Tipu (*Tipuana tipu*)	18	35	25	35	15	15
7	Tipu (*Tipuana tipu*)	14	35	30	30	15	10
8	Tipu (*Tipuana tipu*)	10	20	25	20	10	15
9	Tipu (*Tipuana tipu*)	14	30	35	30	20	15
10	Tipu (*Tipuana tipu*)	14	30	30	35	15	10
11	Tipu (*Tipuana tipu*)	14	30	30	35	15	10
12	Tipu (*Tipuana tipu*)	13	30	25	30	20	15
13	Tipu (*Tipuana tipu*)	13	30	30	35	20	20
14	Tipu (*Tipuana tipu*)	13	30	25	25	15	15
15	Tipu (*Tipuana tipu*)	15	30	25	40	15	20
16	Tipu (*Tipuana tipu*)	11	30	30	25	15	20
17	Tipu (*Tipuana tipu*)	14	40	35	35	15	10

Table 4. Dudek Tree Inventory February 20, 2020

Tree Number	Tree Species	Diameter at Breast Height (inches)	Approximate Height (feet)	Approximate Spread Northwest/ Southeast (feet)	Approximate Spread Southwest/ Northeast (feet)	Crown Base Height (feet)	Crown Health (percent dieback)
18	Tipu (*Tipuana tipu*)	19	40	40	35	15	10
19	Tipu (*Tipuana tipu*)	14	40	25	30	10	5
20	Tipu (*Tipuana tipu*)	19	40	40	35	20	15
21	Tipu (*Tipuana tipu*)	10	30	25	20	20	25
22	Tipu (*Tipuana tipu*)	12	40	20	35	20	10
23	Tipu (*Tipuana tipu*)	14	40	30	35	25	20
24	Tipu (*Tipuana tipu*)	12	35	25	20	25	35
25	Tipu (*Tipuana tipu*)	19	40	40	35	25	25
26	Tipu (*Tipuana tipu*)	19	40	30	35	20	60
27	Tipu (*Tipuana tipu*)	16	40	25	30	20	10
28	Tipu (*Tipuana tipu*)	9	20	20	20	10	20
29	Tipu (*Tipuana tipu*)	15	30	25	25	15	10
30	Tipu (*Tipuana tipu*)	16	25	35	40	10	35
31	Tipu (*Tipuana tipu*)	12	25	25	20	15	15
32	Tipu (*Tipuana tipu*)	21	35	40	40	10	5
33	Coast live oak (*Quercus agrifolia*)	8	10	15	15	5	40
34	Southern live oak (*Quercus virginiana*)	4	12	8	8	5	5
35	Coast live oak (*Quercus agrifolia*)	9	12	15	15	8	80
36	Coast live oak (*Quercus agrifolia*)	13	15	20	20	8	10
37	Coast live oak (*Quercus agrifolia*)	9	15	20	15	8	30
38	Coast live oak (*Quercus agrifolia*)	7	15	15	15	6	5
39	Coast live oak (*Quercus agrifolia*)	17	20	20	25	10	60
40	Coast live oak (*Quercus agrifolia*)	3	10	8	8	5	25
41	Coast live oak (*Quercus agrifolia*)	10	15	12	15	10	15
42	Coast live oak (*Quercus agrifolia*)	10	15	15	12	8	10
43	Southern live oak (*Quercus virginiana*)	6	15	15	15	8	5
44	Southern live oak (*Quercus virginiana*)	5	15	10	12	10	5

4.3.2 i-Tree Carbon Storage and Sequestration

i-Tree Eco was used to calculate the total stored carbon stored for each tree, and the annual carbon sequestered by each tree, as provided in Table 5 and Appendix E based on the tree characteristics collected during the Dudek February 20, 2020, tree inventory. The ability of a tree to store and sequester carbon is based on the trees growth rate, health condition, size, and expected life span. The wide range of carbon stored and sequestered reflects the varying sizes and conditions of the tree inventory. The analysis is a calculation of the current levels of environmental services being provided by these trees and does not account for the lost services these trees would have provided if they were not removed.

Note that i-Tree identifies the tree species with different common names than used in this report; coast live oak = coastal live oak, southern live oak = live oak, and tipu = Pride of Bolivia.

Table 5. i-Tree Carbon Stored and Sequestered per Tree

Tree Number	Tree Species	Tree Species Name in i-Tree	Carbon (pounds)	Gross Carbon Sequestration (pounds/ year)
1	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,233.5	46.1
2	Tipu (*Tipuana tipu*)	Pride of Bolivia	647.0	31.4
3	Tipu (*Tipuana tipu*)	Pride of Bolivia	425.4	26.1
4	Tipu (*Tipuana tipu*)	Pride of Bolivia	647.0	31.4
5	Tipu (*Tipuana tipu*)	Pride of Bolivia	772.5	37.1
6	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,414.1	53.2
7	Tipu (*Tipuana tipu*)	Pride of Bolivia	781.4	39.7
8	Tipu (*Tipuana tipu*)	Pride of Bolivia	339.8	22.8
9	Tipu (*Tipuana tipu*)	Pride of Bolivia	772.5	37.1
10	Tipu (*Tipuana tipu*)	Pride of Bolivia	773.7	39.4
11	Tipu (*Tipuana tipu*)	Pride of Bolivia	773.7	39.4
12	Tipu (*Tipuana tipu*)	Pride of Bolivia	648.3	33.5
13	Tipu (*Tipuana tipu*)	Pride of Bolivia	647.0	31.4
14	Tipu (*Tipuana tipu*)	Pride of Bolivia	648.3	33.5
15	Tipu (*Tipuana tipu*)	Pride of Bolivia	908.2	38.4
16	Tipu (*Tipuana tipu*)	Pride of Bolivia	436.0	24.9
17	Tipu (*Tipuana tipu*)	Pride of Bolivia	789.1	40.0
18	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,622.2	61.3
19	Tipu (*Tipuana tipu*)	Pride of Bolivia	790.4	42.3
20	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,621.0	57.7
21	Tipu (*Tipuana tipu*)	Pride of Bolivia	347.4	20.4
22	Tipu (*Tipuana tipu*)	Pride of Bolivia	549.3	32.3
23	Tipu (*Tipuana tipu*)	Pride of Bolivia	786.6	35.3
24	Tipu (*Tipuana tipu*)	Pride of Bolivia	537.9	22.7
25	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,618.0	50.6
26	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,605.7	25.9
27	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,080.8	48.2
28	Tipu (*Tipuana tipu*)	Pride of Bolivia	264.6	18.5
29	Tipu (*Tipuana tipu*)	Pride of Bolivia	910.9	43.4
30	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,043.7	33.5

Table 5. i-Tree Carbon Stored and Sequestered per Tree

Tree Number	Tree Species	Tree Species Name in i-Tree	Carbon (pounds)	Gross Carbon Sequestration (pounds/ year)
31	Tipu (*Tipuana tipu*)	Pride of Bolivia	530.6	29.7
32	Tipu (*Tipuana tipu*)	Pride of Bolivia	2,040.9	74.2
33	Coast live oak (*Quercus agrifolia*)	Coastal live oak	249.3	15.2
34	Southern live oak (*Quercus virginiana*)	Live oak	42.2	7.4
35	Coast live oak (*Quercus agrifolia*)	Coastal live oak	329.5	5.4
36	Coast live oak (*Quercus agrifolia*)	Coastal live oak	848.4	48.6
37	Coast live oak (*Quercus agrifolia*)	Coastal live oak	337.1	21.4
38	Coast live oak (*Quercus agrifolia*)	Coastal live oak	183.6	20.4
39	Coast live oak (*Quercus agrifolia*)	Coastal live oak	1,639.7	30.7
40	Coast live oak (*Quercus agrifolia*)	Coastal live oak	23.2	4.5
41	Coast live oak (*Quercus agrifolia*)	Coastal live oak	440.9	30.8
42	Coast live oak (*Quercus agrifolia*)	Coastal live oak	441.9	32.8
43	Southern live oak (*Quercus virginiana*)	Live oak	110.2	13.5
44	Southern live oak (*Quercus virginiana*)	Live oak	71.6	10.4
		Total	**32,725.1**	**1,442.5**

4.4 Wildlife Species

The CNDDB (CDFW 2020) and IPaC (USFWS 2020a) literature views resulted in 54 special-status wildlife species that have been documented within the surrounding six quadrats of the Project (Figure 2). Based on Dudek's habitat suitability analysis, none of the 52 special-status wildlife species are expected to occur based on lack of suitable habitat. Appendix F includes a table of the 52 special-status wildlife species and their potential to occur.

During the February 18, 2020, reconnaissance-level biological survey, a total of two wildlife species were documented: American crow (*Corvus brachyrhynchos*) and yellow-rumped warbler (*Setophaga coronata*). Both are common to the Santa Barbara area and neither is a special-status species.

4.5 Critical Habitat

A query of the IPaC (USFWS 2020a) indicated that there is no critical habitat within the Project site (Figure 2).

4.6 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for dispersal or migration of animals and dispersal of plants (e.g., via wildlife vectors). Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, which helps maintain genetic diversity.

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. Although individual animals may not move through a habitat linkage, the linkage is a potential route for gene flow and long-term dispersal. Habitat linkages may serve both as habitat and avenues of gene flow for small animals such as reptiles, amphibians, and rodents. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as stepping stones for dispersal and movement (especially for birds and flying insects). Wildlife corridors and habitat linkages provide avenues for dispersal or migration of animals that also contribute to population viability in several ways, including (1) ensuring continual exchange of genes between populations to aid in maintaining genetic diversity, (2) providing habitat for some species, (3) providing access to adjacent habitat areas representing additional territory for foraging and mating, (4) allowing for a greater carrying capacity, and (5) providing routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes.

The Project site is situated in highly urbanized downtown Santa Barbara and does not contribute to the existence of a wildlife corridor for several reasons. Specifically, the Project site is currently developed with a parking lot dominated by impervious surfaces and surrounded by commercial and residential buildings. Any wildlife moving through the Project site would either be avian species or very small mammals or reptiles. Larger wildlife species seeking to pass through the region are likely traveling along riparian habitats of Mission Creek (approximately 0.3 miles southwest), Laguna Channel (approximately 0.4 miles southeast), and Sycamore Creek (approximately 1.2 miles east). However, these linear riparian habitats are surrounded by residential developments and commercial uses and daylight intermittently (Mission Creek), relatively short in length (0.4 miles Laguna Channel), or a relatively far distance from the Project site (1.2 miles Sycamore Creek). Lastly, the Project site lacks streams, canyons, or similar topography that are commonly used by larger wildlife and would facilitate wildlife movement. With all of this taken into consideration, the Project site does not contribute to or facilitate wildlife movements in the region.

4.7 Aquatic Resources

A query of USFWS National Wetlands Inventory (USFWS 2020b) and USGS National Hydrography Dataset (USGS 2020) databases did not result in aquatic features within the Project site. The nearest aquatic features are Mission Creek (approximately 0.3 miles southwest), Laguna Channel (approximately 0.4 miles southeast), and Sycamore Creek (approximately 1.2 miles east).

During the February 18, 2020, reconnaissance-level biological survey, no aquatic resources were observed. However, there are two storm drain inlets within the parking lot near the corner of Cota Street and Santa Barbara Street.

*Some special-status plant and animal species were documented in the vicinity of the City of Santa Barbara (exact location unknown; CDFW 2020) which are explained in the Biological Assessment Report.

Project Boundary

CNDDB 9-Quad Search
- Plant
- Animal
- Vegetation Community
- Sensitive Ecological Area

USFWS Critical Habitat
- Tidewater Goby
- Least Bell's Vireo
- CA Red-Legged Frog
- Western Snowy Plover
- SW Willow Flycatcher
- California Condor
- Ven. Marsh Milkvetch
- Arroyo Toad

USGS NHD Flowlines
- Stream/River
- Artificial Path
- Canal/Ditch
- Coastline
- Connector
- Pipeline

USFWS NWI
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Forested/Shrub Riparian

SOURCE: CNDDB, USFWS, USGS

DUDEK

0 5,000 10,000 Feet

FIGURE 2

Literature Review Results

Biological Assessment in Support of CEQA Compliance for the Police Station Project

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SOURCE: Bill Spiewak Consulting Arborist 2020

DUDEK 0 15 30 Feet

FIGURE 3

Biological Resources

Biological Assessment in Support of CEQA Compliance for the Police Station Project

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5 Conclusions and Recommendations

5.1 Vegetation Communities and Land Cover Types

No sensitive vegetation communities are present within the Project site; therefore, the Project would have no impacts to sensitive vegetation communities.

5.2 Plant Species

No special-status plant species are expected to occur within the Project site; therefore, the Project would have no impacts to special-status plant species.

5.3 Urban Trees

The Project would remove a total of 35 urban trees from Cota Lot, which is a commuter parking lot owned and managed by the City. The trees include 23 tipu, 9 coast live oak, and 3 southern live oak trees, as shown in Table 6. The City's Urban Forest Management Plant (City of Santa Barbara 2014) and Santa Barbara Municipal Code Chapter 15.20, Tree Planting and Maintenance, address City-owned trees in parks and parkways (street trees) and other developed City parcels and include "the Park and Recreation Director's authority and responsibility related to trees, permitting requirements, and the process for review of requests for significant pruning of City-owned trees." Under Section 15.20.110, "a permit shall be required for any person to plant, prune, trim, perform maintenance on, or remove any tree planted in a parkway strip, tree well, public area or street right-of-way." A public area is defined as parks, playgrounds, areas around public buildings and all other areas under the supervision and maintenance of the City, not including any street right-of-way. Since the Cota Lot is under the supervision and maintenance of the City, a permit is required through the City's Park and Recreation Department prior to any tree-removing activities, or the City's Public Works Department could face penalties under the Resolution 09-096 "fine schedule."

Table 6. Carbon Storage and Sequestration of Trees Planned for Removal

Tree Number	Tree Species	Tree Species Name in i-Tree	Carbon Storage (pounds)	Gross Carbon Sequestration (pounds/ year)
1	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,233.5	46.1
2	Tipu (*Tipuana tipu*)	Pride of Bolivia	647.0	31.4
3	Tipu (*Tipuana tipu*)	Pride of Bolivia	425.4	26.1
4	Tipu (*Tipuana tipu*)	Pride of Bolivia	647.0	31.4
5	Tipu (*Tipuana tipu*)	Pride of Bolivia	772.5	37.1
6	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,414.1	53.2
7	Tipu (*Tipuana tipu*)	Pride of Bolivia	781.4	39.7
8	Tipu (*Tipuana tipu*)	Pride of Bolivia	339.8	22.8
9	Tipu (*Tipuana tipu*)	Pride of Bolivia	772.5	37.1
10	Tipu (*Tipuana tipu*)	Pride of Bolivia	773.7	39.4
11	Tipu (*Tipuana tipu*)	Pride of Bolivia	773.7	39.4
12	Tipu (*Tipuana tipu*)	Pride of Bolivia	648.3	33.5

Table 6. Carbon Storage and Sequestration of Trees Planned for Removal

Tree Number	Tree Species	Tree Species Name in i-Tree	Carbon Storage (pounds)	Gross Carbon Sequestration (pounds/ year)
13	Tipu (*Tipuana tipu*)	Pride of Bolivia	647.0	31.4
14	Tipu (*Tipuana tipu*)	Pride of Bolivia	648.3	33.5
15	Tipu (*Tipuana tipu*)	Pride of Bolivia	908.2	38.4
16	Tipu (*Tipuana tipu*)	Pride of Bolivia	436.0	24.9
17	Tipu (*Tipuana tipu*)	Pride of Bolivia	789.1	40.0
18	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,622.2	61.3
21	Tipu (*Tipuana tipu*)	Pride of Bolivia	347.4	20.4
24	Tipu (*Tipuana tipu*)	Pride of Bolivia	537.9	22.7
28	Tipu (*Tipuana tipu*)	Pride of Bolivia	264.6	18.5
29	Tipu (*Tipuana tipu*)	Pride of Bolivia	910.9	43.4
30	Tipu (*Tipuana tipu*)	Pride of Bolivia	1,043.7	33.5
31	Tipu (*Tipuana tipu*)	Pride of Bolivia	530.6	29.7
32	Tipu (*Tipuana tipu*)	Pride of Bolivia	2,040.9	74.2
33	Coast live oak (*Quercus agrifolia*)	Coastal live oak	249.3	15.2
34	Southern live oak (*Quercus virginiana*)	Live oak	42.2	7.4
35	Coast live oak (*Quercus agrifolia*)	Coastal live oak	329.5	5.4
36	Coast live oak (*Quercus agrifolia*)	Coastal live oak	848.4	48.6
37	Coast live oak (*Quercus agrifolia*)	Coastal live oak	337.1	21.4
38	Coast live oak (*Quercus agrifolia*)	Coastal live oak	183.6	20.4
39	Coast live oak (*Quercus agrifolia*)	Coastal live oak	1,639.7	30.7
40	Coast live oak (*Quercus agrifolia*)	Coastal live oak	23.2	4.5
41	Coast live oak (*Quercus agrifolia*)	Coastal live oak	440.9	30.8
42	Coast live oak (*Quercus agrifolia*)	Coastal live oak	441.9	32.8
43	Southern live oak (*Quercus virginiana*)	Live oak	110.2	13.5
44	Southern live oak (*Quercus virginiana*)	Live oak	71.6	10.4
		Total	**24,673.3**	**1,150.2**

As part of the City's General Plan (2011) Environmental Resources Element, two biological resources policies are relevant:

ER11. Native and Other Trees and Landscaping. Protect and maintain native and other urban trees, and landscaped spaces, and promote the use of native or Mediterranean drought-tolerant species in landscaping to save energy and water, incorporate habitat, and provide shade.

ER12. Wildlife, Coastal and Native Plant Habitat Protection and Enhancement. Protect, maintain, and to the extent reasonably possible, expand the City's remaining diverse native plant and wildlife habitats, including ocean, wetland, coastal, creek, foothill, and urban-adapted habitats.

Additionally, the purpose of the City's Climate Action Plan (2012) is to (1) reduce the rate of carbon emissions generated within Santa Barbara Community and (2) plan for adaptation of Santa Barbara to climate changes. Two particularly important objectives of the plan are presented below:

39. **Tree Plantings** – Increase carbon sequestration through the planting of additional trees, with a goal of 1,000 new trees by 2030.

41. **Tree and Landscape Protection** – Protect and Landscape Protection – Protection native and urban trees and landscape places and promote use of native or Mediterranean, drought tolerant species in landscaping to save energy and water, incorporate habitat, and provided shelter.

Members of the City Public Works, Planning, and Parks and Recreation departments and Dudek met on March 26, 2020, to discuss urban trees removal, carbon balance, and tree-replacement opportunities within the City. As described in the Section 3, Methodology, i-Tree Eco was used to calculate the total stored carbon stored for each tree and the annual carbon sequestered, and Dudek presented the findings of the i-Tree Eco model based on current tree measurements. The total carbon storage and yearly carbon sequestration of the three tree species are presented in Table 7. During the meeting, it was agreed that the replacement trees would annually sequester the same or more carbon than what is sequestered by the removal trees to be consistent with the Climate Action Plan (City of Santa Barbara 2012).

Table 7. Carbon Storage and Sequestration of Trees Planned for Removal by Species

Tree Species	Tree Species Name in i-Tree	Quantity of Trees	Carbon Storage (pounds)	Gross Carbon Sequestration (pounds/ year)
Coast live oak (*Quercus agrifolia*)	Coastal live oak	9	4,493.6	209.8
Tipu (*Tipuana tipu*)	Pride of Bolivia	23	19,955.7	909.1
Southern live oak (*Quercus virginiana*)	Live oak	3	224.0	31.3
	Totals	**35**	**24,673.3**	**1,150.2**

Impact BIO-1. The proposed removal of 35 urban trees and significant pruning of 9 urban trees, owned and managed by the City on public space, the Cota Lot, would require a permit from the City's Parks and Recreation Department. Additionally, biological policies in the Santa Barbara General Plan require the City to protect and maintain native and urban trees within the City—specifically, drought-tolerant trees. The 32 tipu, 9 coast live oak, and 3 southern live oak trees are all considered drought tolerant. The coast live oak is the only native tree of the three tree species. Therefore, due to the City's permit requirements for removal of urban trees and City's General Plan policies to protect drought-tolerant urban trees, the removal of 35 urban trees would be considered significant, without mitigation.

MM BIO-1 **Tree Replacement for Removed Trees.** To offset the impact to the urban tree species requiring removal or significant pruning, the 44 urban trees shall be replaced at a minimum of a 1:1 replacement ratio. All native coast live oak trees shall be replaced with a coast live oak tree. Recommended replacement species cited in Table 8 for tipu and southern live oak trees are selected because they are low water users, drought tolerant, and adapted to changing climate

conditions. Replacement species are selected because they are suitable for streetscape site conditions and spacing restrictions.

All tree plantings shall be subject to a 5-year monitoring effort by an International Society of Arboriculture Certified Arborist. This monitoring effort would consider growth, health, and condition of the subject trees to evaluate the replacement success. The monitoring effort may result in a recommendation of remedial actions should any of the tree plantings exhibit poor or declining health below the recommended replacement quantities, 9 coast live oak and 35 trees planted as street trees or in parking lots. In an effort to maintain minimum replacement tree quantities for native coast live oak following the 5-year monitoring period, it is recommended to install more trees than the 1:1 replacement ratio by 25%, resulting in a replacement of 12 coast live oak trees.

Each replacement tree will be placed within a City public space at the discretion of Parks and Recreation. Coast live oak replacement trees shall be planted in a native habitat restoration site as decided by the City. The replacement requirement and the approved tree replacement species are at the discretion of the City consistent with the Urban Forest Management Plan and at the discretion of the City arborist. As such, the final tree numbers associated with tree replacement and other mitigation components may vary from that presented in this tree inventory and assessment.

Timing and Reporting. Working with Parks and Recreation, Public Works shall propose a tree planting plan for the replacement of trees in a public space, including streets, parking lots, or parks. The plan shall be completed within 1 year from receiving the removal permit. The plan shall include a maintenance and monitoring programs and include annual reporting on the condition of the planted trees. Additionally, the plan shall identify the native restoration site for coast live oaks, location of coast live oak plantings, and specific measures for protection, management, and monitoring of the oaks.

Table 8. Recommended Replacement Tree Species and Quantities

Removal Tree Species	Replacement Tree Species	Quantity of Trees
Coast live oak (*Quercus agrifolia*)	Coast live oak (*Quercus agrifolia*)	12[1]
Tipu (*Tipuana tipu*)	Chinese flame tree (*Koelreuteria bipinnata)*	32
Southern live oak (*Quercus virginiana*)	Fern pine (*Afrocarpus falcatus)*	3
	Totals	**47**

Note:

[1] A total of 9 native coast live oak trees are planned for removal. In an effort to maintain minimum replacement tree quantities for coast live oak following the 5-year monitoring period, it is recommended to install more trees than the 1:1 replacement ratio by 25%, resulting in a replacement of 12 coast live oak trees.

The online tool ecoSmart Landscapes was used to understand at what year the carbon storage and carbon sequestration totals for the replacement trees would replace the current levels of the removal trees. The totals were calculated using tree growth dynamics, with each replacement tree assumed to be planted with a 1-inch diameter at breast height. Table 9 indicates that by year 12, the carbon stored in the replacement trees will begin to exceed the total of what is stored in the removal trees.

Table 9. Estimated Recovery of Stored Carbon – Years 11 to 15

Year	Carbon Stored in Replacement Trees (pounds)	Carbon Stored in Removal Trees (pounds/ year)
11	23,458.24	24,673.3
12	27,216.74	24,673.3
13	31,232.05	24,673.3
14	35,503.5	24,673.3
15	40,030.55	24,673.3

Table 10 indicates that by year 3 the replacement trees will annually sequester more carbon than what is sequestered by the removal trees.

Table 10. Estimated Recovery of Carbon Sequestration – Years 2 to 6

Year	Replacement Tree Carbon Sequestered by Year (pounds)	Removal Tree Current Carbon Sequestration (pounds/ year)
2	907.97	1,150.2
3	1,249.49	1,150.2
4	1,568.49	1,150.2
5	1,869.37	1,150.2
6	2,157.64	1,150.2

MM BIO-2 **Tree Protection.** A total of 9 tipu trees located on the Project site to be preserved in place would experience direct or indirect impacts from construction-related activities. Therefore, tree protection is recommended. Preserved trees shall be protected to the extent possible according to the tree protection measures discussed in Appendix G.

Timing and Reporting. Before the start of construction activities, all tree protection shall be in place. The City Public Works shall inspect the tree protections regularly to ensure they are maintained through the construction of the project. A monitoring report shall be completed for each inspection.

5.4 Wildlife Species

No special-status wildlife species are expected to occur within the Project site; therefore, the Project would have no impacts on special-status wildlife species. Removal of trees and vegetation associated with construction of Project have the potential to disturb nesting birds on and adjacent to the site, to the degree that the nests may be abandoned, resulting in a direct loss of an active bird nest. Bird nests with eggs or young of all migratory bird species are protected under the MBTA and the California Fish and Game Code. Loss of active nests as a result of construction or other site-preparation activities may potentially be in conflict with these regulations. Nesting birds within the Project site would primarily be American crow, Anna's hummingbird (*Calypte anna*), bushtit (*Psaltriparus minimus*), California towhee (*Melozone crissalis*), dark-eyed junco (*Junco hyemalis*), and house finch (*Haemorhous mexicanus*). Other species that may nest near the Project site in adjacent trees and vegetation include acorn

woodpecker (*Melanerpes formicivorus*), Eurasian collared-dove (*Streptopelia decaocto*), and northern mockingbird (*Mimus polyglottos*).

Active bird nests or nests with eggs or young of all native bird species are protected under the MBTA and the California Fish and Game Code. If Project tree and vegetation removal is unable to avoid the February 1 through August 30 nesting bird period, the following measures (**MM BIO-3** and **MM BIO-4**) are recommended:

MM BIO-3 **Pre-construction Nesting Bird Survey**. A pre-construction survey for nesting birds shall be conducted by a qualified biologist to determine if active nests of special-status birds, or common bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code, are present in the construction zone or within 300 feet of the construction zone. The survey shall be conducted within 1 week prior to construction or site preparation activities that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February 1 through August 30).

Timing and Reporting. Within 1 week before the start of construction activities, a City-approved biologist shall conduct the nesting bird survey. A preconstruction nesting bird report shall be completed and submitted to City Public Works within 48 hours of the survey.

MM BIO-4 **Nesting Bird Buffers and Requirements**. If active nests are found, a no-construction buffer shall be established at a minimum of 100 feet (this distance may be greater depending on the bird species and construction activity, as determined by the biologist) around the nest site where it overlaps with work areas. Tree and vegetation clearing and construction within the no-construction buffer shall be postponed or halted, at the discretion of the biologist, until the nest is vacated, juveniles have fledged, and there is no evidence of a second attempt at nesting. In addition, all active nests shall be mapped with a GPS unit and nest locations with 100-foot buffers overlain on aerial photographs to provide regular updated maps to inform the Project manager/engineer and construction crew of areas to avoid. The City-approved biologist shall also serve as a construction monitor during the breeding season to ensure that there are no inadvertent impacts to nesting birds.

Timing and Reporting. Bird nest surveys shall be conducted every 14 days following identification of a bird nest until all birds have fled the nest and the nest is deemed inactive by the City-approved biologist. A bird nest monitoring report shall be completed and submitted to City Public Works within 48 hours of each survey.

5.5 Critical Habitat

No critical habitat is present within the Project site; therefore, the Project would have no impacts to critical habitat.

5.6 Wildlife Corridors and Habitat Linkages

No wildlife corridors or habitat linkages are present within the Project site; therefore, the Project would have no impacts to wildlife corridors or habitat linkages.

5.7 Aquatic Resources

No aquatic resources were identified within the Project site; therefore, the Project would have no direct impacts to on-site aquatic resources. However, there is potential for indirect impacts to downstream aquatic resources (i.e., Laguna Channel and Mission Creek – Laguna Lagoon) through the storm drain network during Project demolition and construction. Potential indirect impacts may include runoff, sedimentation, chemical pollution, erosion, or litter. To minimize impacts to adjacent hydrological resources, a National Pollutant Discharge Elimination System Construction General Permit Stormwater Pollution Prevention Plan (SWPPP) should be prepared in coordination with the City. The following measure (**MM BIO-5**) should be implemented to reduce indirect impacts to aquatic resources to a less-than-significant level.

MM BIO-5 **Stormwater Pollution Prevention Plan (SWPPP).** It is recommended that the City retain a Qualified SWPPP Developer to prepare a SWPPP to minimize the potential for discharge of pollutants from the Project during construction and operational activities. The SWPPP shall be designed to meet the requirements of the City and Central Coast RWQCB's General Construction Permit. The SWPPP shall include both structural and non-structural best management practices, including straw wattles around storm drains, silt fencing and or other physical controls to diver flows from exposed soil, spill prevention methods, and clean housekeeping methods for storing and refueling machinery.

It is recommended that the City retain a Qualified SWPPP Practitioner to monitor the site's SWPPP measures before the start of construction and throughout the duration of construction to ensure they continue to function properly.

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Appendix A

Photograph Log

Photograph 1: Tipu (*Tipuana tipu*) trees within the Project site, facing south. February 18, 2020.

Photograph 2: Tipu and coast live oak (*Quercus agrifolia*) trees in the background of the photograph, facing northwest along Santa Barbara Street. February 18, 2020.

Photograph 3: Tipu and coast live oak trees within the background of the photograph, facing southwest along Cota Street. February 18, 2020.

Photograph 4: Tipu and Virginia live oak (*Quercus virginiana*) trees, facing northeast. February 18, 2020.

Appendix B

Plant Species Not Expected to Occur

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Amsinckia douglasiana	Douglas' fiddleneck	None/None/4.2	Cismontane woodland, Valley and foothill grassland; Monterey shale, dry/annual herb/Mar–May/0–6,395	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 8.0 miles to the west near Highway 217 in Goleta recorded in 2019 (CNPS 2020).
Anomobryum julaceum	slender silver moss	None/None/4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; damp rock and soil on outcrops, usually on roadcuts/moss/N.A./325–3,280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 11.0 miles to the northwest, west of San Marcos Pass along West Camino Cielo Road adjacent to Winchester Gun Club recorded in 2006 (CDFW 2020).
Arctostaphylos refugioensis	Refugio manzanita	None/None/1B.2	Chaparral (sandstone)/perennial evergreen shrub/Dec–Mar(May)/895–2,690	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 8.5 miles to the northwest, in the vicinity of San Pedro Canyon in the Santa Ynez Mountains recorded in 1974 (CDFW 2020).
Astragalus didymocarpus var. *milesianus*	Miles' milk-vetch	None/None/1B.2	Coastal scrub (clay)/annual herb/Mar–June/65–295	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 7.5 miles to the northwest, near the intersection with Mono Silt Dam Road and Old Adobe Road recorded in 1961 (CDFW 2020).
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/5–1,505	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 1.5 miles to the west, near Oak Park recorded in 1956 (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; alkaline/annual herb/Apr–Oct/30–655	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 2.7 miles to the west, near Cliff Drive and Hendry's Beach parking lot recorded in 1947 (CDFW 2020).
Calandrinia breweri	Brewer's calandrinia	None/None/4.2	Chaparral, Coastal scrub; sandy or loamy, disturbed sites and burns/annual herb/(Jan)Mar–June/30–4,000	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 8.0 miles to the west, near Highway 217 in Goleta entered in 2019 (CNPS 2020).
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/(Feb)Mar–June/45–2,295	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 0.2 miles north and was recorded in 1861 (CNPS 2020).
Calochortus fimbriatus	late-flowered mariposa lily	None/None/1B.3	Chaparral, Cismontane woodland, Riparian woodland; often serpentinite/perennial bulbiferous herb/June–Aug/900–6,250	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 1.7 mile to the south, along Mountain drive was recorded in 1929. The most recent occurrence was recorded in 2017 and is located approximately 8.9 miles to the southeast, along East Camino Cielo (CDFW 2020).
Calochortus palmeri var. *palmeri*	Palmer's mariposa lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; mesic/perennial bulbiferous herb/Apr–July/2,325–7,840	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 8.1 miles northwest in Escondido Canyon recorded in 1981 (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Calystegia sepium ssp. *binghamiae*	Santa Barbara morning-glory	None/None/1A	Marshes and swamps (coastal)/perennial rhizomatous herb/Aug/15–15	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 0.1 miles to the north near the foot of De La Vina Street in 1886 (CDFW 2020).
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1,570	Not expected to occur. No suitable vegetation present. The nearest occurrence is 5.0 miles to the east near Hollister Avenue and Puente Drive recorded in 1952. The most recent occurrence was recorded in 2013 and is located approximately 7.8 miles west near Goleta Beach County Park (CDFW 2020).
Cercocarpus betuloides var. *blancheae*	island mountain-mahogany	None/None/4.3	Closed-cone coniferous forest, Chaparral/perennial evergreen shrub/Feb–May/95–1,965	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 5.4 miles north east of Knapp's Castle recorded in 1888 (CNPS 2020).
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 8.6 miles to the east in Carpinteria Salt Marsh recorded in 2017 (CDFW 2020).
Chorizanthe palmeri	Palmer's spineflower	None/None/4.2	Chaparral, Cismontane woodland, Valley and foothill grassland; rocky, serpentinite/annual herb/Apr–Aug/180–3,100	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 0.7 miles to the northeast in 1876 (CNPS 2020).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	None/None/1B.2	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; often clay/annual herb/Apr–July/95–5,015	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 9.9 miles to the northeast near Jameson Lake in 1926 (CNPS 2020).
Clinopodium mimuloides	monkey-flower savory	None/None/4.2	Chaparral, North Coast coniferous forest; streambanks, mesic/perennial herb/June–Oct/1,000–5,905	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 18.0 miles northeast recorded in 1929 (CNPS 2020).
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2,425	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 0.1 miles to the north recorded in 1878 (CNPS 2020).
Cryptantha rattanii	Rattan's cryptantha	None/None/4.3	Cismontane woodland, Riparian woodland, Valley and foothill grassland/annual herb/Apr–July/800–3,000	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 6.2 miles to the northeast near Rattlesnake Canyon Park in 1962 (CNPS 2020).
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernally mesic, sometimes sandy/annual herb/(Mar)Apr–Nov(Dec)/80–3,080	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 3.5 miles to the north near the Santa Barbara Botanic Garden in 1947 (CNPS 2020).
Delphinium umbraculorum	umbrella larkspur	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/Apr–June/1,310–5,245	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				approximately 3.9 miles to the northwest in San Roque Canyon recorded in 1965. The most recent occurrence was recorded in 2018 approximately 11.4 miles north (CDFW 2020).
Fritillaria ojaiensis	Ojai fritillary	None/None/1B.2	Broadleafed upland forest (mesic), Chaparral, Cismontane woodland, Lower montane coniferous forest; rocky/perennial bulbiferous herb/Feb–May/735–3,270	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 5.3 miles to the north along Gibraltar Road recorded in 2016 (CDFW 2020).
Hordeum intercedens	vernal barley	None/None/3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools/annual herb/Mar–June/15–3,280	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 2.4 miles to the east recorded in 1955 (CNPS 2020).
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/225–2,655	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 1.8 miles to the west along Fellowship Road recorded in 1946. The most recent occurrence was recorded in 2011 and is located approximately 7.3 mils to the west along Arroyo Burro Road (CDFW 2020).
Juncus luciensis	Santa Lucia dwarf rush	None/None/1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools/annual herb/Apr–July/980–6,690	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 9.6 miles to the west along the Santa Ynez Range Summit Road recorded in 1956 (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lasthenia conjugens	Contra Costa goldfields	FE/None/1B.1	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools; mesic/annual herb/Mar–June/0–1,540	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 8.7 miles to the west in Isla Vista recorded in 1973 (CDFW 2020).
Layia heterotricha	pale-yellow layia	None/None/1B.1	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; alkaline or clay/annual herb/Mar–June/980–5,590	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 6.8 miles to the northwest near the San Marcos Pass Summit recorded in 1963 (CDFW 2020).
Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; openings/perennial bulbiferous herb/Mar–July(Aug)/95–5,905	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 3.0 miles to the north recorded in 1954 (CNPS 2020).
Lonicera subspicata var. *subspicata*	Santa Barbara honeysuckle	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub/perennial evergreen shrub/May–Aug(Dec–Feb)/30–3,280	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 1.7 miles to the north along Mountain Drive recorded in 1926. The most recent occurrence was recorded in 2014 approximately 10.6 miles east along lower Sutton Canyon, north of Carpinteria (CDFW 2020).
Malacothrix saxatilis var. *arachnoidea*	Carmel Valley malacothrix	None/None/1B.2	Chaparral (rocky), Coastal scrub/perennial rhizomatous herb/(Mar)June–Dec/80–3,395	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats approximately 11.2 miles to the north along the road to Big Pine recorded in 1982 (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Nasturtium gambelii	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (freshwater or brackish)/perennial rhizomatous herb/Apr–Oct/15–1,080	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats, near the City of Santa Barbara (exact location unknown) recorded in 1886 (CDFW 2020).
Phacelia hubbyi	Hubby's phacelia	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; gravelly, rocky, talus/annual herb/Apr–July/0–3,280	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 2.5 miles to the west near Elings Park recorded in 1962 (CNPS 2020).
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/15–985	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 0.2 miles to the north recorded in 1902 (CNPS 2020).
Pleuridium mexicanum	Mexican earthmoss	None/None/2B.1	Chaparral; Sandstone/moss/N.A./1,440–1,440	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats, approximately 10.8 miles northwest, north of Cold Springs arch bridge recorded in 2006 (CDFW 2020).
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1	Closed-cone coniferous forest, Chaparral, Coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr(May–Aug)/45–1,310	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 1.6 miles to the north along Mountain Drive recorded in 1965. The most recent occurrence was recorded in 2015 approximately 2.6 miles north along Rattlesnake Canyon Trail (CDFW 2020).
Ribes amarum var. *hoffmannii*	Hoffmann's bitter gooseberry	None/None/3	Chaparral, Riparian woodland/perennial deciduous shrub/Mar–Apr/15–3,900	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 3.0 miles to

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				the north near Parma Park recorded in 1964 (CNPS 2020).
Sanicula hoffmannii	Hoffmann's sanicle	None/None/4.3	Broadleafed upland forest, Coastal bluff scrub, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest; often serpentinite or clay/perennial herb/Mar–May/95–985	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 2.8 miles to the northwest near Mission Canyon recorded in 1984 (CNPS 2020).
Scrophularia atrata	black-flowered figwort	None/None/1B.2	Closed-cone coniferous forest, Chaparral, Coastal dunes, Coastal scrub, Riparian scrub/perennial herb/Mar–July/30–1,640	Not expected to occur. No suitable vegetation present. The nearest occurrence is approximately 1.2 miles north on the back of El Encanto recorded in 1924. The most recent occurrence was recorded in 1971 approximately 3.4 miles north in Jesusita Canyon (CDFW 2020).
Senecio astephanus	San Gabriel ragwort	None/None/4.3	Coastal bluff scrub, Chaparral; rocky slopes/perennial herb/May–July/1,310–4,920	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 4.3 miles to the northwest along Arroyo Burro Trail recorded in 1953 (CNPS 2020).
Suaeda esteroa	estuary seablite	None/None/1B.2	Marshes and swamps (coastal salt)/perennial herb/(May)July–Oct(Jan)/0–15	Not expected to occur. No suitable vegetation present. One occurrence has been recorded within the surrounding six quadrats, approximately 8.0 miles west in the Goleta Slough recorded in 1979 (CDFW 2020).

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Thermopsis macrophylla	Santa Ynez false lupine	None/SR/1B.3	Chaparral (sandy, granitic, disturbed areas)/perennial rhizomatous herb/Apr–June/1,390–4,590	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. The nearest occurrence is approximately 5.1 miles north near the junction of Camino Cielo Road and road to La Cumbre Peak recorded in 1955. The most recent occurrence was recorded in 1978 approximately 9.3 miles northwest near the San Marcos Pass summit (CDFW 2020).

Notes:
Federal
FE – Federally Endangered
SE – State Endangered
State
SR – State Rare
ST – State Threatened
California Rare Plant Ranks
1A – Plants presumed extirpated in California and either rare or extinct elsewhere
1B – Plants rare, threatened, or endangered in California and elsewhere
2A – Plants presumed extirpated in California but common elsewhere
2B – Plants rare, threatened, or endangered in California but more common elsewhere
3 – Review list: plants about which more information is needed
4 – Watch list: plants of limited distribution
Threat Ranks
0.1 – Seriously threatened in California (over 80% of occurrences threatened/ high degree and immediacy of threat)
0.2 – Moderately threatened in California (20-80% occurrences threatened/ moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened/ low degree and immediacy of threat or no current threats known)

Appendix C

Plant Species Compendium

Plant Species

Eudicots

ASTERACEAE—SUNFLOWER FAMILY

Baccharis pilularis—coyote brush
* *Erigeron bonariensis*—asthmaweed
* *Senecio vulgaris*—old-man-in-the-Spring
* *Sonchus asper*—spiny sowthistle
* *Taraxacum officinale*—common dandelion

BRASSICACEAE—MUSTARD FAMILY

* *Capsella bursa-pastoris*—shepherd's purse

FABACEAE—LEGUME FAMILY

* *Medicago polymorpha*—burclover
* *Strelitzia nicolai*—giant bird-of-paradise
* *Tipuana tipu*—tipu

FAGACEAE—OAK FAMILY

Quercus agrifolia—coast live oak
* *Quercus virginiana*—southern live oak

GERANIACEAE—GERANIUM FAMILY

* *Erodium moschatum*—musky stork's bill

MALVACEAE—MALLOW FAMILY

* *Hibiscus* sp.—hibiscus
* *Malva nicaeensis*—bull mallow
* *Malva parviflora*—cheeseweed mallow

OXALIDACEAE—OXALIS FAMILY

* *Oxalis pes-caprae*—Bermuda buttercup

POLYGONACEAE—BUCKWHEAT FAMILY

* *Polygonum aviculare*—prostrate knotweed

URTICACEAE—NETTLE FAMILY

* *Urtica urens*—dwarf nettle

Monocots

POACEAE—GRASS FAMILY

* *Poa annua*—annual bluegrass
* *Stipa miliacea* var. *miliacea*—smilograss

* signifies introduced (non-native) species

Appendix D

Bill Spiewak Tree Report

Bill Spiewak
CONSULTING ARBORIST
Registered Consulting Arborist #381 • American Society of Consulting Arborists

TREE REPORT for the Santa Barbara Police Station: Cota St. & Santa Barbara St. Parking Lot

August 15, 2021

Prepared for:
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SUMMARY

The Cearnal Collective is proposing to build a new Santa Barbara Police Station in the location of the City parking lot at the corner of Cota and Santa Barbara Streets. There are thirty two *Tipuana tipu* trees and twelve oaks of two species on this site. In May of 2017, I prepared a report on these trees for the City of Santa Barbara regarding their condition and damage they were causing to the parking lot.

This new project will require the removal of 23 tipu trees and all of the oak trees. Note that 3 oaks (Virginia Live Oaks) are non-native and most native oaks were in fair to poor condition. The tipu trees also varied in condition and most were causing damage to the curbs and parking lot, and creating trip hazards. At the time of my previous report, the city was considering a phased removal of many of the trees.

For this project, 9 tipus will be retained including 5 along the west property line and 4 along the north property line. These trees provide the adjacent properties with partial screening as they currently provide (when not in winter dormancy). The trees will also require some protection measures.

The Table of Contents on the next page illustrates the organization of this report.

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BACKGROUND/ASSIGNMENT

The Santa Barbara City Parking Lot at the corner of Cota and Santa Barbara Streets is being considered as the site for a new City Police Station. The site is currently planted with thirty two *Tipuana tipu* trees, nine California Live Oaks *(Quercus agrifolia)*, and three Virginia Live Oaks *(Quercus virginiana)*.

The project calls for the removal of all the trees with the exception of nine tipus along the north and western property line. In 2017 I prepared an assessment of theses trees due to the extensive damage to the curbs and asphalt. More recently I was asked to provide this updated report on the current status of the trees.

GENERAL OBSERVATIONS

1. The parking lot is approximately 310' long (east to west) by 230' wide (north to south) and currently has entrances/exits on Santa Barbara and on Cota streets. There is also a walk-in entrance at the corner of Santa Barbara and Cota Streets.
2. Throughout the interior of the site are parking spaces and small planters with tipus. The thirty two tipu trees varied in height from approximately 15' to 40' tall. Tree trunk diameters varied from 10" DBH to 21" DBH (diameter at breast height measured at 54" above ground) and their canopies spread from approximately 20' to 50'.
3. Most of the tipu trees are in good health.
4. Structurally, many of the limbs are concerning due to poor limb attachments and overhanging weight.
5. Most of the trees are damaging the curbs and asphalt parking due to their aggressive root systems, thus creating trip hazards.
6. The tallest trees are along the western and northern property lines (western side), growing in the wide planters adjacent to multi-level residences. These trees were allowed to get taller in order to screen the parking lot versus the interior trees that are pruned in an attempt to control their size.
7. However, between 2006 and 2011, tenants of the adjacent building had directed topping of the seven tipu trees along the western property line within their view corridor. Of these seven trees, five are proposed to be retained. The two in the bullet planters will be removed.
8. In addition, four trees along the northern property (at the eastern and western ends) will also be retained to screen adjacent properties.
9. Along the southern and eastern edges of the parking lot are narrow planting strips with California Live Oaks and Virginia Live Oaks. There is also one native oak and one non-native oak along the northern property line.
10. The spreadsheet and site plan identify trees and locations by corresponding number.

TREE SURVEY

- ***#*** corresponds with the site plan
- ***Type*** is Tipu *(Tipuana tipu),* VLO = Virgina Live Oak *(Quercus virginiana),* CLO = California Live Oak *(Quercus agrifolia).* California Live Oaks are natives.
- ***Approx height and spread*** are estimated in 5' increments.
- ***DBH*** is diameter at breast height measured at 54" above ground.
- ***Health and structure*** are rated as Good, Fair, or Poor. Read more under *Discussion*
- ***Average Condition*** is rated as Good, Fair, or Poor and is an average of health and structure. A tree may be biologically healthy but structurally poor or vice versa.
- ***PPI*** is potential project impact, indicating if tree is to be protected or removed.
- ***Comment*** is a note taken.

#	Type	DBH	Approx Height	Approx Spread	Health G/F/P	Struc G/F/P	Ave. Cond G/F/P	PPI	Comment
1	Tipu	17	30	50	G	G	G	Remove	
2	Tipu	13	25	35	G	F	G	Remove	
3	Tipu	11	15	25	F	P	P	Remove	Poorly pruned
4	Tipu	13	25	35	G	F	G	Remove	New curbs on west and east sides, extensive curb damage
5	Tipu	14	20	35	G	F	G	Remove	Larger surface roots in planter
6	Tipu	18	25	40	G	G	G	Remove	New curb on west side, cracked
7	Tipu	14	30	35	G	G	G	Remove	
8	Tipu	10	15	20	G	F	G	Remove	New curb on west, severe curb damge, small tree
9	Tipu	14	25	30	G	F	G	Remove	New curbs on east and west
10	Tipu	14	25	30	G	F	G	Remove	New curbs on east and west
11	Tipu	14	20	40	G	P	G	Remove	New curbs on east and west
12	Tipu	13	25	30	G	G	G	Remove	New curbs on east and south, east curb cracked
13	Tipu	13	25	40	G	G	G	Remove	New curbs on west
14	Tipu	13	25	30	G	F	F	Remove	New curb on east
15	Tipu	15	25	50	G	P	P	Remove	New curb on north, major wound on western leader
16	Tipu	11	20	25	G	G	G	Remove	
17	Tipu	14	30	34	G	G	G	Remove	New curbs on east and west
18	Tipu	19	35	40	G	G	G	Remove	New curbs on east and west
19	Tipu	14	35	35	G	F	F	Protect	Topped
20	Tipu	19	35	30	G	F	F	Protect	Topped, note crack in wall of neighbor's property likely from tree roots

#	Type	DBH	Approx Height	Approx Spread	Health G/F/P	Struc G/F/P	Ave. Cond G/F/P	PPI	Comment
21	Tipu	10	25	20	G	F	F	R	New curbs on north and south, severe curb damage, topped
22	Tipu	12	35	30	G	F	F	Protect	Topped
23	Tipu	14	35	30	G	F	F	Protect	Topped
24	Tipu	12	35	30	G	F	F	Remove	New curb on north, topped
25	Tipu	19	40	30	G	F	F	Protect	Topped
26	Tipu	19	40	30	G	F	F	Protect	Limbs over parking hit by truck. Northside overhangs adjacent bldg.
27	Tipu	16	40	30	G	G	G	Protect	Heavy limb over parking.
28	Tipu	9	20	25	G	F	G	Remove	New curb on east and west, removal will allow space for adajcent trees
29	Tipu	15	30	35	G	G	G	Remove	Wounds on limb over parking.
30	Tipu	16	25	30	G	F	F	Remove	New curb on north, heavy limb over parking is concerning
31	Tipu	12	25	30	G	G	G	Protect	Prune to provide space between trees
32	Tipu	21	35	40	G	G	G	Protect	Prune to provide space between trees
33	CLO	8	10	10	F	P	P	Remove	Vines taking over tree, drought damaged, needs structural pruning
34	VLO	4	10	6	G	F	G	Remove	Needs structural prune to improve
35	CLO	9	10	10	P	P	P	Remove	Very poor remove
36	CLO	13	15	20	G	F	F	Remove	Needs structural prune to improve
37	CLO	9	10	15	F	F	F	Remove	Needs structural prune to improve
38	CLO	7	10	15	G	F	G	Remove	Needs structural prune to improve
39	CLO	17	20	30	P	P	P	Remove	Drought damaged, remove
40	CLO	3	8	4	P	P	P	Remove	Scrawny, remove
41	CLO	10	15	10	F	P	P	Remove	Drought damaged, remove
42	CLO	8	12	6	F	F	F	Remove	Drought damaged, needs structural pruning
43	VLO	6	15	10	G	F	F	Remove	Needs structural prune to improve
44	VLO	5	15	10	G	F	F	Remove	Vines taking over tree, drought damaged, needs structural pruning

DISCUSSION

This tree species, *Tipuana tipu*, is a non-native and high maintenance tree that has been widely planted throughout Santa Barbara, since the late 1980s. It is frequently chosen due to its rapid growth and large spreading shade canopy. Tipus can grow several feet per year in height and spread. Its yellow flower is attractive and the tree goes dormant in the winter, thus providing more sunlight at that time of the year. Many modern developments have planted tipu trees in an effort to provide quick maturity to the landscape and abundant shade.

Unfortunately, long term problems are now more recognized since early plantings. Along with quick growth come negative attributes. This tree species is highly susceptible to breaking limbs, pest problems, and aggressive root growth. This tree is often planted in tight spaces, such as parking lots and parkways. The fast growth tends to cause weak attachments between limbs that often break during windy conditions. Planters limit root growth thus affecting the tree. The tipu psyllid also causes dripping of honeydew (a sticky exudate of the insect sucking leaves). Roots are consistently a problem. I've observed more damage to curb, gutter, asphalt and surrounding hardscape than most other tree species.

Although I rated many trees to be in good condition, this is relative to each other in their limited site. From an appraised value perspective, the limitations of the site would significantly reduce their value.

CONCLUSIONS

- Due to their fast growth and aggressive roots, these high maintenance non-native tipu trees are considered low in value.
- Due to their species characteristics, retention of the interior tipu trees will result in more infrastructure damage, maintenance, and costs. New landscape can mitigate the removal of these trees.
- The native oaks were mostly stressed from drought and lack of supplemental care in this harsh environment. The non-native Virginia Live oaks performed better.

RECOMMENDATIONS

1. Protect the nine tipu trees with fencing during construction.
2. Prune the sides and tops to create more of a screen and manage their height.
3. Root pruning will likely be necessary to contain root systems in addition to installing root barriers.
4. Specific protection measures can be provided upon approval of the project and the building plans.

REFERENCES

- ANSI (*American National Standards Institute)* A300: Part 5 - *Management of Tree and Shrubs During Site Planning, Site development, and Construction*, 2012
- *Best Management Practices: Managing Trees During Construction, Second Edition,* International Society of Arboriculture, Champaign, Illinois, 2016.
- Harris, R. W., and Matheny, N. P., and Clark, J. R., 2004. *Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines*, Fourth Edition. Prentice Hall.
- Matheny and Clark, *Trees and Development; A Technical guide To Preservation of Trees During Land Development,* ISA, 1998.

ARBORIST'S DISCLOSURE AND CERTIFICATION OF PERFORMANCE

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

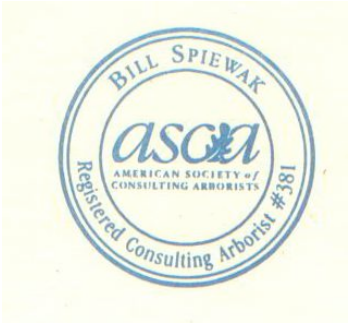
I Bill Spiewak, certify:
That I have personally inspected the trees on the property referred to in this report and have stated my findings accurately.
The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and commonly accepted arboricultural practices.

Prepared by:

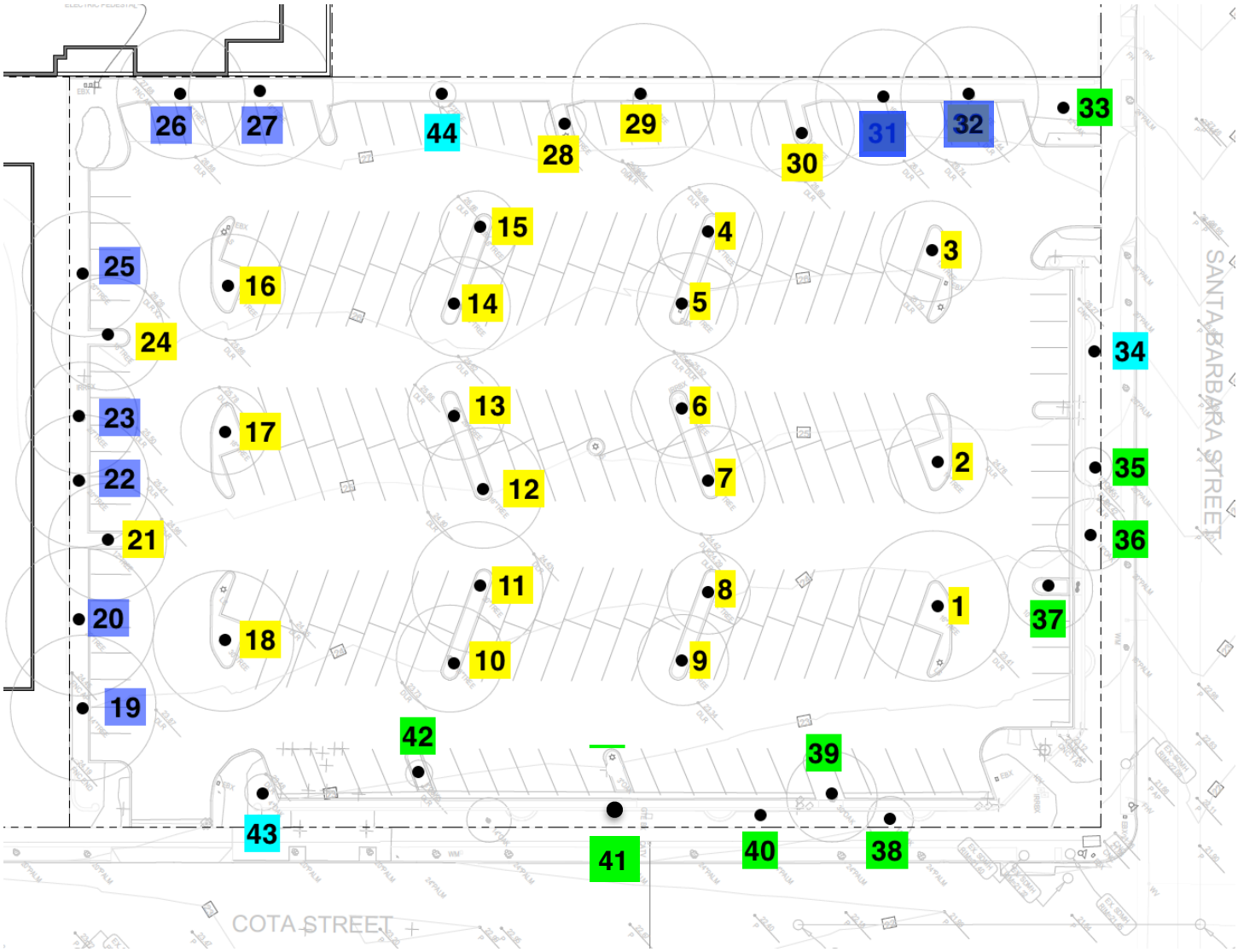
Bill Spiewak

Bill Spiewak
Registered Consulting Arborist #381
American Society of Consulting Arborists
Qualified Tree and Plant Appraiser

Board Certified Master Arborist #310B
International Society of Arboriculture
Qualified Tree Risk Assessor



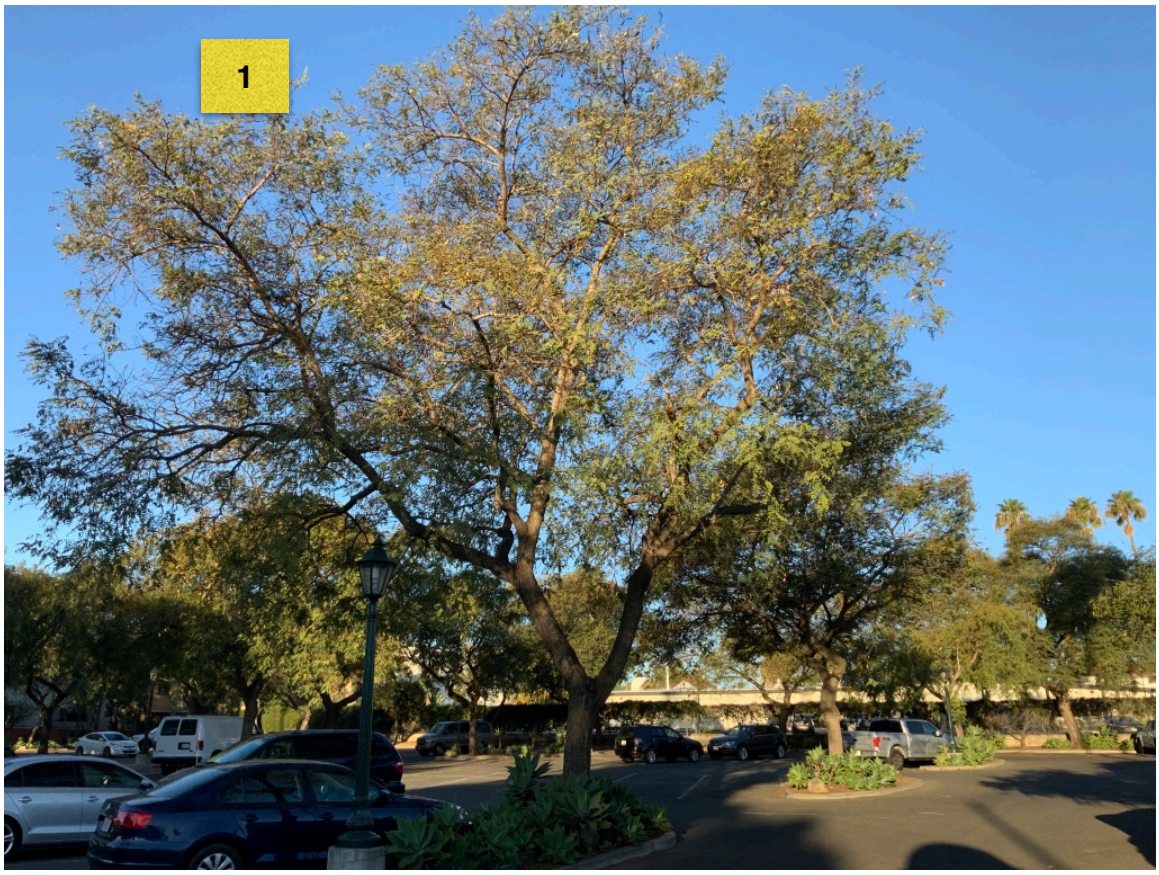
SITE PLAN



LEGEND

#	= Tipu to be removed
#	=California Live Oak to be removed
#	=Virginia Live Oak to be removed
#	= Tipu to be retained and protected

PHOTOS

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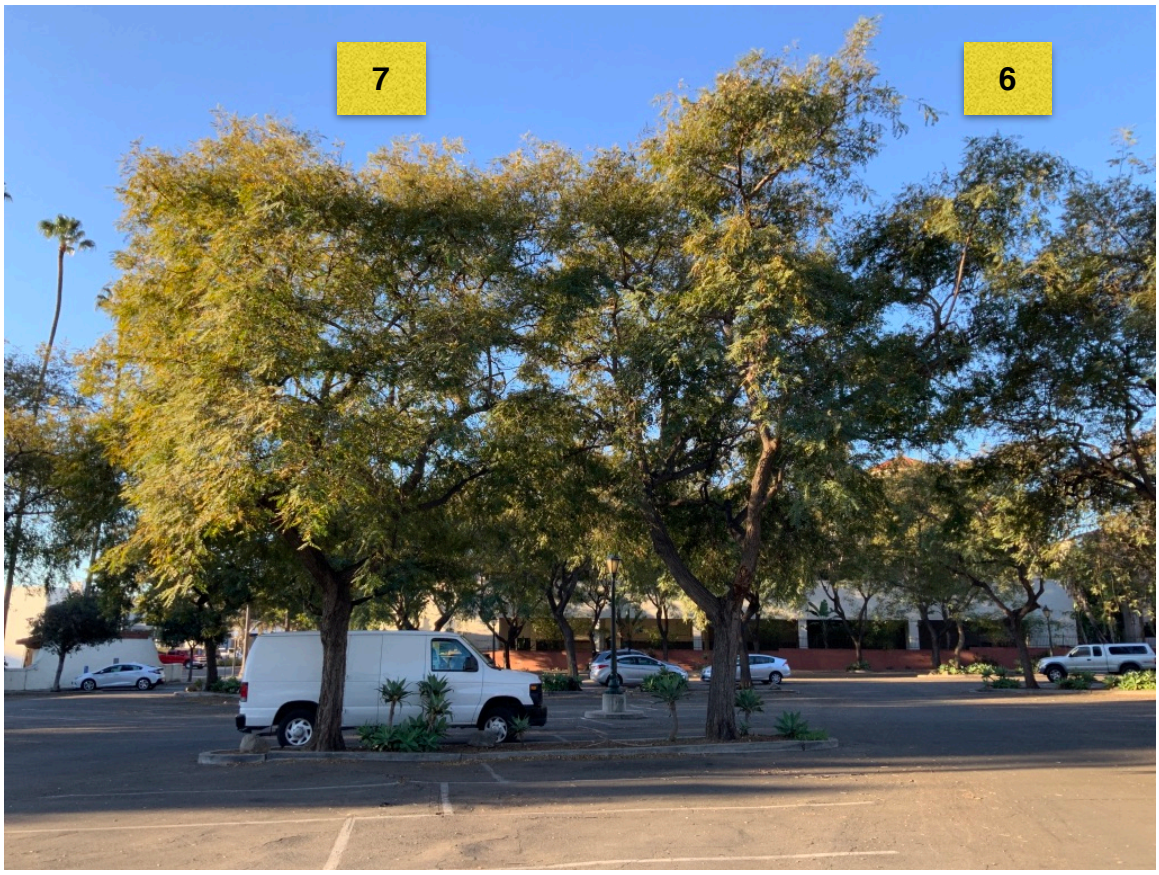
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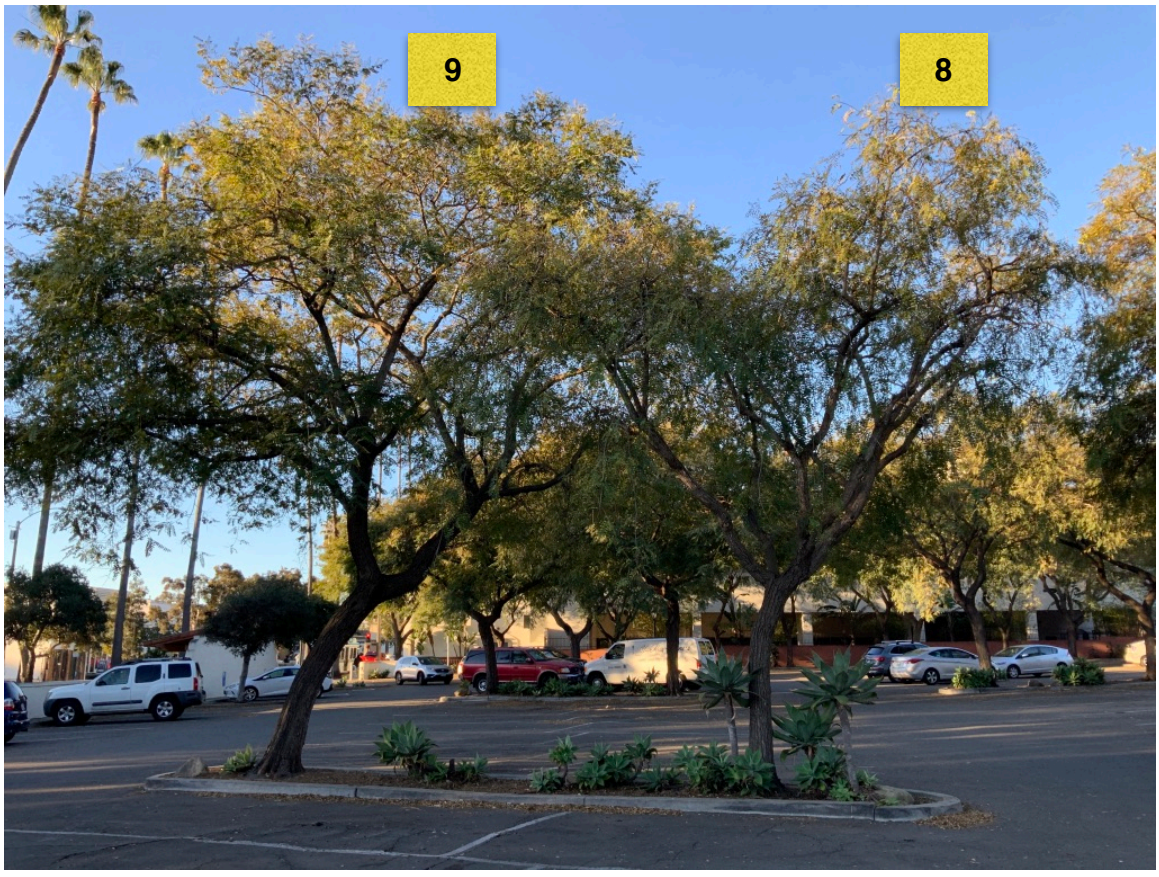
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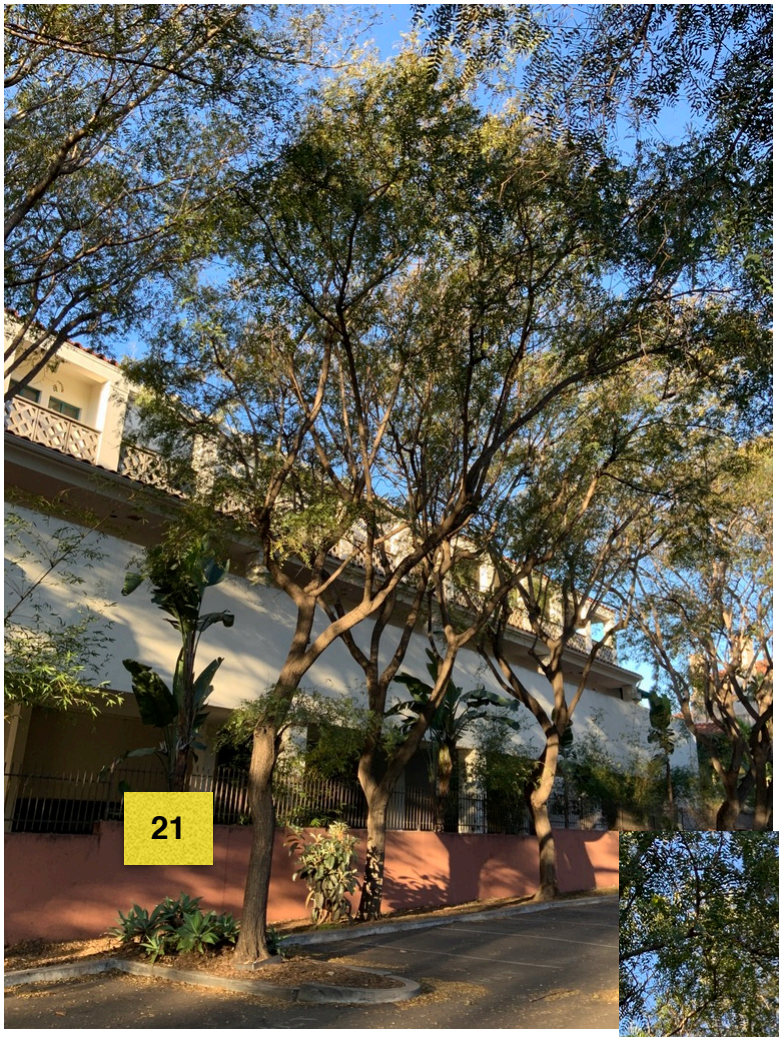
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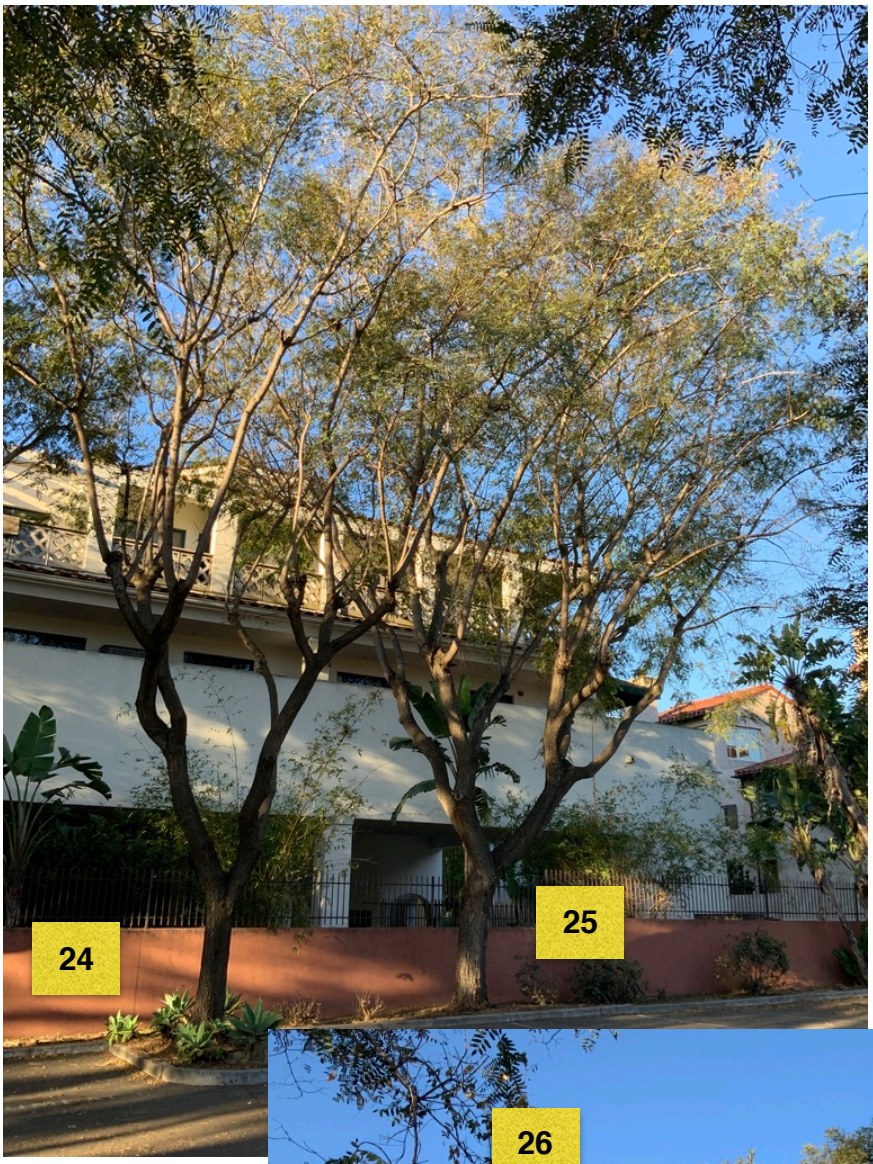
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Below: Trees #31 and #32 will be retained


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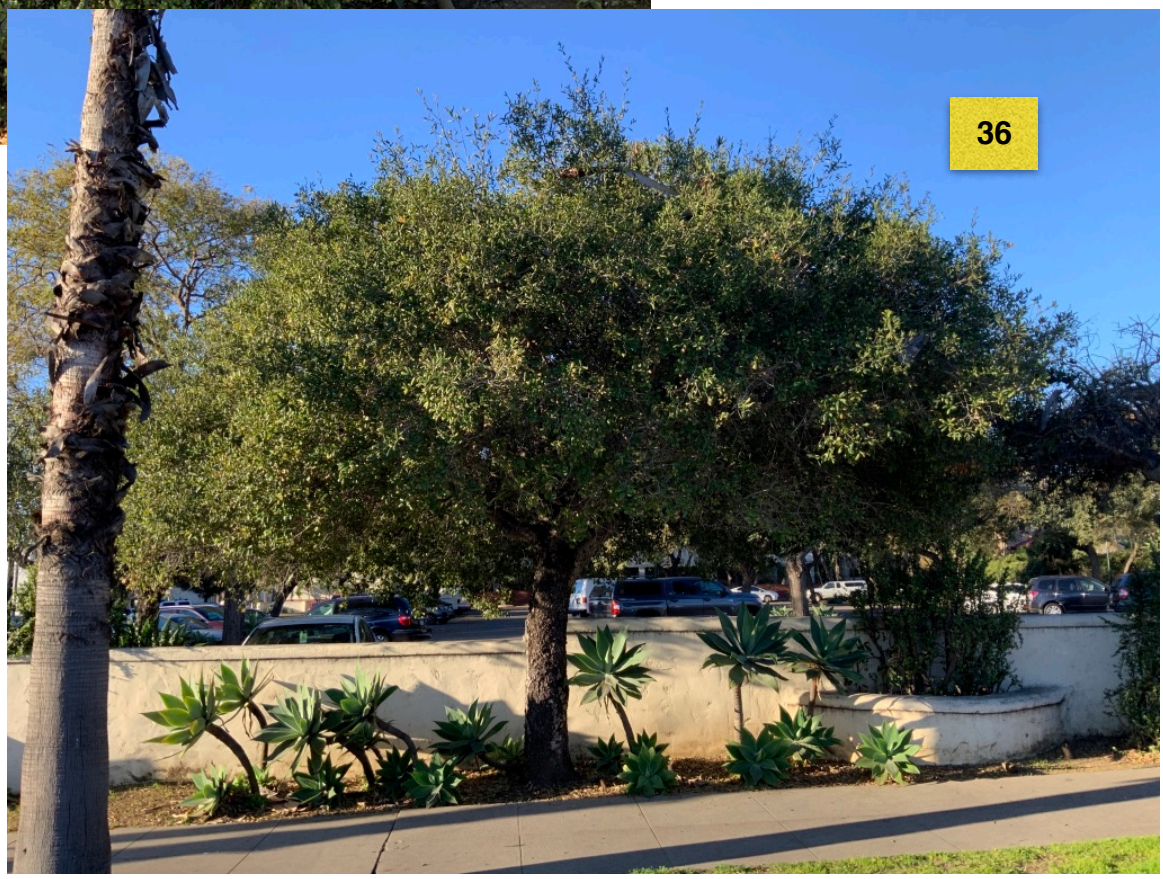
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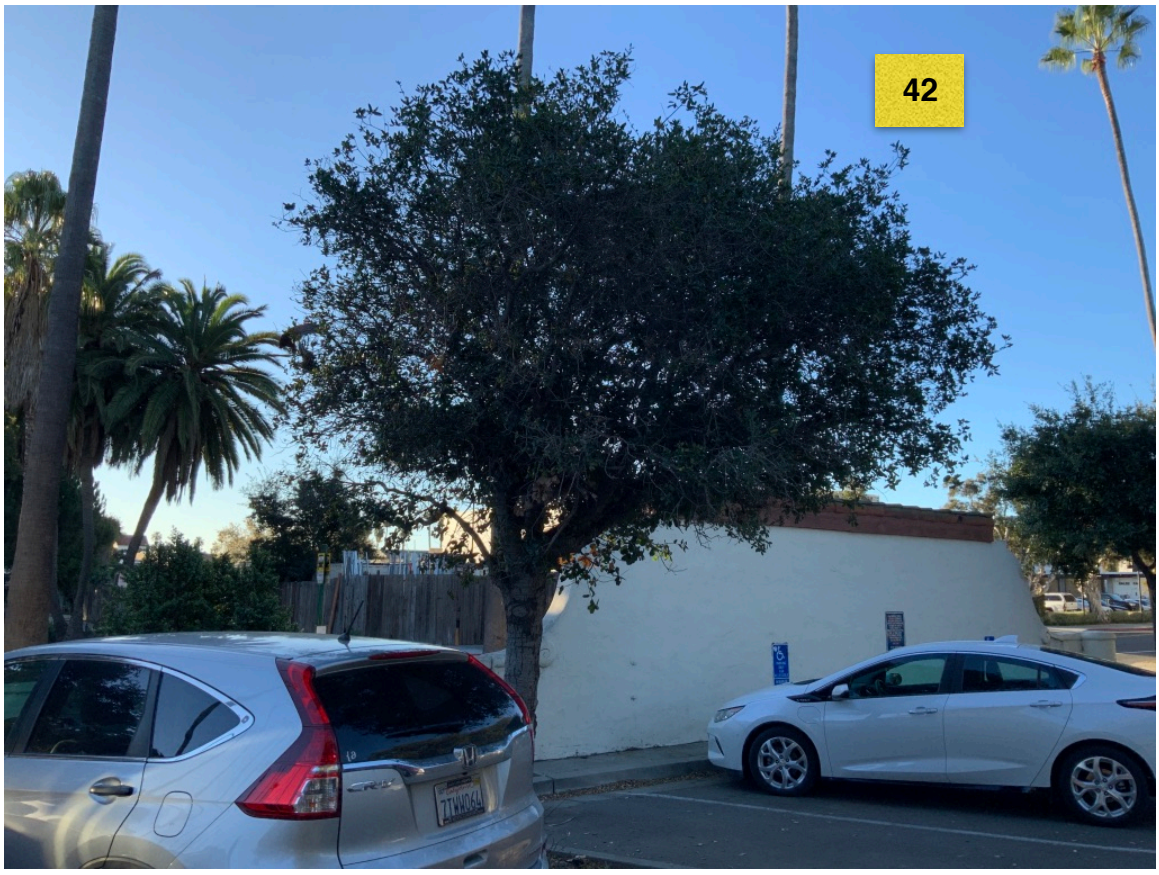
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Above: Looking SW at trees #19-#25 to be retained except #21 & #24 (arrows) in bullet planters.
Below: Looking NW at trees #26 & #27 to be retained. All retained trees will need to be protected & pruned to a more upright form to keep off structures & provide screening.

Appendix E

i-Tree Reports

Carbon Sequestration of Individual Trees

Location: Santa Barbara , Santa Barbara, California, United States of America
Project: Santa Barbara Police Station, Series: Santa Barbara Police Station, Year: 2020
Generated: 2/24/2020

Tree ID	Species Name	Gross Carbon Sequestration (lb/yr)	% of Total
1	Pride of bolivia	46.1	3.2
2	Pride of bolivia	31.4	2.2
3	Pride of bolivia	26.1	1.8
4	Pride of bolivia	31.4	2.2
5	Pride of bolivia	37.1	2.6
6	Pride of bolivia	53.2	3.7
7	Pride of bolivia	39.7	2.8
8	Pride of bolivia	22.8	1.6
9	Pride of bolivia	37.1	2.6
10	Pride of bolivia	39.4	2.7
11	Pride of bolivia	39.4	2.7
12	Pride of bolivia	33.5	2.3
13	Pride of bolivia	31.4	2.2
14	Pride of bolivia	33.5	2.3
15	Pride of bolivia	38.4	2.7
16	Pride of bolivia	24.9	1.7
17	Pride of bolivia	40.0	2.8
18	Pride of bolivia	61.3	4.2
19	Pride of bolivia	42.3	2.9
20	Pride of bolivia	57.7	4.0
21	Pride of bolivia	20.4	1.4
22	Pride of bolivia	32.3	2.2
23	Pride of bolivia	35.3	2.5
24	Pride of bolivia	22.7	1.6
25	Pride of bolivia	50.6	3.5
26	Pride of bolivia	25.9	1.8

Carbon Sequestration of Individual Trees

Location: Santa Barbara , Santa Barbara, California, United States of America
Project: Santa Barbara Police Station, Series: Santa Barbara Police Station, Year: 2020
Generated: 2/24/2020

Tree ID	Species Name	Gross Carbon Sequestration (lb/yr)	% of Total
27	Pride of bolivia	48.2	3.3
28	Pride of bolivia	18.5	1.3
29	Pride of bolivia	43.4	3.0
30	Pride of bolivia	33.5	2.3
31	Pride of bolivia	29.7	2.1
32	Pride of bolivia	74.2	5.1
33	Coastal live oak	15.2	1.1
34	Live oak	7.4	0.5
35	Coastal live oak	5.4	0.4
36	Coastal live oak	48.6	3.4
37	Coastal live oak	21.4	1.5
38	Coastal live oak	20.4	1.4
39	Coastal live oak	30.7	2.1
40	Coastal live oak	4.5	0.3
41	Coastal live oak	30.8	2.1
42	Coastal live oak	32.8	2.3
43	Live oak	13.5	0.9
44	Live oak	10.4	0.7
	Total	**1,442.5**	**100%**

Carbon Storage of Individual Trees

Location: Santa Barbara , Santa Barbara, California, United States of America
Project: Santa Barbara Police Station, Series: Santa Barbara Police Station, Year: 2020
Generated: 2/24/2020

Tree ID	Species Name	Carbon Storage (lb)	% of Total
1	Pride of bolivia	1,233.5	3.8
2	Pride of bolivia	647.0	2.0
3	Pride of bolivia	425.4	1.3
4	Pride of bolivia	647.0	2.0
5	Pride of bolivia	772.5	2.4
6	Pride of bolivia	1,414.1	4.3
7	Pride of bolivia	781.4	2.4
8	Pride of bolivia	339.8	1.0
9	Pride of bolivia	772.5	2.4
10	Pride of bolivia	773.7	2.4
11	Pride of bolivia	773.7	2.4
12	Pride of bolivia	648.3	2.0
13	Pride of bolivia	647.0	2.0
14	Pride of bolivia	648.3	2.0
15	Pride of bolivia	908.2	2.8
16	Pride of bolivia	436.0	1.3
17	Pride of bolivia	789.1	2.4
18	Pride of bolivia	1,622.2	5.0
19	Pride of bolivia	790.4	2.4
20	Pride of bolivia	1,621.0	5.0
21	Pride of bolivia	347.4	1.1
22	Pride of bolivia	549.3	1.7
23	Pride of bolivia	786.6	2.4
24	Pride of bolivia	537.9	1.6
25	Pride of bolivia	1,618.0	4.9
26	Pride of bolivia	1,605.7	4.9

Carbon Storage of Individual Trees

Location: Santa Barbara , Santa Barbara, California, United States of America
Project: Santa Barbara Police Station, Series: Santa Barbara Police Station, Year: 2020
Generated: 2/24/2020

Tree ID	Species Name	Carbon Storage (lb)	% of Total
27	Pride of bolivia	1,080.8	3.3
28	Pride of bolivia	264.6	0.8
29	Pride of bolivia	910.9	2.8
30	Pride of bolivia	1,043.7	3.2
31	Pride of bolivia	530.6	1.6
32	Pride of bolivia	2,040.9	6.2
33	Coastal live oak	249.3	0.8
34	Live oak	42.2	0.1
35	Coastal live oak	329.5	1.0
36	Coastal live oak	848.4	2.6
37	Coastal live oak	337.1	1.0
38	Coastal live oak	183.6	0.6
39	Coastal live oak	1,639.7	5.0
40	Coastal live oak	23.2	0.1
41	Coastal live oak	440.9	1.3
42	Coastal live oak	441.9	1.4
43	Live oak	110.2	0.3
44	Live oak	71.6	0.2
	Total	**32,725.2**	**100%**

Due to limits of available models, i-Tree Eco will limit carbon storage to a maximum of 7,500 kg (16,534.7 lbs) and not estimate additional storage for any tree beyond a diameter of 254 cm (100 in). Whichever limit results in lower carbon storage is used.

Appendix F

Wildlife Species Not Expected to Occur

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No habitat present. A total of two occurrences have been recorded within the surrounding six quadrats. The nearest occurrence is approximately 7.3 miles to the northeast near Gibraltar Reservoir recorded in 2004. The most recent occurrence was recorded in 2011 approximately 7.9 miles northeast near Gibraltar Reservoir (CDFW 2020).
Rana boylii	foothill yellow-legged frog	None/SSC, PST	Rocky streams and rivers with open banks in forest, chaparral, and woodland	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence documented approximately 7.8 miles to the north in 1980 (CDFW 2020).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. No habitat present. The nearest occurrence is within the City of Santa Barbara (exact location unknown) recorded in 1914. The most recent occurrence was recorded in 2017 approximately 8.9 miles west near San Pedro Creek (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur. No habitat present. The nearest occurrence is within the City of Santa Barbara (exact location unknown) recorded in 1941. The most recent occurrence was recorded in 2010 approximately 9.9 miles northwest near Highway 154 and West Camino Cielo (CDFW 2020).
Reptiles				
Actinemys marmorata	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 1.9 miles east near Highway 101 and Salinas Street recorded in 2017 (CDFW 2020).
Anniella pulchra	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	Not expected to occur. No habitat present. The nearest occurrence is within the City of Santa Barbara (exact location unknown) recorded in 1953. The most recent occurrence was recorded in 2012 approximately 3.3 miles west (CDFW 2020).
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 8.1 miles north along the Santa Ynez River in 2013 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. No habitat present. The nearest occurrence is within the City of Santa Barbara (exact location unknown) recorded in 1947. The most recent occurrence was recorded in 2010 approximately 9.4 miles northwest near Highway 154 and West Camino Cielo Road (CDFW 2020).
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur. No habitat present. The nearest occurrence is within the City of Santa Barbara (exact location unknown) recorded in 1939. The most recent occurrence was recorded in 1990 approximately 10.3 miles north in the vicinity of Hidden Potrero (CDFW 2020).
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 3.3 miles north near Mission Creek recorded in 2013 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. No habitat present. The nearest occurrence is approximately 2.5 miles north near the Santa Barbara Botanic Garden recorded in 1966. The most recent occurrence was recorded in 2009 approximately 5.9 miles east near Turnpike Road and Hollister Avenue (CDFW 2020).
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No habitat present. The nearest occurrence is approximately 6.0 miles northwest near San Jose Creek and Maria Ygnacio Creek recorded in 1971. The most recent occurrence was recorded in 1975 approximately 8.7 miles west near Highway 101 and Los Carneros Road (CDFW 2020).
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 6.3 miles northwest near Highway 154 and Camino Cielo Road in 1994 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No habitat present. The nearest occurrence is approximately 4.6 miles northwest near Highway 154 at San Antonio Creek Road recorded in 2007. The most recent occurrence was recorded in 2008 approximately 5.2 miles west near Turnpike Road and Hollister Avenue (CDFW 2020).
Aquila chrysaetos (nesting and wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 10.1 miles northwest near San Fernando Rey Ranch, east of Lake Cachuma in 1974 (CDFW 2020).
Ardea alba (nesting colony)	great egret	None/None	Nests and roosts in large trees over water or on islands, both in freshwater and marine estuarine habitats; forages in wetlands, including marshes, streams, ditches, and fish-rearing ponds, but also in irrigated pastures and croplands	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 7.4 miles west near Goleta Beach County Park recorded in 2012 (CDFW 2020).
Ardea herodias (nesting colony)	great blue heron	None/None	Nests in large trees or snags; forages in wetlands, water bodies, watercourses, and opportunistically in uplands, including pasture and croplands	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 7.4 miles west near Goleta Beach County Park recorded in 2012 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Artemisiospiza belli belli	Bell's sage sparrow	BCC/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 6.3 miles northwest near Highway 154 and Camino Cielo Road recorded in 1994 (CDFW 2020).
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 5.7 miles west near Rhoads Avenue and La Roda Avenue recorded in 1982 (CDFW 2020).
Charadrius alexandrinus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No habitat present. The nearest occurrence is approximately 0.6 miles southeast near Andree Clark Bird Refuge recorded in 2005. The most recent occurrence was recorded in 2014 approximately 7.8 miles west at the west end of Goleta Beach (CDFW 2020).
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats within the vicinity of the City of Santa Barbara (exact location unknown) in 1996 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Egretta thula (nesting colony)	snowy egret	None/None	Nests in dense marshes and trees; forages in wetlands or aquatic habitats, including estuaries, emergent wetlands, slow-moving rivers, irrigation ditches, and wet fields	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 0.7 miles south near the intersection of Castillo Street and Cabrillo Boulevard recorded in 2012 (CDFW 2020).
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Not expected to occur. No habitat present. The nearest occurrence is approximately 4.0 miles northwest near Foothill Road and Antone Road recorded in 2007. The most recent occurrence was recorded in 2009 approximately 5.3 miles west near Hollister Avenue and Turnpike Road (CDFW 2020).
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No habitat present. The nearest occurrence is approximately 7.1 miles northeast near Gibraltar Reservoir recorded in 1990. The most recent occurrence was recorded in 1991 approximately 11.5 miles northeast along Mono Creek nest to Ogilvy Ranch (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Eremophila alpestris actia	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 10.1 miles west near Storke Road and Camino Corto recorded in 2003 (CDFW 2020).
Falco mexicanus (nesting)	prairie falcon	BCC/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 6.4 miles north recorded in 1979 (CDFW 2020).
Gymnogyps californianus	California condor	FE/FP, SE	Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (Sequoiadendron giganteus); forages in relatively open habitats where large animal carcasses can be detected	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 14.1 miles north near the Sisquoc-San Rafael condor area recorded in 1975 (CDFW 2020).
Laterallus jamaicensis coturniculus	California black rail	BCC/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, within the Santa Barbara area (exact location unknown) recorded in 1917 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Nycticorax nycticorax (nesting colony)	black-crowned night-heron	None/None	Nests in dense-foliaged trees and dense fresh or brackish emergent wetlands associated with marshes, ponds, reservoirs, and estuaries	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 0.7 miles south near the intersection of Castillo Street and Cabrillo Boulevard recorded in 2012 (CDFW 2020).
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected to occur. No habitat present. The nearest occurrence is approximately 5.1 miles west along Atascadero Creek recorded in 1982. The most recent occurrence was recorded in 2016 approximately 7.8 miles west within Goleta Slough (CDFW 2020).
Pelecanus occidentalis californicus (nesting colonies and communal roosts)	California brown pelican	FDL/FP, SDL	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 0.6 miles south near the Santa Barbara Harbor recorded in 2002 (CDFW 2020).
Phalacrocorax auritus (nesting colony)	double-crested cormorant	None/WL	Nests in riparian trees near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines; winter habitat includes lakes, rivers, and coastal areas	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 7.4 miles west near Highway 217 and Mesa Road recorded in 2012 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Rallus obsoletus levipes	Ridgway's rail	FE/SE, FP	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No habitat present. The nearest occurrence is approximately 7.9 miles near Goleta Slough recorded in 1972. The most recent occurrence was recorded in 2007 approximately 8.6 miles east within Carpinteria Marsh (CDFW 2020).
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. No habitat present. The nearest occurrence is within the City of Santa Barbara (exact location unknown) recorded in 1913. The most recent occurrence was recorded in 1927 approximately 2.3 miles west near Arroyo Burro Beach (CDFW 2020).
Sternula antillarum browni (nesting colony)	California least tern	FE/FP, SE	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No habitat present. The nearest occurrence is approximately 0.6 miles south near Highway 101 and State Street recorded in 1932. The most recent occurrence was recorded in 2011 approximately 9.9 miles west near Coal Oil Point Reserve (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 7.0 miles north near the Gibraltar Reservoir recorded in 2013 (CDFW 2020).
Fish				
Eucyclogobius newberryi	tidewater goby	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 0.3 miles south within Mission Creek recorded in 2014 (CDFW 2020).
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/None	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable habitat present. The nearest occurrence is also the most recent occurrence approximately 0.5 miles south within Mission Creek recorded in 2011 (CDFW 2020).
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 10.1 miles east near the intersection of Storke Road and Camino Corto recorded in 2017 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 2.6 miles northwest near Monte Vista Elementary School recorded in 1996 (CDFW 2020).
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 5.2 miles west near Via Tranquila and Las Palmas Drive recorded in 2008 (CDFW 2020).
Lasiurus blossevillii	western red bat	None/SSC	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	Not expected to occur. No habitat present. The nearest occurrence is approximately 5.2 miles west near Via Tranquila and Las Palmas Drive recorded in 2008. The most recent occurrence was recorded in 2017 approximately 10.1 miles west near Storke Road and Camino Corto (CDFW 2020).
Lasiurus cinereus	hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 5.1 miles west near Via Tranquila and Las Palmas Drive recorded in 2008 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Myotis yumanensis	Yuma myotis	None/None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 5.7 miles west near Turnpike Road and Hollister Avenue recorded in 2008 (CDFW 2020).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 9.1 miles northwest near San Pedro Creek recorded in 2015 (CDFW 2020).
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, with the vicinity of Santa Barbara (exact location unknown) recorded in 1996 (CDFW 2020).
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/PSE	Open grassland and scrub communities supporting suitable floral resources.	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 8.7 miles west in Isla Vista recorded in 1968 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Cicindela hirticollis gravida	sandy beach tiger beetle	None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico.	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 9.9 miles east within Carpinteria recorded in 1979 (CDFW 2020).
Coelus globosus	globose dune beetle	None/None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico.	Not expected to occur. No habitat present. The nearest occurrence is also the most recent occurrence approximately 0.6 miles east recorded in 1971 (CDFW 2020).
Danaus plexippus pop. 1	monarch	None/None	Wind-protected tree groves with nectar sources and nearby water sources.	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable habitat present. The nearest occurrence is approximately 1.0 miles south near Cliff Drive and Loma Alta Drive recorded in 2016. The most recent occurrence was recorded in 2018 approximately 3.0 miles west along Arroyo Burro Creek (CDFW 2020).
Panoquina errans	wandering skipper	None/None	Saltmarsh	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 8.6 miles east within Carpinteria recorded in 2007 (CDFW 2020).

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Tryonia imitator	mimic tryonia (=California brackishwater snail)	None/None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County.	Not expected to occur. No habitat present. One occurrence has been recorded within the surrounding six quadrats, approximately 8.0 miles west at the University of California Santa Barbara Lagoon recorded in 1966 (CDFW 2020).

Notes:
Federal
BCC – Birds of Conservation Concern
FDL – Federally Delisted
FE – Federally listed as Endangered
State
FT – Federally listed as Threatened
FP – Fully Protected
PSE – Petitioned State Endangered
PST – Petitioned State Threatened
SDL – State Delisted
SE – State listed as Endangered
SSC – Species of Special Concern
ST – State listed as Threatened
WL – Watch List

References

CDFW. 2020. California Natural Diversity Database: RareFind 5 (Carpinteria, Goleta, Hildreth Peak, Little Pine Mountain, San Marcos Pass, and Santa Barbara 7.5-minute topographic quadrangles). Electronic database managed by the Natural Diversity Data Base, Wildlife Data and Habitat Analysis Branch, California Department of Fish and Wildlife. Sacramento, California. Version 5.2.14. Accessed January 11, 2020. https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx.

CNPS (California Native Plant Society). 2020. *Inventory of Rare and Endangered Plants of California* (online ed., version 8-03 0.45). Sacramento: CNPS, Rare Plant Program. Accessed January 11, 2020. http://www.rareplants.cnps.org/.

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Appendix G

Tree Protection Measures

Appendix G – Tree Protection Measures

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Tree protection zone (TPZ) is defined at the area outside of planned direct impacts (i.e., grading and compaction, concrete foundation, building walls, etc.). As part of project development, the seven (7) remaining urban trees (Tipuana tipu) will be subject to significant root and canopy prunning, however, the City of Santa Barbara is retaining these trees, and, therefore, protection of the portion of the trees outside of the impact zone will be fully protected.

Pre-Construction Meeting: A pre-construction meeting should be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, should provide written acknowledgement of their receiving tree protection training. This training should include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance During Construction

Once construction activities have begun the following measures should be adhered to:

Equipment Operation and Storage: Avoid heavy equipment operation around the trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced TPZ, unless where specifically approved in writing and under the supervision of a Certified Arborist or as provided by the approved landscape plan.

Storage and Disposal: Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the protection zone. Remove all foreign debris within the protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked at least 50 feet away from retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Grade Changes: Grade changes, including adding fill, are not permitted within the TPZ without special written authorization and under the supervision of a Certified Arborist or as provided by the approved landscape plan. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around the tree (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using International Society of Arboriculture (ISA) standards.

Root Pruning: Except where specifically approved in writing, all trenching should be outside of the TPZ. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first 12 months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every 2 to 4 weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone ***but never soaking the area located within 6 feet of the tree trunk, especially during warmer months***.

Pruning: All pruning should be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood should be removed from tree canopies.

Washing: During construction in summer and autumn months, wash foliage of trees adjacent to the construction sites with a strong water stream every two weeks in early hours before 10:00 a.m. to control mite and insect populations.

Inspection: An ISA Certified Arborist should inspect the impacted preserved trees on a monthly basis during construction. A report comparing tree health and condition to the original, pre-construction baseline should be submitted following each inspection. Photographs of representative trees are to be included in the report on a minimum annual basis.

Maintenance After Construction

Once construction is complete the fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: The trees will not require regular pruning. Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning should only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 20% of the canopy should be removed at any one time. All pruning should conform to ISA standards.

Watering: The natural trees that are not disturbed should not require regular irrigation, other than the 12 months following substantial root pruning. However, soil probing will be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall, supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary. The trees should be irrigated *only* during the winter and spring months.

Watering Adjacent Plant Material: All plants near the trees should be compatible with water requirements of said trees. The surrounding plants should be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil should not be allowed to become saturated or stay continually wet. Irrigation spray should not hit the trunk of any tree. A 60-inch dry-zone should be maintained around all tree trunks. An aboveground micro-spray irrigation system is recommended over typical underground pop-up sprays.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every 2 weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection: All trees that were impacted during construction within the TPZ should be monitored by an ISA Certified Arborist for the first 5 years after construction completion. The Arborist should submit an annual report, photograph each tree and compare tree health and condition to the original, pre-construction baseline.

From: Heather Moine
Date: April 9, 2022 at 8:13:14 AM PDT
To: Brad Hess
Cc: John Davis IV
Subject: City of SB Police Station - Replacement Trees Carbon

Based on the updated replacement tree species and quantities, 55 coast live oak trees, please see the updated carbon storage and carbon sequestration totals for the replacement trees below. Please let us know if we can assist with anything else.

The online tool ecoSmart Landscapes was used to understand at what year the carbon storage and carbon sequestration totals for the replacement trees would replace the current levels of the removal trees. The totals were calculated using tree growth dynamics, with each replacement tree assumed to be planted with a 1-inch diameter at breast height. Table 9 indicates that by year 18, the carbon stored in the replacement trees will begin to exceed the total of what is stored in the removal trees.

Table 9. Estimated Recovery of Stored Carbon – Years 17 to 21

Year	Carbon Stored in Replacement Trees (pounds)	Carbon Stored in Removal Trees (pounds/ year)
17	24,423.3	24,673.3
18	29,364.5	24,673.3
19	35,060.3	24,673.3
20	41,591.55	24,673.3
21	49,045.15	24,673.3

Table 10 indicates that by year 10 the replacement trees will annually sequester more carbon than what is sequestered by the removal trees.

Table 10. Estimated Recovery of Carbon Sequestration – Years 9 to 13

Year	Replacement Tree Carbon Sequestered by Year (pounds)	Removal Tree Current Carbon Sequestration (pounds/ year)
9	993.85	1,150.2
10	1,234.75	1,150.2
11	1,515.25	1,150.2
12	1,839.75	1,150.2
13	2,211.55	1,150.2

Regards,

Heather Moine
Biologist

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