

6.0 BIOLOGICAL RESOURCES

This section has been prepared to evaluate potential impacts to vegetation and wildlife from construction and operation of the proposed project. This section is based on information relating to biological resources as provided in the following reports: (1) *Tree Mitigation Plan* (Lee, Burkhardt, Liu, Inc., July 2003); (2) *Arborist Report* (Randall T. Mudge November 2003; revised and amended July 2003 and October 2003); (3) *Peer Review of Arborist Report* (LSA Associates, Inc., April 2004 [updated May 2004]); and the *Santa Barbara Cottage Hospital Moreton Bay Fig Report* (Bill Spiewak, September 2004). The peer review is included as Appendix C of this EIR. All other documents referenced are available for review at the City of Santa Barbara Community Development Department Planning Division.

6.1 BIOLOGICAL RESOURCES - IMPACT SIGNIFICANCE GUIDELINES

Biological resource issues involve the potential for a project to substantially affect biologically important natural vegetation and wildlife, particularly species and their habitat that are protected as rare, threatened, or endangered by federal or State wildlife agencies, as well as native specimen trees.

In accordance with CEQA and the City environmental review guidelines, significant biological resource impacts involve substantial disturbance to important wildlife and vegetation in the following ways:

- a) Elimination or substantial reduction or disruption of important natural vegetative communities and wildlife habitat or migration corridors, such as oak woodland, coastal strand, riparian, and wetlands
- b) Substantial effect on protected plant or animal species listed or otherwise identified or protected as endangered, threatened or rare
- c) Substantial loss or damage to important native specimen trees

6.2 BIOLOGICAL RESOURCES - METHODOLOGY

Existing native wildlife and vegetation on a project site are qualitatively assessed to identify whether they constitute important biological resources, based on the types, amounts, and quality of the resources within the context of the larger ecological community. If important biological resources exist, project effects to the resources are qualitatively evaluated to determine whether the project would substantially affect those important biological resources.

A peer review of the *Arborist Report and Addendum* was conducted by a certified arborist to confirm the accuracy and adequacy of the impacts and mitigation measures identified in the report. Based upon the findings of the peer review, an updated tree count was conducted by Bob Cunningham (Landscape Architect, Arcadia Studios) to verify the number and location of existing trees on the project site. An evaluation of the Moreton Bay fig tree was also completed by Bill Spiewak (Registered Consulting Arborist) to determine the health and vigor of the tree and recommend mitigation measures to minimize impacts to the tree with implementation of

the proposed project. Site visits were conducted by an LSA wildlife biologist with special expertise in avifauna and LSA's certified arborist to verify the condition of existing trees.

6.3 BIOLOGICAL RESOURCES - REGULATORY FRAMEWORK

Numerous guidance documents regulate the maintenance, removal, and replacement of vegetation, and in particular trees, within the City. These documents include the City of Santa Barbara General Plan Conservation Element, Architectural Board of Review Guidelines, Tree Preservation (Chapter 15.24 of the Municipal Code), Chapter 15.20 Tree Planting and Maintenance, and Chapter 22.10.060 Vegetation Removal. Applicable guidance from these documents is outlined below.

➤ Nesting Birds

- Pursuit, hunting, taking, capture, killing, attempting to take, capture or kill, possessing, offering for sale, sell, offering to purchase, purchase, delivering for shipment, shipping, causing to be shipped, delivering for transportation, transporting, causing to be transported, carrying, or causing to be carried by any means whatever, receiving for shipment, transportation or carriage, or exporting, at any time, or in any manner, any migratory bird, as defined in 50 CFR 10.13 is prohibited. This prohibition applies to birds and their parts (including eggs, nests, and feathers). Nearly all native species are included in the list of protected migratory birds. While this law was intended to control the intentional take of birds and/or their eggs and nests by collectors, falconers, etc., it can nevertheless be applied to unintentional take, e.g., destroying an active nest by cutting down a tree. (Migratory Bird Treaty Act of 1918, codified at 16 USC 703-712).

➤ Wetland/Riparian Resources Board

- Section 404 of the federal Clean Water Act regulates discharges of dredged or fill material into *waters of the United States*. The Army Corps of Engineers (Corps) has been given regulatory jurisdiction over waters of the United States, pursuant to Section 404. These *waters* include *wetlands* and nonwetland bodies of water that meet specific criteria as outlined in 33 CFR 328.3. and the Corps 1987 Manual. The Corps are responsible for issuance of Nationwide and Individual Permits for undertakings that affect jurisdictional waters. The Corps has preauthorized specific activities which are covered by a variety of Nationwide Permits. For activities that are not covered by a Nationwide Permit, an Individual Permit must be issued.
- Anyone proposing to conduct a project that requires a federal permit or involves dredge or fill activities that may result in a discharge to waters of the United States and/or waters of the State are required to obtain a Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) from one of the California Regional Water Quality Control Boards, verifying that the project activities will comply with state water quality standards. The Central Coast Regional Water Quality Control Board is responsible for compliance with Section 401 and provides Water Quality Certification determination (Section 401) for projects that discharge into waters of the United States or waters of the State.

- The CDFG, through provisions of the California Fish and Game Code (Sections 1602), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. CDFG regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFG. While seasonal ponds are within the CDFG definition of wetlands, if they are not associated with a river, stream, or lake, they are not subject to jurisdiction of CDFG under Sections 1602 of the Fish and Game Code.

- **Habitat Preservation**
 - Enhance and preserve the City's critical ecological resources in order to provide a high-quality environment necessary to sustain the City's ecosystem (Conservation Element: Biological Resources Goals).
 - Redevelopment and renovation of the central city shall be encouraged in order to preserve existing resources (Conservation Element: Biological Resources Policy 2.0).

- **General Tree Protection/ Replacement**
 - Mature trees should be integrated into project design rather than removed (Conservation Element: Visual Resources Implementation Strategy 4.1).
 - All feasible efforts should be exhausted prior to the removal of trees (Conservation Element: Visual Resources Implementation Strategy 4.3).
 - Major trees removed as result of development or other property improvement shall be replaced by specimen trees on a minimum one for one basis (Conservation Element: Visual Resources Implementation Strategy 4.3).
 - Private efforts to increase the number of street trees throughout the City should be encouraged (Conservation Element: Visual Resources Implementation Strategy 4.4).

- **Oak Tree Protection/Replacement**
 - Any oak tree with a minimum diameter of four inches (measured four feet from the base of the trunk) removed shall be replaced by five oak trees of the same species elsewhere on the lot. Replaced oak trees shall be effectively maintained (Section 22.10.060 of the City Vegetation Removal Ordinance).
 - When an oak tree is removed, the ABR Guidelines require replacement on a three to one or as much as a ten to one basis (ABR Guidelines).

- **Tree Planting**
 - All trees within a parkway strip shall be planted and maintained according to the City Master Street Tree Plan. A parkway strip is defined as either i) the area between the curb and sidewalk within a fully improved street right-of-way, or ii) that area extending six feet from the curb towards the nearest right-of-way line in an area with no sidewalk, or iii) any area within a street right-of-way in which an official or parkway tree is located (Section 15.20.030 of the Tree Ordinance).

- It is unlawful to install or plant in a parkway strip i) any tree not designated an official tree in the Master Street Tree Plan; ii) any other plant whose ultimate growing height is over eight inches; iii) any other non-living ground cover, without a written permit from the Directory of Parks (Section 15.20.040 of the Tree Ordinance).
- The applicant, for any activity for which approval by the ABR is required by City law, shall, concurrently with processing of such application, submit to the Director and the ABR plans for planting of official trees. The Director of Parks may designate species, kind, number, spacing and method of planting of such trees and may require the inclusion of root inhibiting planters (Section 15.20.060 of the Tree Ordinance).
- An owner of property adjoining a street right-of-way is responsible for maintaining all trees and other vegetation planted between the edge of the pavement nearest said property and right-of-way line separating the property from the street, except those trees to be maintained by the Director pursuant to Section 15.20.050. The maintenance obligation shall include keeping such area free from weeds or any obstructions inimical to public safety and/or contrary to the Master Street Tree Plan. The placing of tar paper, plastic or other material over the ground, or the use of materials or chemicals intended to permanently sterilize the soil in these areas is prohibited (Section 15.20.090 of the Tree Ordinance).
- Whenever a property owner or occupant desires to plant, prune, trim, perform maintenance on, or remove any tree planted in a parkway strip, tree wall, public area or street right-of-way an application shall be filed with the Parks Department for a permit for such action (Section 15.20.110).
- It is unlawful for any person to injure or destroy any tree growing within a City street right-of-way or in public areas by means, including, but not limited to the following:
 - 1) Construction of a concrete, asphalt, brick or gravel sidewalk or otherwise fill up the ground area around any tree so as to substantially shut off air, light or water from its roots
 - 2) Piling building equipment, material or any other substance around any tree so as to cause injury
 - 3) Pouring any deleterious material or any substance around any tree so as to cause injury
 - 4) Posting any sign, poster, notice or otherwise on any tree, tree stake or guard, or fastening a guy wire, cable, rope aisle, screws or other device to any tree, tree stake or guard without having first obtained a permit from the Parks Director
 - 5) Causing any wire charges with electricity to come in contact with any tree without first obtaining a permit from the Parks Director
 - 6) Causing any fire or burning near or around any tree (Section 15.20.150 of the Tree Ordinance)

6.4 **BIOLOGICAL RESOURCES - EXISTING SETTING**

6.4.1 **Setting - Project Site Conditions**

SBCH is located in an urban setting surrounded by medical offices and residences. It is a predominantly landscaped/developed habitat that includes planted native and nonnative vegetation and structures (buildings) with associated infrastructure (i.e. roads, parking lots). This type of environment generally does not contain plant-based communities and is not usually described as a typical habitat type. However, this environment is utilized by numerous wildlife species. The City's Master Environmental Assessment Biological Resources Maps identify the project site as Urban with limited native vegetation or habitat. The majority of on-site vegetation consists of introduced ornamental species that have been planted for aesthetic and shading purposes.

➤ **Plant Species (Existing Conditions)**

The landscaping within the project site contains a variety of native and ornamental plants and is adapted to the local climate. Ornamental plants include bird of paradise (*Strelitzia reginae*), giant bird of paradise (*Strelitzia nicolai*), bridal veil spiraea (*Spiraea prunifolia* 'Plena'), xylosma (*Xylosma congestum*), boxwood (*Buxus* spp.), holly (*Ilex* spp.), and oleander (*Nerium oleander*). Native plants on-site include coast live oak (*Quercus agrifolia*), and California sycamore (*Plantanus racemosa*).

➤ **Trees (Existing Conditions)**

There are approximately 422 trees located on site, including 107 street trees located along the streets surrounding the hospital. Table 2 of the Arborist Report and Table 1 in the Addendum identify the size and condition of each tree.¹ The existing tree canopy cover within the project site is estimated from aerial photographs to be approximately 110,000 square feet (2.5 acres). Examples of native and ornamental trees planted on the site include coast live oak (*Quercus agrifolia*), California sycamore (*Platanus racemosa*), jacaranda (*Jacaranda mimosifolia*), fern pines (*Podocarpus* spp.), Canary Island pine (*Pinus canariensis*), lemon gum (*Eucalyptus citriodora*), acacia (*Acacia melanoxylon*), olive (*Olea europaea*), coast redwood (*Sequoia sempervirens*), eucalyptus (*Eucalyptus* spp.), and several species of palms.

The most abundant tree species on the site are native coast live oak (58 specimens constituting 11 percent) and fern pine (59 specimens constituting 14 percent). Both species occur as street and parking lot trees and are well distributed, with many mature specimens.

The existing trees and plants on the project site vary as to health and vigor. Many of the street trees are in fair to poor condition due to lack of water, stress, and the large amount of paving in relation to the restricted planting area. The restricted planting area limits opportunity for root growth and the absorption of water and nutrients, and the surrounding paving, cars, and structures increase the amount of heat and reflected light near the trees. Water stress and restricted rooting area are both common problems for urban street trees planted in small spaces,

¹ The Arborist Report identifies 454 trees on the project site. An updated tree count by Arcadia Studio on July 27, 2004 identifies 422 trees on the project site. The analysis in this EIR is based upon the most recent tree count.

and these conditions are not conducive to favorable plant growth and development. Stressed trees become more susceptible to diseases (e.g. cankers, sooty mold) and pests (e.g. scale, mites, lerp psyllid). These diseases and pests were documented by the applicant's arborist and LSA's arborist Denise Kelly on various specimens within the project site. The street trees that are planted in the sidewalk parkways have a larger planting space for their roots and are generally in better condition than the trees planted in small concrete cutouts within the sidewalks.

➤ **Native Tree Species (Existing Conditions)**

Two species of trees identified within the project site are native to the local biotic community, California sycamore and coast live oak. Based on LSA field observations, all of the sycamores and some of the oaks were planted as landscape specimens. The sycamores are a native riparian species but are not considered native to the project site because there is no riparian habitat present.

➤ **Moreton Bay Fig (Existing Conditions)**

A large 83-inch-diameter Moreton Bay fig (*Ficus macrophylla*) that was planted in 1919 dominates the south entry of the existing hospital, at the corner of Pueblo and Castillo Streets. The applicant's Arborist Report identifies the tree as a significant tree resource, and the tree was identified in the *Historic Structures Report* (San Buenaventura Research Associates January 2003) as eligible for City listing as an object of merit.

Based on the Spiewak report and LSA visual field observations, the tree is showing signs of stress due to the relatively small planting space where it is growing and the lack of sufficient water. Mr. Spiewak examined the soil and rooting area beneath the tree after exposing portions of the root system with an airspade, which is a tool that uses air pressure to remove soil around roots without significant damage. The root area was prewatered with soaker hoses to soften the top several inches of topsoil, and an extremely dry and hard soil surface was encountered to the sides of the areas that were preirrigated. Roots were found growing in this soil, but there was no indication of any moisture noted except on the east side of the tree. The airspade excavation also indicated evidence of historic root cutting on the south and west sides of the tree. Most roots were cut on the west side of the tree near a pedestrian walkway, but roots were also pruned at least twice on the south side of the tree where utility lines exist.

This specimen has outgrown its existing space, and both the canopy and root system are currently impacted by the lack of adequate growing area. The canopy has been pruned several times to accommodate the hospital building, affecting the vigor of the tree and symmetry of the canopy. Much of the fig tree's root system is covered by paving, and the soil is very hard and compacted in the rooting area, which limits water penetration and availability to the roots.

➤ **Wildlife Species (Existing Conditions)**

Due to the urbanized nature of the project site, no wetland habitat or wildlife migration corridors exist on the project site. Although the project site does not constitute an important natural habitat or ecological resource, it does provide localized avian habitat. The site's diverse vegetation provides habitat for a mix of native and introduced avian species. The site's native oak trees and introduced trees and shrubs, occurring in dense stands in some areas, provide shade, shelter, foraging, and nesting habitat for a variety of resident wildlife species commonly

associated with landscaped/developed areas. LSA biologists observed feral pigeon, Eurasian collared-dove, Anna's hummingbird, acorn woodpecker, western scrub-jay, American crow, bushtit, European starling, house finch, lesser goldfinch, and house sparrow on site. LSA biologists also observed an acorn woodpecker clan utilizing the sizable clump of giant bird of paradise near the southwest corner of Pueblo and Castillo Streets at what appears to be an auxiliary granary site.

This mixed native and nonnative habitat also provides foraging opportunities for migrating and wintering birds, such as owls and kestrels, ruby-crowned kinglet, yellow-rumped and Townsend's warblers, white-crowned sparrow, and dark-eyed junco. Commentators on the Draft EIR identified the presence of owls and kestrels within the Oak Park neighborhood. Overall, the existing vegetation on the project site represents a minor localized habitat source with limited biological value for urban wildlife, such as birds and other species adapted to urban settings.

➤ **Protected Species (Existing Conditions)**

According to the Conservation Element of the City of Santa Barbara (City) General Plan and the California Natural Diversity Database (CNDDDB), the following rare, threatened, or endangered wildlife species may be found within the City: American peregrine falcon, southern bald eagle, California brown pelican, California least tern, Light-footed clapper rail, Belding's savannah sparrow, black rail, bank swallow, Cooper's hawk, western snowy plover, tidewater goby, southwestern pond turtle, monarch butterfly, California red-legged frog, and two-striped garter snake.

In addition to the CNDDDB, the California Native Plant Society (CNPS) also publishes a rare and endangered species list that is used to identify sensitive plants potentially present within the City. The CNPS and CNDDDB lists include saltmarsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*), yellow dicentra (*Dicentra ochroleuca*), Pholisma (*Pholisma arenarium*), Hoffman's sanicle (*Sanicula hoffmannii*), Contra Costa goldfields (*Lasthenia conjugens*) [formerly Contra Costa Baeria], Coulter's saltbush (*Atriplex coulteri*), Santa Ynax false lupine (*Thermopsis macrophylla*), Sonoran maiden fern (*Thelypteris perbula* var. *sonorensis*), Nuttall's scrub oak (*Quercus dumosa*), Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), Santa Barbara morning-glory (*Calystegia sepium* ssp. *binghamiae*), late-flowered mariposa lily (*Calochortus weedii* var. *vestus*), and Davidson's saltscale (*Atriplex serenana* var. *davidsonii*).

No federal- or State-listed protected species were observed on site or during recent surveys for this EIR or were documented from previous surveys. No protected wildlife or plant species inhabit the site, and the limited urbanized habitat would not be expected to support such species.

➤ **Mission Creek (Existing Conditions)**

A portion of Mission Creek traverses the City of Santa Barbara from the northern City limits to the Pacific Ocean. This drainage flows from Mission Canyon to Oak Park, then parallel to U.S. 101 from Junipero to Gutierrez Streets, and then to the ocean directly east of Stearns Wharf at the foot of State Street. Portions of Mission Creek maintain their natural character with a soft soil bottom and riparian/wetland vegetation, primarily the upper portions in the foothills and lower portions near the Pacific Ocean. Near the project site, Mission Creek is a

concrete-lined drainage channel. Mission Creek continues to function as an important wildlife movement corridor, primarily where the drainage has been maintained in a natural state. In the lower portion of Mission Creek, habitat for two federally-listed aquatic species, the tidewater goby (*Eucyclogobius newberryi*) and steelhead trout (*oncorhynchus mykiss*) is present.

6.4.2 SETTING - SURROUNDING CONDITIONS

SBCH is located in a predominantly urban residential setting. The neighborhood includes commercial offices associated with the hospital, such as medical offices, imaging centers, a child-care center, and single multifamily residences. Similar to the project site, the landscaped/developed habitat includes native and nonnative vegetation and structures (buildings) with associated infrastructure (roads and parking lots). Many of the homes in the adjacent Oak Park neighborhood have small individual front gardens, side yards, and backyards, with patios, lawns, flowering perennials, shrubs, vines, and trees. Trees of various species and statures shade the surrounding streets, and the overall effect is that of an established neighborhood with mature vegetation. Mission Creek is a natural drainage channel located to the south of the south of the project site. This drainage has been channelized with concrete near the project site, however, portions of the drainage upstream and downstream of the project are in their natural state.

➤ Plant Species (Surrounding Setting)

Native and ornamental plants in the neighborhood are similar to those species found on the project site. Trees and plants are primarily of Mediterranean and tropical origin, and include podocarpus, olive, myrtle (*Myrtus communis*), edible fig (*Ficus carica*), bird of paradise, giant bird of paradise, cannas (*Canna* sp.), bananas (*Musa* spp. and *Ensete* spp.), orchid trees (*Bauhinia* spp.), star jasmine (*Trachelospermum jasminoides*), and hibiscus (*Hibiscus sinensis*). Native plants on and off site include coast live oak, island oak (*Quercus tomentella*), and toyon (*Heteromeles arbutifolia*).

➤ Wildlife Species (Surrounding Setting)

Wildlife species in the surrounding neighborhood are similar to the species found on the project site. Since the type of vegetation present is similar to that identified on the project site, the presence of wildlife within the surrounding community, in particular birds, is consistent with the species identified within the project area.

6.5 BIOLOGICAL RESOURCES - PROJECT FEATURES

PF 6-1 The Preliminary Landscape Plan. The project Landscape Plan (Figure 3.6) proposes an increase of approximately 79,184 square feet of green space throughout the project site, resulting in a total landscaped area of 206,134 square feet (vegetation, pathways and other hardscape). Trees, shrubs, ground cover, patios, water features, walkways, and open spaces are included as part of the plan, and existing trees were incorporated into the plan where feasible. The primary features of the plan include a garden at the corner of Pueblo Street and Oak Park Lane, five patient pavilion courtyards, central and western courtyards, and Main Entry landscaping. Additional features of the plan include service and surface parking landscaping,

third-floor terraces, street trees, and parking structure landscaping. Details related to the plant palettes within each element are provided in the Preliminary Landscape Plan for review at the City of Santa Barbara. The proposed plan includes the following elements:

- Planting of approximately 398 new trees over the course of the phased implementation of the project, including 36 new street trees,
- Preservation of 109 trees (including two sycamores, seven jacarandas, and 29 oaks).
- Removal and relocation of 10 existing trees.
- A net gain of 95 trees considering both preserved and planted trees.
- Increase of approximately 79,184 square feet of landscaping (including hardscape).
- Incorporation of the large Moreton Bay fig, which provides a focal point for the new main hospital entry.
- Replacement of ornamental trees including landscape specimens, at a ratio of 1:1, with minimum 15-gallon size trees. All replacement trees would be preserved and maintained for their natural life.

6.6 BIOLOGICAL RESOURCES - LONG-TERM IMPACTS

Potential long-term effects of the proposed project on plants, trees, and wildlife species are evaluated in the discussion below.

6.6.1 PROJECT LONG-TERM BIOLOGICAL IMPACTS

➤ Wildlife and Plant Species Impacts (Project Long-Term)

The proposed project does not involve a substantial change that would affect special-status biological resources. No impacts to protected special status wildlife species would result due to the proposed project. The project site is a landscaped/developed urban habitat and is therefore not a high-quality natural environment that supports protected biological resources. With implementation of the Final Landscape Plan, the proposed project would result in a net increase of 95 trees within the project area. An increase in tree canopy cover would eventually sustain the wildlife species that currently thrive within the existing urban environment. As such, the proposed project will not conflict with the goals, subgoals, and policies of the City's General Plan, as identified in Section 6.3. *Application of tree and bird species protection measures identified as mitigation below would minimize impacts. Project long-term impacts to wildlife and plant species would be less than significant.*

➤ Localized Wildlife/Avian Habitat Impacts (Project Long-Term)

The project site's landscaped vegetation provides a localized minor habitat for birds and other wildlife species adapted to urban environments. In particular, the site's native oak trees support foraging and nesting bird species, notably acorn woodpeckers.

The Tree Disposition Plan, prepared by Arcadia Studios (July 2, 2004), identifies the total number of trees on site as 422. Of these trees, 109 would remain in place, 10 trees would be removed and relocated on site, and 324 trees would be removed. According to the Mudge

Arborist Report, trees to be removed include 45 Canary Island pine (*Pinus canariensis*), 36 fern pine (*Podocarpus gracilior*), 28 lemon gum (*Eucalyptus citriodora*), 27 Mexican fan palm (*Washingtonia robusta*), and 19 [increased to 29] coast live oak (*Quercus agrifolia*). The amount of trees lost represents removal of an estimated 83,592 square feet (1.9 acres) of tree canopy. The proposed loss of biomass and age diversity are important because most of the species of birds found on the project site tend to prefer larger trees and substantial vegetation for cover, foraging, and nesting sites. For example, oaks do not produce acorns until the trees are biologically mature, which can be from 20 to 60 years old.¹ There will be a large but temporal loss of localized avian and wildlife foraging habitat resulting in a decrease in the biological value of the site, resulting in a potentially significant impact. However, there is adequate available similar habitat for wildlife and avian species immediately off site within the Oak Park neighborhood, which would provide roosting, nesting, and feeding opportunities to species displaced by the removal of the existing trees and other vegetation within the project site and during the interim period of maturation of the proposed Landscape Plan.

Per the Conservation Element of the General Plan and the City's ABR Guidelines, removed trees over 4 inches in diameter must be replaced on a one-to-one ratio. Replacement ratio guidelines for removed native oaks range from one-to-one (Conservation Element) to ten-to-one (ABR Guidelines). The tree replacement requirements have been incorporated into the project's preliminary landscape plan where feasible.

The Preliminary Landscape Plan includes 517 trees. This includes the preservation of 109 trees, and the replacement of 398 trees to be planted over the course of the phased construction project. With implementation of the Preliminary Landscape Plan, there will be a net gain of 95 trees and an increase of approximately 79,184 square feet of landscaping.

Implementation of the Preliminary Landscape Plan, which replaces ornamental and oak trees at a 1:1 replacement ratio on site, and Mitigation Measure B-12, which requires replacement of an additional 67 oak trees within one mile of the project site, would minimize potential loss of habitat within the Oak Park neighborhood. Additionally, replanting the existing street trees with healthy new specimens, as proposed, would benefit the neighborhood in the surrounding area as well since existing street trees are exhibiting signs of stress, which may ultimately result in the loss of the existing trees.

In addition to adding several new species of palms and flowering trees, the project proposes to replant many of the same species currently found on the site. However, it would take many years for the tree and plant species to grow to similar sizes and provide a similar level of urbanized avian habitat. New oak specimens planted at the site would take decades to reach maturity and provide acorns for the acorn woodpeckers and western scrub-jays currently found on the site.

Also, because of the difference between existing site and proposed species, there is the potential that the increased number of trees to be planted would not result in a corresponding increase in tree cover. Any potential permanent and temporal loss would be offset by the presence of mature vegetation within the surrounding area. There is adequate similar habitat available for wildlife and avian species within the Oak Park neighborhood that would provide roosting, nesting, and feeding opportunities to species displaced by the removal of the existing trees and

¹ LSA and Doug McCreary, University of California Integrated Hardwood Range Management Program, personal communication

other vegetation within the project site and during the interim period of maturation of the proposed Landscape Plan and off-site replacement of oak trees.

Replacement trees must be monitored after the initial planting to ensure that the trees are successful in the long term. As with trees in most urban environments, both the street and landscape trees would benefit from timely maintenance including regular watering, pest control, soil aeration, regular addition of organic matter (mulch) over the root zone, and fertilization, if necessary. Mitigation Measure B-1 requires the retention of a Project Arborist to oversee the installation and conduct maintenance and monitoring of the existing and replacement trees. Mitigation Measure B-2 requires the long-term monitoring of replacement trees for one year after completion of Phase III for all species of trees other than oaks. Coast live oak trees must be monitored for five years after completion of Phase III.

Additionally, replacement of vegetation, including trees after completion of each phase of construction, would assist in minimizing the temporal loss of roosting, nesting, and foraging habitat for localized wildlife species. Mitigation Measure B-3, which requires replanting of grasses, ground covers, shrubs, and trees in a sequential manner, will provide opportunities for birds and animals to begin recolonizing the new vegetation on site. Mitigation Measures B-8 and B-9 specify tree replacement quantities. Also, the trees and vegetation in the surrounding Oak Park neighborhood would minimize the temporal loss of roosting, nesting and foraging habitat.

The project would have a temporary adverse effect on wildlife habitat. With implementation of the Final Landscape Plan and compliance with the early replacement and long-term monitoring requirements identified in Mitigation Measures B-1 through B-3, impacts would be reduced to less than significant levels

➤ **Moreton Bay Fig Impacts (Project Long-Term)**

Construction of new structures constructed adjacent to the Moreton Bay fig tree have the potential to result in long-term damage to the health of this large tree, including root and limb damage associated with construction of the building and over- or underwatering of the tree during operation of the replacement hospital. Proper maintenance of the tree and appropriate landscape planting and irrigation practices would enhance the survival of this tree.

With implementation of Mitigation Measure B-4, which requires the hospital to provide an annual monitoring report documenting the health of the Moreton Bay fig tree, potential long-term impacts to this tree would be reduce to less than significant levels.

There is the potential that, after implementation of the maintenance measures, the Moreton Bay fig tree may not survive. If the tree does not survive, replacement of the tree would be required with the largest available specimen tree available. Additionally, the applicant would be required to compensate the City in a sum consistent with the appraised value of the tree (prior to any construction). Mitigation Measures B-5, B-6, and B-7 outline the requirements for tree appraisal and replacement. Due to the age and size of the tree, it is unlikely that replacement of the tree would provide a commensurate biological value for a substantial number of years.

Even with implementation of Mitigation Measures B-5 through B-7, the potential for loss of this historic tree remains, and would constitute a potential significant impact.

➤ **Mission Creek (Project Long-Term)**

To reduce peak flooding conditions within the project site, construction of a 10-foot by 10-foot reinforced concrete box (RCB) is proposed from the project site along Junipero Street that would discharge storm flows into Mission Creek through an existing inlet structure located near the Oak Park Lane/Padre Street intersection (PF 10-4). The inlet into Mission Creek would be upsized to accommodate flows from the proposed RCB (PF 10-4), flows associated with the proposed project, and areawide drainage within the Oak Park neighborhood (PF 10-5). Mission Creek is a concrete lined drainage channel in this area that conveys flows from this portion of the City to the ocean. Runoff currently sheet flows within the project site and surrounding neighborhood to existing storm drain facilities that ultimately empty into Mission Creek. These storm drain facilities are currently undersized for receiving a peak storm event and localized flooding occurs.

As described in Chapter 10 (Hydrology), peak storm flows would be slightly lower due to the reduction in impervious surfaces associated with the proposed project. Peak storm flows would be conveyed to Mission Creek via the proposed underground storm drain system. Although the amount of stormwater at this location would increase the total stormflows entering the Oak Park inlet, peak flows within Mission Creek, downstream of the project site would be the same as existing conditions. As described in PF 10-5, the inlet would be upsized to reduce the velocity of flows entering Mission Creek at this location. As the drainage channel is currently concrete lined, there would be no potential for affecting wetland/riparian habitat at the outlet and the potential for downstream impacts to wetland/riparian vegetation downstream due to erosion within the channel would be the same as the existing conditions.

Operational treatment Best Management Practices (BMPs) have been identified in Mitigation Measures HYD-4 (Water Pollution Control), HYD-5 (Project Storm Water Management Plan) and HYD-6 (Operational and Maintenance Plan) to improve the quality of runoff from the project site in the long term. This reduction would improvement the quality of the runoff from the project site and assist in improving the quality of water entering Mission Creek. This improvement would have a net benefit on downstream resources within Mission Creek.

With implementation of PF 10-4 and PF 10-5 and Mitigation Measures HYD-4 through HYD-6, potential impact to downstream resources within Mission Creek would be reduced to less than significant.

6.6.2 BIOLOGICAL RESOURCES - MITIGATION MEASURES (PROJECT LONG-TERM)

The following measures are intended to reduce potential long-term impacts to biological resources on the site to less than significant in the long term.

B-1 Designation of a Project Arborist. Prior to issuance of the first grading or demolition permit, the project applicant shall provide evidence to the Community Development Department for its review and approval that a Project Arborist has been retained to implement and/or monitor implementation of mitigation measures for retention, removal, and replacement of trees outlined in Chapter 6.0 of this EIR. The Project Arborist shall be a Certified Arborist accredited by the International Society of Arboriculture (ISA) or a Consulting Arborist registered by the American Society of Consulting Arborists (ASCA). The Project Arborist shall

coordinate with the applicant, construction personnel, the Project Environmental Coordinator (PEC), and the landscape architect for all phases of construction and maintenance. Memos prepared by the Project Arborist documenting compliance with tree retention, removal, and replacement measures shall be sent by the applicant to the PEC on a schedule to be determined prior to construction.

B-2 Post-Construction Monitoring of Existing and Replacement Trees. The Project Arborist shall monitor and report on the success of site replacement trees and conditions of existing trees not affected by construction activities for at least one year after completion of Phase III or any subsequent phase of the Specific Plan for all tree species, except coast live oaks. Existing and replaced coast live oak trees shall be monitored for five years after completion of Phase III or any subsequent phase of the Specific Plan. Monitoring reports prepared by the Project Arborist shall be submitted by the applicant to the City Arborist and Community Development Department on a quarterly basis documenting the conditions of the trees and identifying any remedial actions required of the applicant.

B-3 Landscape Plan Implementation. Prior to issuance of the first demolition or grading permit for each phase of construction of the hospital or building permit for the parking structures and day-care facilities, whichever is appropriate, the project applicant shall provide evidence to the Community Development Department, for its review and approval, that the contract specifications include a requirement that all vegetation identified in the Final Landscape Plan be installed prior to completion of the construction phase.

B-4 Moreton Bay Fig Maintenance Plan. Prior to issuance of a grading permit for Phase III of the proposed project, the project applicant shall provide a Moreton Bay Fig Tree Maintenance Plan for review by the City Arborist. The Maintenance Plan shall identify measures to be implemented by the applicant during and after installation of landscaping in Phase III to promote the health of the tree. These measures shall include but not be limited to supplemental irrigation, addition of mulch materials beneath the canopy, and avoidance of mulch and irrigation near the woody buttress roots. The Maintenance Plan shall include requirements for annual reporting of the tree's condition and the applicant's compliance with the requirements of the Plan prepared by a Certified Arborist, accredited by the International Society of Arboriculture (ISA) or a Consulting Arborist registered by the American Society of Consulting Arborists (ASCA). The annual reports shall be provided to the City Arborist for review and approval for a period of five years after completion of Phase III of the proposed project.

B-5 Moreton Bay Fig Tree Appraisal. Prior to issuance of the first demolition permit, the applicant shall provide an appraisal of the Moreton Bay fig tree for review and approval by the City Arborist. The appraised value of the tree shall be determined by a Certified or Consulting Arborist specializing in tree appraisal and will take into consideration the difficulty of finding a replacement specimen tree of the same species. The appraised value will also include an estimate of the cost of removing the existing tree and an estimate of replanting a tree into the existing landscape.

B-6 Moreton Bay Fig Tree Replacement. If the Moreton Bay fig tree fails after implementation of the maintenance measures outlined in Mitigation Measure B-4, or due to lack of implementation of the maintenance measures, the applicant shall replace the tree with the largest available specimen tree of the same species. A Moreton Bay Fig Tree Replacement Plan shall be prepared to outline the procedures for planting and long-term maintenance of the

replacement tree. The Replacement Plan shall require submittal of an annual monitoring report prepared by a Certified Arborist or Consulting Arborist for a period of five years after replacement of the tree.

B-7 Compensation for Moreton Bay Fig Tree Loss. If the Moreton Bay fig tree fails after implementation of the maintenance measures outlined in Mitigation Measure B-4, or due to lack of implementation of the maintenance measures, the applicant shall compensate the City commensurate with the appraised value of the tree (Mitigation Measure B-5). This compensation payment shall be submitted to the City Manager for his acceptance. The compensation payment shall be applied toward planting specimen trees within the Oak Park neighborhood pursuant to the City's Master Street Tree Plan implemented by the Forestry Section of the Parks and Recreation Department. Failure of the tree due to acts of nature, such as heavy wind conditions, or regulatory requirements, such as mandatory water rationing, that are not related to the construction of the proposed hospital constitute potential reasons for waiving implementation of this measure. Evidence of these conditions or any other appropriate factors shall be prepared by a Certified Arborist or Consulting Arborist and provided by the applicant to the City Arborist and Community Development Department for their consideration of a waiver of this compensation.

6.6.3 SPECIFIC PLAN LONG-TERM BIOLOGICAL IMPACTS

Potential future phases of the Specific Plan including the reconstruction of the South, East, and Centennial Wings and Buildings G and K, have the potential to remove additional mature trees and ornamental landscaping adjacent to the buildings and street trees along this portion of Bath and Pueblo Streets. Similar to the proposed development plan, loss of trees and localized wildlife/avian habitat would also occur as a result of the implementation of a fourth nursing cottage. Additionally, runoff associated with an additional nursing pavilion could affect downstream resources in Mission Creek. Potential future development as part of the Specific Plan would be subject to the landscaping requirements as identified in Table 3-C, Specific Plan Development Standards, for replacement landscaping. Additionally, the Landscape Plan for any future Specific Plan development would be subject to design review and approval by the Architectural Board of Review (ABR). ***With implementation of the Specific Plan requirements and ABR review, as well as continued application of Mitigation Measures B-1 through B-3, identified above, and HYD-4 through HYD-6 (identified in Chapter 10) potential impacts to localized habitat and ornamental and native trees and vegetation would be reduced to less than significant levels.***

6.6.4 BIOLOGICAL RESOURCES MITIGATION MEASURES (SPECIFIC PLAN LONG-TERM)

Compliance with Mitigation Measures B-1 through B-3, identified above, would be required to reduce potential long-term biological impacts of the proposed Specific Plan.

6.6.5 CUMULATIVE LONG-TERM BIOLOGICAL IMPACTS

The project site does not constitute an important natural habitat or ecological resource but does contribute incrementally to cumulative biological functions and provides localized avian habitat. In particular, the site's individual oak trees represent an important biological resource and support breeding and nesting of bird species. Native oak trees are considered a local species of particular sensitivity from a cumulative biological perspective due to gradual loss of mature native oaks to urbanization throughout the County. However, in this setting, native oaks mingle with nonnative species to create an urban habitat that hosts a number of native and nonnative wildlife species. Except for certain species such as the acorn woodpecker, which is dependent on oak acorns as a food source, nonnative trees and shrubs provide as much important habitat as oaks, especially given the number of nonnative trees on the project site.

Development within the Oak Park neighborhood currently consists of intensification of existing residential uses and/or conversion of residential uses to hospital-related medical offices. This type of development is expected to occur within the foreseeable future. Ongoing development within the Oak Pak neighborhood has the potential to remove mature ornamental and native trees and shrubs, which provide localized habitat for wildlife and avian species. Each of these projects would have to mitigate for any loss in wildlife habitat, protected species, or reduction in native specimen trees resulting from their development.

Although the proposed project would contribute to a temporal loss of habitat for birds favoring trees, in particular coast live oaks as habitat in the immediate project site, there are mature trees and vegetation in the surrounding area. There is adequate and similar available habitat for avian and wildlife species within the Oak Park neighborhood, which would provide roosting, nesting, and feeding opportunities to species displaced by the gradual removal of existing trees and during the maturation of the vegetation proposed by the Landscape Plan. As proposed, the Landscape Plan will result in a net increase of 95 trees and a 1:1 replacement of oaks within the project site. Ultimately, the proposed Landscape Plan would result in a net benefit on localized habitat through the introduction of more trees, both native and ornamental, than what are currently present on the project site. ***With implementation of the Landscape Plan and Mitigation Measures B-1 through B-3, which require designation of a Project Arborist and long-term maintenance and monitoring of replacement trees, the proposed project's contribution to cumulative localized wildlife and avian habitat is further minimized and would be reduced to less than significant levels.***

Runoff from cumulative projects within the Oak Park neighborhood has the potential to impact downstream wetland/riparian vegetation within Mission Creek. ***Compliance with Mitigation Measures HYD-4 through HYD-6 and implementation of PF 10-4 and PF 10-5, the proposed project's contribution to cumulative impacts to biological resources within Mission Creek is reduced to less than significant.***

There are no other development projects that would affect the viability of the Moreton Bay fig tree. There are no cumulative impacts to this resource beyond the effects of the proposed project, identified above. ***As described above, with successful implementation of Mitigation Measure B-4, potential project impacts and cumulative contribution to impacts to the Moreton Bay Fig tree would be reduced to less than significant levels. As also described above, if Mitigation Measure B-4 is not successful, the loss of the tree would be considered a***

significant adverse project and cumulative impact even with implementation of Mitigation Measures B-5 through B-7 which require replacement of and compensation for the tree.

6.6.6 BIOLOGICAL RESOURCES - MITIGATION MEASURES (CUMULATIVE LONG-TERM)

Compliance with Mitigation Measures B-1 through B-7, identified above, and HYD-4 through HYD-6 (identified in Chapter 10) would be required to reduce potential long-term biological impacts of the proposed Specific Plan.

6.7 BIOLOGICAL RESOURCES - TEMPORARY CONSTRUCTION IMPACTS

6.7.1 PROJECT CONSTRUCTION - BIOLOGICAL IMPACTS

The proposed project would require the removal of numerous trees and much of the existing landscaping on the project site. Vegetation removal would coincide with the demolition activities identified in the construction phasing plans. The following discussion describes the potential construction-related impacts to localized wildlife/avian habitat, ornamental trees, coast live oak trees, and the Moreton Bay fig.

➤ Localized Wildlife Habitat Impacts (Project Construction)

As described in Section 6.6, the project site is not considered a high quality natural environment; however, there is mature vegetation that provides habitat for local wildlife species. The localized wildlife habitat would be disrupted by temporary construction impacts including the loss of vegetative cover and disturbance from noise and dust generated by demolition and construction activities. Wildlife would likely disperse during construction and relocate to similar habitats within the surrounding neighborhood, which contains a similar mix of mature ornamental and native tree and shrub species as the project site. For example, there is an adequate number of oak trees within the Oak Park neighborhood to sustain species, such as acorn woodpeckers, that utilize these trees for roosting, foraging, and nesting habitat.

The incorporation of Mitigation Measure B-3 requires implementation of the Landscape Plan, which would replace lost trees and vegetation on the site. Wildlife would eventually return to the site after the new planting of trees and shrubs has become established and provides cover and habitat. *Incorporation of Mitigation Measure B-3 would reduce the impacts associated with the loss of trees and vegetation on-site to less than significant.*

➤ Nesting Birds Impacts (Project Construction)

Temporary disruption of the site's vegetation and urban wildlife would occur during all four phases of project construction due to the removal of landscaping and trees. Nesting birds have been observed on site, and due to the size of the site and the existing landscaping, it is anticipated that birds would continue to nest on site in the future. Demolition, grading, and construction activities would produce noise and vibration effects that have the potential to adversely affect the ability of birds to nest on site. As described in Section 6.3, the federal

Migratory Bird Treaty Act prohibits the disturbance of birds while they are actively nesting to minimize potential impacts to nesting species.

Mitigation Measure B-8 will be implemented to restrict vegetation removal to outside of the breeding season for nesting birds to the maximum extent feasible. *With implementation of Mitigation Measure B-8, impacts to nesting birds would be considered less than significant.*

➤ **Ornamental Tree Impacts (Project Construction)**

The following discussion describes impacts to existing ornamental trees. Impacts to oak trees are analyzed separately below. There are 364 ornamental trees within the project site according to the Tree Disposition Plan (August 2004). The Plan identifies 295 trees that would be removed by construction of the proposed project, 80 trees that will remain on site, and 10 trees that will be removed and relocated on site. Protection of trees remaining on site and replacement of removed trees are discussed below.

Ornamental Tree Protection. Existing, protected trees on the project site are located primarily along the edges of the project site and would experience adverse impacts due to dust generated from demolition and construction activities, root disturbance, disruption of regular watering schedules, changes in solar exposures, dewatering activities, removal and addition of structures, and placement of impervious surfaces and incompatible landscaping underneath trees. *These impacts would occur during all phases of demolition and construction and would result in potentially significant impacts to native specimen trees (per significance threshold [c], described in Section 6.1 above).*

Potential indirect impacts to trees include root disturbance, disruption of watering regimes, soil alteration from dewatering activities, and changes in solar exposures. Tree roots would be negatively impacted by any change in activity in the root zone, including soil compaction from foot or vehicular traffic, trenching or grading that would tear or remove roots, disruption in irrigation timing (causing drought or flood stress), and dewatering activities that would cause soil erosion, flooding, and soil compaction in the root zone.

Changes in solar exposure may negatively impact the trunk and canopy of certain tree species, causing sunscald to trunk, limbs, and leaves. The project arborist would direct the use and removal of shade cloth to protect existing trees from sunscald, as outlined in Mitigation Measure B-10.

A preliminary Tree Mitigation Plan was prepared by the applicant addressing potential indirect effects to existing trees slated to remain on the project site during demolition and construction activities. Mitigation Measure B-10 requires the development and implementation of a Tree Protection Plan and includes the recommendations from the Tree Mitigation Plan and additional requirements to minimize stressful conditions on protected trees prior to the start of and during construction. The measures include requirements for limiting activities within the root zone and canopy of protected trees, maintaining appropriate watering regimens, dust control, fertilization, pest control, protective barrier fences, and monitoring and maintenance during construction.

Placement of hardscape features, such as retaining walls, planters, concrete, and paving materials, as well as certain types of ground cover and shrub species, could prove detrimental to the long-term viability of protected trees. Hardscape features can result in introduction of impermeable surface area, thus limiting the amount of water reaching the root system. Some

ground covers and shrubs have watering requirements that are incompatible with the existing trees on site. These conditions have the potential to result in stress and may inhibit the long-term success of the remaining trees on site. These conditions could result in potentially significant impact to these trees.

Restriction of the types of impermeable surfaces and landscaping materials that can be planted under existing trees would reduce the potential for introducing conditions that will stress these resources. Mitigation Measure B-11, which limits the type of impervious and landscape materials that can be placed underneath and around trees, will avoid introduction of inappropriate irrigation regimes that inhibit tree growth.

With implementation of Mitigation Measures B-10 and B -11, potential direct and indirect construction effects, which could result in stressful conditions for protected trees, would be reduced to less than significant levels.

Tree Replacement. Approximately 324 trees would be removed as a result of the proposed project throughout construction Phases I through IV. As discussed above, these removals represent a loss of an estimated 83,592 square feet (1.9 acres) of tree canopy that provides habitat for local wildlife, as well as providing shade opportunities and contributing to the aesthetic character within the Oak Park neighborhood. As described in the Preliminary Landscape Plan, all trees removed as part of demolition and construction activities would be replaced on a 1:1 basis within the project site. Replacement trees shown in the Preliminary Landscape Plan are a minimum container size of 15 gallons. This replacement ratio is consistent with the minimum ratio identified in the Conservation Element of the City's General Plan. ***With implementation of the replacement ratios identified in the Preliminary Landscape Plan, potential impacts resulting from the loss of ornamental trees would be less than significant.***

Oak Tree Protection/Replacement. Native oaks are considered a local species of particular sensitivity due to a gradual loss of mature trees through urbanization. As described in Section 6.1, substantial loss of, or damage to, important native specimen trees may result in significant impacts. As identified in the Tree Disposition Plan, there are 58 oaks located on the project site. Of these, 29 oak trees, or 50 percent, will be removed. The total number of trees identifies all oak trees regardless of trunk diameter size. Of the 29 oak trees removed, 10 are less than 5 inches, 8 between 6 and 11 inches in diameter, 5 are 12 to 18 inches in diameter, 1 is 19 to 24 inches in diameter, and 5 are greater than 25 inches in diameter. Oak tree removals by phase are Phase I (21 trees), Phase II (5 trees), and Phase III (3 trees). Protection of the remaining oaks and replacement of removed oaks are discussed below.

Oak Tree Protection. As described above, ***potentially significant impacts would result from placement of impervious materials and inappropriate vegetation under trees, including oak trees. Mitigation Measure B-11 identifies restrictions for landscaping under existing trees and also includes specific requirements for oak trees that would reduce potential effects to oak trees due to these factors to a less than significant level.***

Oak Tree Replacement. The Preliminary Landscape Plan indicates that all trees to be removed would be replaced by 15-gallon trees at a ratio of 1:1 (29 oaks). However, the applicant's Arborist Report concludes that a 1:1 replacement of oaks would not provide equivalent canopy or habitat value for decades due to the long maturation period for this species and recommends higher mitigation ratios and larger box sizes for the oaks.

The City's ABR guidelines and Tree Protection Ordinance and the Arborist's Report (Mudge, May 2004) were reviewed in determining the appropriate ratio and size of replacement trees. Although the Arborist's Report suggested replacement with 36–48 inch box specimen trees, a mix of 15-gallon and 24-inch box trees has been identified for replacement of oaks impacted by the project. These sizes were determined appropriate in consideration of the City's guidelines, the area available on site for the replacement of trees, and the potential for long-term viability and success. Although a larger size replacement tree would initially provide greater biomass, the size of tree recommended would take longer to adapt to new growing conditions and may mature more slowly than the moderate-sized trees identified or possibly not survive. Moderate-sized trees would adapt easier to changes in environmental condition and would generally thrive quicker than larger trees, improving the potential for success. Additionally, the size recommended would provide a more natural-looking tree that will grow into the existing environment, similar to what has occurred with the existing trees. Larger trees are older and have been pruned more over time, resulting in a less natural look when placed within the context of the rest of the proposed landscaping trees and shrubs.

Mitigation Measure B-12 identifies appropriate replacement ratios for oak trees according to the size of the tree to be removed. Applying these replacement ratios to the quantity and size of impacted trees, identified above, the proposed project would be responsible for planting of 96 oak trees (64 15-gallon trees and 32 24-inch box trees). In addition to the 29 oak trees identified in the Landscape Plan, replacement of an additional 67 oak trees would be required. There are three options for replacement of these additional trees: (1) increase the number of oak trees in the Landscape Plan; (2) plant trees in an off-site City-owned property, such as Oak Park; or (3) plant additional oak trees as street trees within the Oak Park neighborhood. Sufficient area for replacement of all oak trees on site does not appear feasible given the number of trees and planting requirements of this species, and off-site mitigation will be required.

Off-site replacement of oak trees should be conducted within one mile of the project site within the Oak Park neighborhood as to achieve a no net reduction in oak trees. The City Arborist was contacted regarding locations for potential off-site replacement of oak trees. According to the City Arborist, there is the potential to plant up to 50 street trees within the Oak Park neighborhood, primarily along Oak Park Lane, Pueblo Street, Bath Street, and upper State Street, up to 6 trees in Oak Park, and up to 25 oak trees in Skofield Park. Adequate opportunity exists off site to mitigate the additional 67 oak trees required as part of Mitigation Measure B-12.

With implementation of Mitigation Measure B-12, replacement of impacted oak trees would result in planting of 96 oak trees, 38 more than currently exists on the site. This net increase in oak trees would result in a substantial benefit within the project site and surrounding Oak Park neighborhood, both by providing wildlife habitat and shading and aesthetic enhancements in the long term. ***Potential impacts resulting from loss of oak trees is reduced to less than significant levels with implementation of Mitigation Measure B-12.***

Moreton Bay Fig. Demolition of Buildings B & C in Phase III could substantially damage the fig tree due to falling debris and the large amount of dust expected to be generated. The building side of the tree trunk would also be newly exposed to sunlight, which could cause severe sun scald on that side of the trunk.

Construction of the main entry of the replacement building and associated hardscape features (planters, sidewalks, and curb) would encroach substantially into the root zone of the Moreton

Bay fig tree on its south side, reducing its rooting area from approximately 86 feet to approximately 60 feet. Additionally, construction of one of the new patient pavilions would require heavy pruning of limbs on the easterly side of the tree to accommodate the new structure. ***These encroachments may cause substantial damage to the tree, and pursuant to significance threshold (c) above, impacts to the fig tree during Phase III construction would result in a potentially significant impact.***

Mitigation measure B-13 identifies measures that need to be taken to address impacts to the Moreton Bay Fig tree prior to and during construction to ensure adequate protection of the tree. Due to the current condition of the tree, intensive invigoration techniques are required to improve the overall health of the tree prior to initiation of construction activities in the vicinity of the tree. These techniques may include deep watering, deep root fertilization, application and maintenance of mulch underneath the tree and prophylactic pruning. Additionally, protection measures outlined in Mitigation Measures B-10 and B-13 will further ensure protection of the tree from construction activities. ***With implementation of Mitigation Measure B-10, potential impacts to the Moreton Bay fig tree would be reduced to less than significant levels.***

➤ **Mission Creek (Project Construction)**

Although there are no wetland or riparian resources within this portion of Mission Creek, modification of the existing inlet structure at Padre Street would potentially alter stormwater flow and quality at this location. Changes in storm flows or quality could affect downstream erosion rates and further degrade the quality of water that enters Mission Creek, ultimately reaching the Pacific Ocean. The Corps of Engineers (Corps) and the California Department of Fish and Game (CDFG) must be notified that potential direct effects to the drainage channel and downstream flows could occur. The Central Coast Regional Water Quality Control Board would also need to be notified due to the potential for downstream erosion associated with the increased discharge at this point would also be a concern.

Construction within the channel would be covered under Nationwide Permit No. 7, which addresses reconstruction of existing storm drain outfalls or Nationwide Permit 49 for residential, commercial, and industrial development and supporting infrastructure. Notification of the Corps of Engineers verifying coverage of the proposed reconstruction of the outfall under Nationwide Permit No. 7 or 49 would be required. Since there are no wetland/riparian resources located within the channel, the velocity of peak storm flows have been minimized through PF 10-5, and potential short-term water quality impacts would be minimized during construction through implementation of HYD-8 (State General Construction Activity Permit), HYD-9 (Erosion Control Plan), HYD-11 (Dewatering), HYD-12 (Discharge of Hazardous Substances), and HYD-13 (Water Pollution Control), no additional mitigation would be required by the Corps.

Notification of the CDFG would also be required since there is alteration of a stream course. This notification requires documentation of all minimization measures that would be implemented during construction to limit erosion and water quality impacts within the drainage. Given that no wetland/riparian resources are present within the channel and the mitigation measures (HYD-8, HYD-9, HYD-11, and HYD-13) have been identified to reduce short-term water quality impacts during construction, no additional mitigation would be required.

With compliance to Mitigation Measures B-14 through B-16 and HYD-8, HYD-9, HYD-11, and HYD-13, potential effects to Mission Creek associated with the proposed reconstruction of the storm drain outlet structure are reduced to less than significant.

6.7.2 BIOLOGICAL MITIGATION MEASURES (PROJECT CONSTRUCTION)

The following mitigation measures shall be incorporated into the Construction Management Plan.

B-8 Nesting Season. Prior to issuance of any demolition, grading, or building permit, the applicant shall provide evidence that the contractor specifications include a requirement to remove vegetation outside the breeding/nesting season (January 15 through August), if feasible. If removal of vegetation during the breeding season is required due to construction or phasing logistics, documentation of these conditions, and their effect on vegetation removal, shall be provided to the Community Development Department. The language shall be submitted to and approved by the Community Development Department. The language shall include a requirement for the following: 1) if vegetation removal must occur during the breeding season, pre-construction surveys shall be conducted by a qualified biologist in the appropriate habitats within, and up to, 100 feet from the proposed vegetation removal area to identify nesting birds within or adjacent to the removal area, 2) if active nests are observed within or adjacent to the vegetation removal area, the Project Biologist shall establish an appropriate buffer between the nest and construction activities until either the young have fledged or the nest becomes inactive, depending on the biological circumstances and species involved.

B-9 Tree Replacements. Prior to issuance of a demolition for any phase, a Final Landscape Plan shall be submitted for review and approval by the Community Development Department and City Arborist. The Plan shall include a minimum 1:1 replacement of removed trees and 15 gallon container size. Additionally, measures for removal, transplantation, maintenance, and monitoring of existing trees replaced on site shall be included in the Plan. The Plan shall also indicate that trees shall be replaced at the end of each phase of building construction, so vegetation will gradually be replaced throughout the multiyear project.

B-10 Existing and Replacement Tree Protection during Construction. Prior to issuance of any demolition, grading, or building permit, the project applicant shall prepare a Tree Protection Plan and submit the Plan for review and approval by the Community Development Department and City Arborist. The project applicant shall also provide evidence to the Community Development Department that the protective measures outlined in the Tree Protection Plan have been incorporated into the contract specifications prior to issuance of any of the permits identified above. Protection measures within the Plan shall include, but not be limited to, the following:

- The construction contractor shall work with the Project Arborist to ensure that all trees, notably the Moreton Bay fig, are protected. The contractor shall comply with modifications to demolition, grading, or building activities recommended by the Project Arborist in the field during construction.
- The construction contractor shall ensure that all trees adjacent to construction areas shall be fenced with four- to six-foot-high chain-link fence at the outside edge of the drip line plus

six feet or as designated by the Project Arborist. All construction-related activities shall be prohibited within these fenced areas. The construction contractor shall place signs stating "Tree Protection Area" at 15-foot intervals on the fence. Fencing and signs shall remain in place throughout all grading and construction activities.

- As determined necessary by the Project Arborist, temporary fencing shall be installed to discourage pedestrian access to the tree.
- The construction contractor shall designate a landscape maintenance monitor to work with the Project Arborist to ensure that all protected trees and plants within the construction site are properly irrigated and maintained for the duration of construction activities.
- The Project Arborist shall be present during the course of any pruning, cutting, grading, or excavation near protected trees.
- No construction materials, debris, soil, or excavated material shall be stored within the root protection zone (six feet outside of the drip line or outer perimeter of leaf canopy).
- Parking and/or vehicular traffic shall not be permitted within six feet of the outside edge of the drip line.
- Trees shall be watered thoroughly prior to beginning of construction and the root protection zone will be covered with a two-inch layer of chipped bark mulch. Mulch may not be piled against any trees.
- If the protected root zone of any tree is compromised (i.e., for temporary access), the root zone shall be protected with a six-inch layer of mulch and covered with a double layer of three-fourths-inch plywood overlapped at the seams. Where vertical excavations expose roots, the exposed face of the trench shall be covered with burlap and kept continuously damp to limit desiccation of the root zone. Exposed roots shall be covered with temporary earth or packed with moistened peat moss and wrapped with burlap. Exposed roots shall not be allowed to dry out before permanent backfill is placed. Exposed roots shall be shaded from direct sunlight and watered and maintained in a moistened condition until permanent backfill is placed.
- Root systems of trees, shrubs, and ground covers shall be protected from damage due to spillage or application of chemical compounds, such as paints, finishes, or stucco.
- Root systems shall be protected from flooding, erosion, or excessive wetting resulting from dewatering operations, if necessary.
- Within the tree drip line, roots shall be excavated by hand using narrow tine spading forks and comb soil. Roots beyond the tree drip line can be cut by hand or with a diamond bladed machine saw (roots may not be cut with a backhoe, loader, excavator, or standard trencher). Branches and roots shall only be cut with sharp, sterile instruments designed for the purpose. Roots shall not be broken, pulled, or chopped, and roots larger than two inches in diameter shall not be cut. If cutting of roots cannot be avoided, roots shall be severed approximately three inches back from new construction. Where large lateral roots are encountered, they shall be exposed beyond the limits of excavation and bent into backfill areas wherever possible. Mechanical excavation for leveling the ground surface near existing trees prior to paving shall not be permitted.

- Excavation within the drip line of trees shall only occur where necessary to complete the requirements of the project.
- All plant parts (including the root zone) shall be protected from dumping of refuse, concrete, paint, or plaster washout or chemically injurious materials or liquids. Continuous puddling or running water shall be prevented within drip lines of all trees and plants.
- The project arborist will work with the designated landscape maintenance individual and construction site superintendent to provide on-going tree protection through the duration of the project phases. The primary focus of tree protection maintenance on site will be checking the protective barrier fencing on a minimum daily basis. Any change in placement of the protective fencing will be reported to the project arborist, site superintendent, and City inspector. Other maintenance activities to maintain the health and vigor of the existing site trees will be directed by the Project Arborist, including monthly (minimum) wash-down of foliage, fertilization and pest control if necessary, and the direction of shadecloth placement and removal.
- Only trees designated for removal on the approved Final Landscape Plan will be removed; any protected trees (i.e., any tree identified on the tree protection plan) that are removed, relocated, and/or damaged (more than 20 percent encroachment into the critical root zone) will be replaced at a ratio of 10:1. The Project Arborist shall identify any trees that are negatively impacted due to construction and work with the project landscape architect and the City to determine suitable replacement size, species, and timing.
- Replacement trees that are lost during construction shall be replaced on a 1:1 basis. The Project Arborist shall identify any replacement trees that are inadvertently lost due to construction and work with the project landscape architect and the City to determine suitable replacement size, species, and timing.

B-11 Landscaping Under Preserved Trees. Prior to issuance of any building permit, landscaping plans and specifications shall be submitted to the Building Department for its review and approval. Landscaping provided under preserved trees shall be compatible with preservation of the trees and prohibited under any oak tree. All proposed utility corridors, irrigation lines, tree wells, and retaining walls shall be shown on the Final Tree Protection Plan. The final design plans shall minimize the amount of paving and other nonpermeable surface encroachment under native and specimen tree canopies/drip lines. If paving or other nonpermeable surfaces encroach within a canopy, no more than 25 percent of the total area beneath the canopy drip line shall be covered, and paving may only be placed by hand or with hand tools. Any paving shall be of pervious material (gravel, brick without mortar, or turf block). For oak trees, no paving other than pervious decomposed granite or similar material shall be permitted under the canopy due to oaks' sensitivity to paving. No type of surface, either pervious or impervious, shall be placed within a six-foot-radius of oak tree trunks. These areas should remain uncovered, natural, and dry, particularly during the summer.

B-12 Coast Live Oak Tree Replacement Plan. Prior to issuance of demolition or grading permits for any phase where existing oak trees would be affected, an Oak Tree Replacement Plan, which identifies on-site and off-site locations for replacement of affected oak trees, shall be prepared by a Certified Arborist or Consulting Arborist for review and approval by the City Arborist. Off-site replacement shall be conducted within one mile of the project site. The

following replacement ratios shall be used to determine the number of trees that must be replaced.

Existing Tree Size (dbh)	Mitigation Ratio	Size(s) of Mitigation Trees
5" and less	1:1	One 15-gallon
6–11"	2:1	Two 15-gallon
12–18"	3:1	Two 15-gallon and one 24-inch box
19–24"	5:1	Three 15-gallon and two 24-inch box
25" and up	10:1	Five 15-gallon and five 24-inch box

The Plan shall also identify on-site and off-site locations for replacement trees, tree planting, maintenance and monitoring plans, and specifications. Monitoring of on-site replacement oaks by the Project Arborist shall be required for a minimum of five years after planting, with yearly reports submitted to the Community Development Department and the City Arborist. Trees replaced off-site shall be monitored and maintained by the property owner. Trees planted on City property shall be monitored and maintained by the City Arborist. The City Arborist shall provide a monitoring report to the Community Development Department on an annual basis for a period of five years, documenting the monitoring and maintenance activities undertaken for both on-site and off-site replacement trees, success of these activities and identifying remedial measures, if required. All replacement and mitigation trees, including trees replaced off-site, shall have a 100 percent success rate and shall be healthy, vigorous, and exhibiting recent growth at the end of five years. If initial efforts are unsuccessful, replacement oak trees will be replanted at a 1:1 ratio until a 100 percent success rate is achieved.

B-13 Moreton Bay Fig Invigoration and Protection. The Project Arborist shall monitor the condition of the Moreton Bay fig tree specifically in regard to the action plan and tree protection recommendations specified in the SBCH Moreton Bay Fig Report, dated September 2004. The report's recommendations should be written into the construction specifications for the hospital retrofit project, with verification provided to the City prior to issuance of any demolition or grading permit for Phases II and III. The applicant shall comply with any field design modifications recommended by the Project Arborist.

The report includes an action plan with a timeline of recommendations that begin with tree invigoration prior to the start of construction. Tree invigoration action items for the first two years (2004 to 2006) include monthly deep watering from April through October, yearly mulch applications, yearly deep root fertilization, and specific pruning in October 2005. Hand tools will be used to demolish the walkway on the west side in November 2006. The watering, fertilizing, and mulch application schedule continues through 2010 and thereafter on an ongoing basis. Roots and limbs on the north and east sides will be cut in November 2009. All work will be done under the direction of the Project Arborist.

B-14 Nationwide Permit. Prior to issuance of a grading permit for reconstruction of the existing storm drain outfall at Padre Street, the project applicant shall notify the Corps of Engineers requesting verification from the Corps of Engineers of the use of a Nationwide Permit to cover activities within Mission Creek. This notification shall identify measures that would be undertaken as part of project operation and during the construction of the proposed

improvement in Mission Creek to reduce the potential for downstream erosion within the channel. Verification from the Corps of Engineers shall be provided to the Public Works Department and any conditions identified by the Corps included in the contract specifications for this improvement.

B-15 Water Quality Certification. Prior to issuance of a grading permit for construction of the reconstructed storm drain outfall at Padre Street, the project applicant shall obtain a Section 401 Certification from the Regional Water Quality Control Board-Region 3. Approval of the Section 401 Certification shall be provided to the Public Works Department and any conditions of approval included in the contract specifications for this improvement.

B-16 1602 Streambed Alteration Agreement. Prior to issuance of a grading permit for reconstruction of the storm drain outfall at Padre Street, the project applicant shall notify the California Department of Fish and Game of the intent to modify Mission Creek. This notification shall identify the measures that would be undertaken during operation of the proposed project and the construction of the proposed improvement within Mission Creek to reduce the potential for downstream erosion within the channel. A Streambed Alteration Agreement, concurrence on a Finding of No Substantial Effect or Finding of Operation by Law issued by the CDFG shall be provided to the Public Works Department and any conditions identified by CDFG included in the contract specifications for this improvement.

6.7.3 SPECIFIC PLAN CONSTRUCTION - BIOLOGICAL IMPACTS

Demolition of the existing structures and construction of the fourth patient pavilion associated with the Specific Plan would have the potential to remove existing trees, indirectly impacting remaining trees due to the proximity to these development activities, and affect localized wildlife habitat, similar to the proposed development identified above. The Specific Plan would have direct impact on Mission Creek. These impacts may result in significant effects to biological resources. There are approximately 23 trees which could be affected by potential future construction of a fourth nursing pavilion, based on the Tree Disposition Plan. Of these trees, there are two oak trees on Pueblo Street, west of Bath Street. As there are currently no design plans available for this potential additional development (not part of the proposed project), exact impacts to trees and potential canopy cover cannot be ascertained. ***With implementation of Mitigation Measures B-8 through B-12, described above, which minimize potential construction-related direct and indirect effects on trees and wildlife habitat, potential construction impacts of future development allowed under the Specific Plan would be reduced to less than significant levels.***

6.7.4 BIOLOGICAL MITIGATION MEASURES (SPECIFIC PLAN CONSTRUCTION)

Mitigation Measures B-8 through B-12 are required to reduce potential construction impacts associated with construction of the Specific Plan.

6.7.5 CUMULATIVE CONSTRUCTION - BIOLOGICAL IMPACTS

Similar to the analysis of the proposed project's contribution to cumulative effects from the operation of the development plan, on-going construction activities within the Oak Park neighborhood would have the potential to remove additional mature trees and shrubs with related impacts to localized wildlife habitat and affect Mission Creek. The proposed project's contribution to cumulative construction impacts to biological resources would be reduced with implementation of Mitigation Measures B-8 through B-16, which required protection of preserved trees and replacement of removed trees and minimize potential impacts to the overall tree canopy within the project site due to the addition of 95 trees over the existing condition, planting of 67 oaks within one mile of the project site and compliance with the Clean Water Act and Fish and Game Code. *With implementation of these mitigation measures, potential cumulative construction impacts to biological resources would be reduced to less than significant levels.*

6.7.6 BIOLOGICAL MITIGATION MEASURES (CUMULATIVE CONSTRUCTION)

Mitigation measures B-8 through B-16 are required to reduce the project's contribution to cumulative construction impacts to biological resources.

6.8 SUMMARY OF BIOLOGICAL RESOURCES IMPACTS

The proposed project is expected to result in potentially significant impacts to biological resources. *With implementation of Mitigation Measures B-1 through B-16 identified above, potentially significant impacts to biological resources would be reduced to less than significant levels.*

Loss of the Moreton Bay fig tree is considered a significant unavoidable adverse impact if Mitigation Measure B-4 is unsuccessful. *Mitigation Measures B-5 through B-7 would minimize effect of the loss of the Moreton Bay fig tree, but the residual impact would be considered significant.*