

Mount Vernon Avenue Bridge Project

NES(MI)

Natural Environment Study

(Minimal Impacts)
City of San Bernardino

Federal Highway Administration

State of California Department of Transportation

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Prepared By:



Kurt Campbell
Jones & Stokes
(951) 506-4038

Date:

17 May 2006

Reviewed By:



Aaron P. Burton, Associate Environmental Planner (N.S.)
(909) 388-7069
California Department of Transportation District 8
Environmental Studies/Support B

Date:

June 12, 2006

Approved By:



Marie J. Petry, Office Chief
(909) 383-6379
Environmental Studies/Support B
Department of Transportation, District 8

Date:

6/12/06



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1. Introduction

This report addresses potential constraints to the proposed Mount Vernon Avenue Bridge project (Caltrans Bridge No. 54C-0066) posed by applicable federal and state laws, regulations, and case law addressing biological and habitat resources where such resources may be affected by the proposed project. This report is a review and revision of the Biological Technical Memorandum provided by Parsons Brinckerhoff (dated January 16, 2003) for the Mount Vernon Avenue Bridge project.

The proposed project is the replacement or retrofit/rehabilitation of the Mount Vernon Avenue Bridge over the Burlington North Santa Fe (BNSF) rail yard and associated improvements to adjoining roadways and infrastructure.

This report is intended to support the preparation of National Environmental Policy Act (NEPA) documentation with the Federal Highway Administration (FHWA), which is funding a portion of the project with Caltrans, as NEPA lead agency. This report also supports efforts to obtain agreements, permits, and concurrences needed to proceed with the proposed project.

Project Site Location

The proposed project lies on and in the vicinity of the Mount Vernon Avenue Bridge in the city of San Bernardino, San Bernardino County, California (Figures 1 and 2). The project site is depicted on the San Bernardino South, California 7.5-minute U.S. Geological Survey (USGS) quadrangle map (San Bernardino South 1980) and on page 606 (block E1) of the current San Bernardino County Street Guide and Directory (Thomas Bros. 2003).

Project Design

The proposed designated area of effect (AOE) anticipated by the replacement of the Mount Vernon Avenue Bridge is illustrated in Figure 3. This area includes both the proposed project footprint and associated staging areas. Two project alternatives are considered: a replacement alternative (preferred) and a retrofit/rehabilitation alternative. The replacement alternative would involve complete demolition of the existing bridge structure while the latter would involve retrofit and rehabilitation of the existing structure. Both of these alternatives are judged to have essentially the same footprint in regards to biological resource issues and, as such, are treated as a single proposed project footprint. The following details have been assumed for the area of effect:

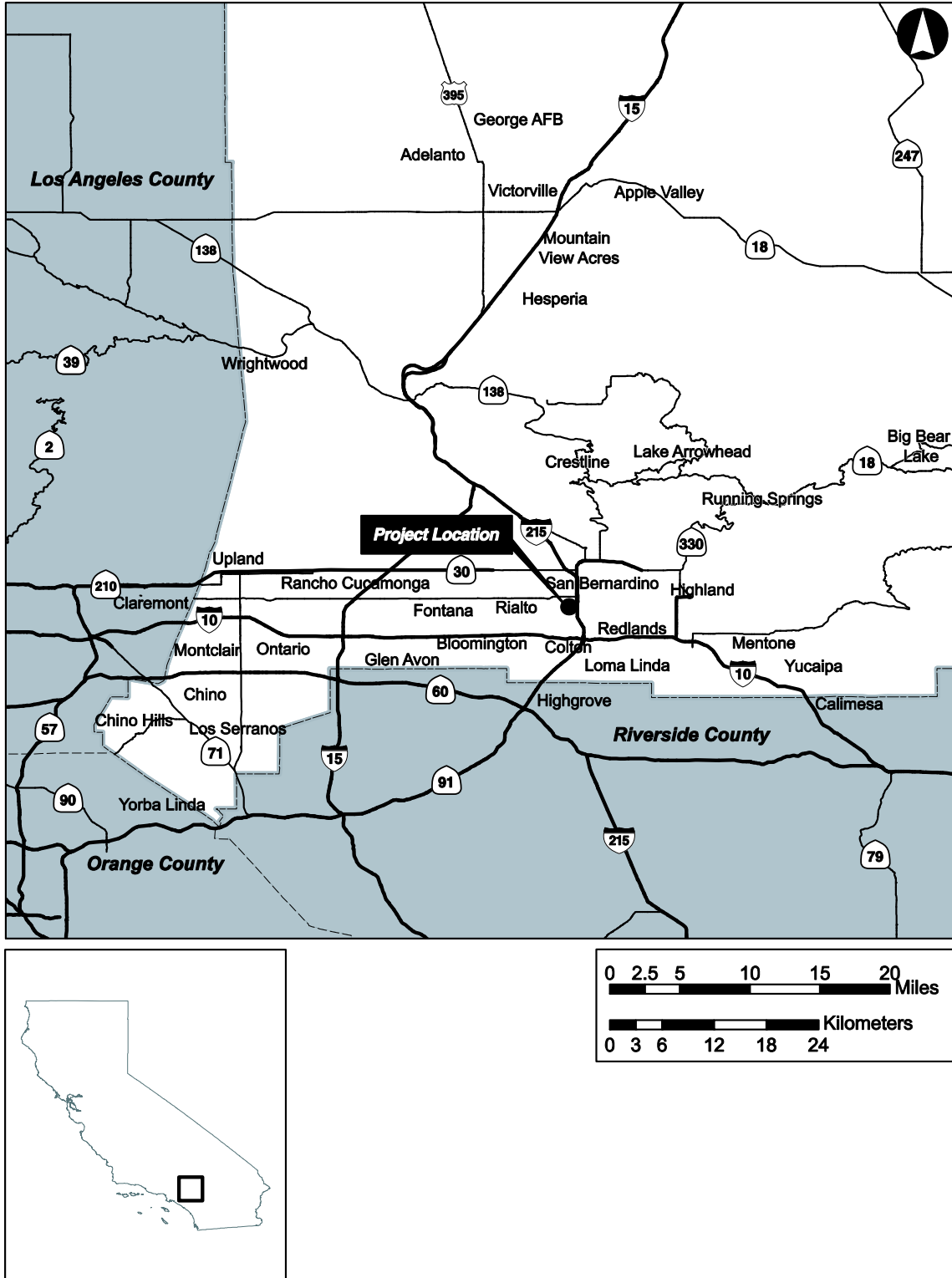
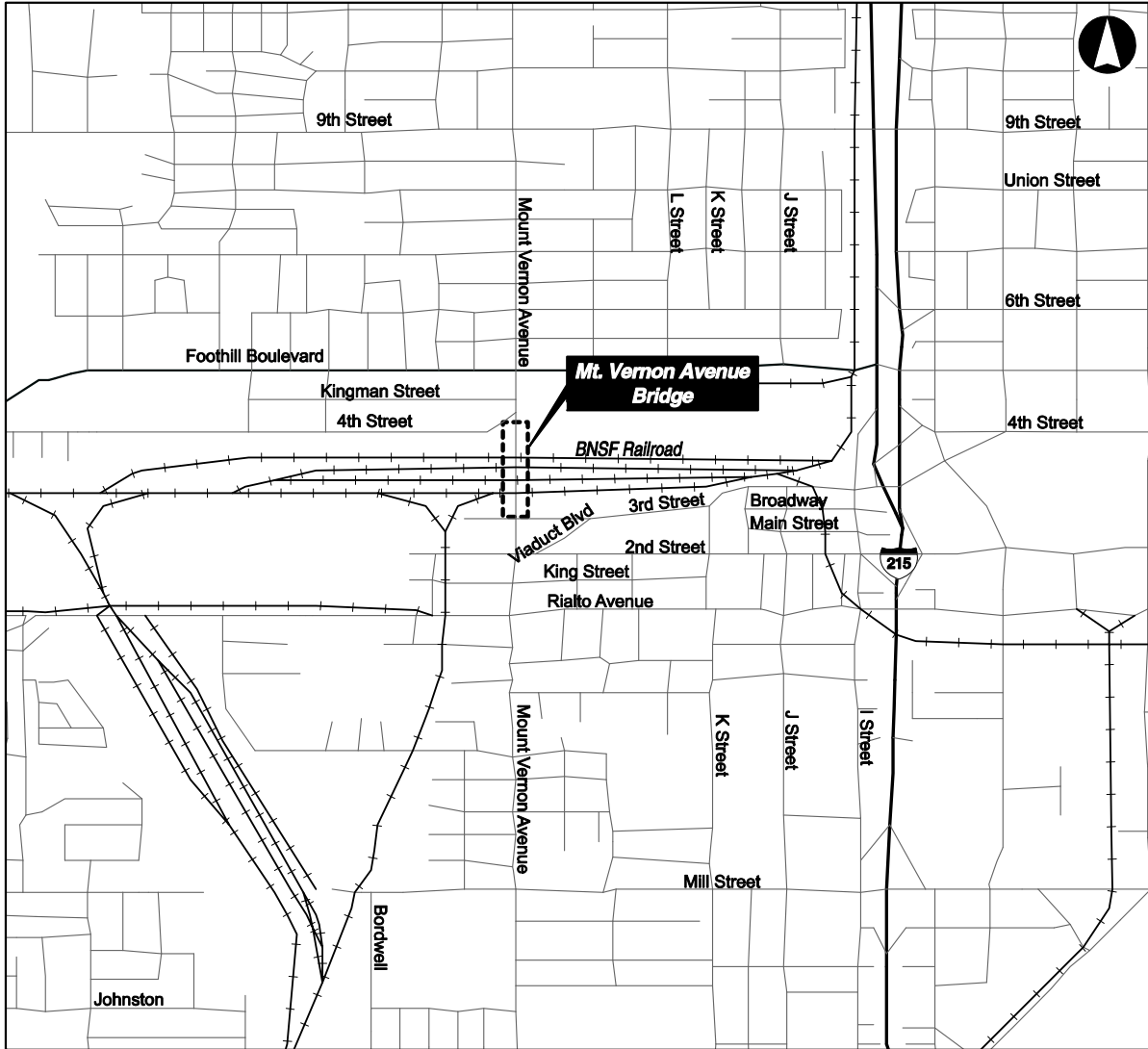


Figure 1. Regional Location Map
 Mount Vernon Avenue Bridge Project
 City of San Bernardino, California



Sources: U.S. Census Bureau TIGER Data, 2000; Myra L. Frank/Jones & Stokes, 2004.

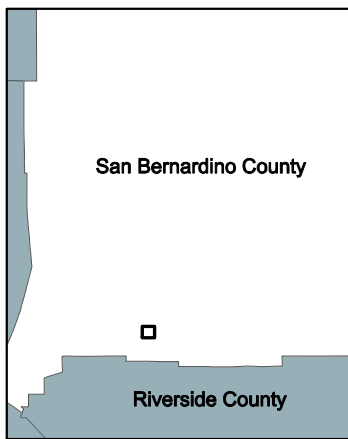
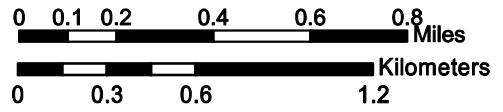


Figure 2. Project Vicinity Map
 Mount Vernon Avenue Bridge Project
 City of San Bernardino, California

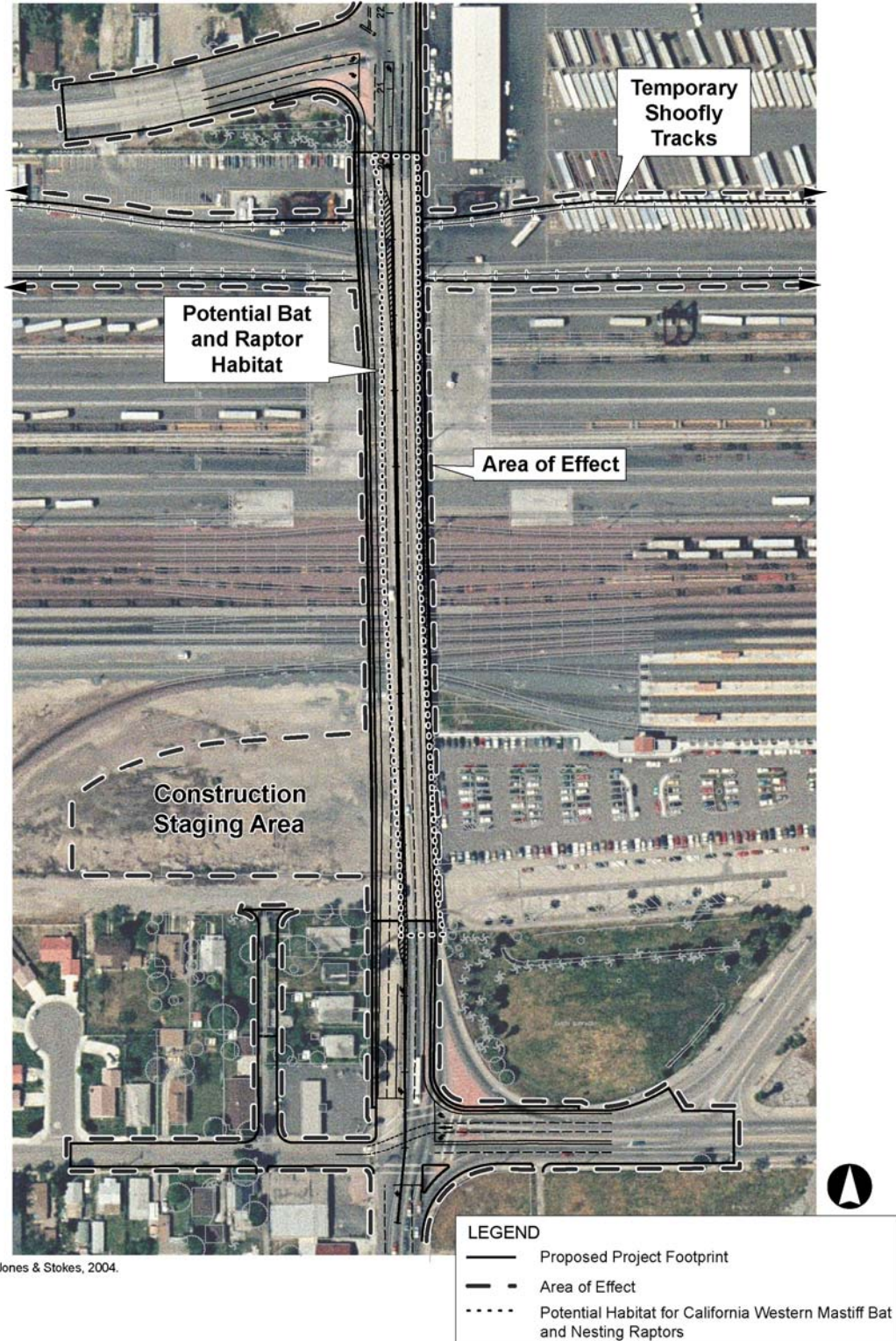


Figure 3. Project Area of Effect
 Mount Vernon Avenue Bridge Project
 City of San Bernardino, California

- The proposed construction footprint is located on and adjacent to Mount Vernon Avenue between about West 5th and West 2nd Streets. Other associated areas of proposed construction include a section of West 2nd Street from about Grape Court east to West Viaduct Boulevard and an alleyway between West 2nd and West 3rd Streets that is behind the residential area along Mount Vernon Avenue. Improvements are also proposed to portions of the West 4th Street and West Kingman Avenue intersections with Mount Vernon Avenue. Two temporary railroad tracks (“shoofly tracks”) would be installed in the BNSF yard.
- A single staging area for construction equipment and materials is proposed at the northwest corner of Mount Vernon Avenue and West 3rd Street. Staging Areas 1, 3, and 4 in the previous biological resources report (Parsons Brinckerhoff 2003) are no longer under consideration.

2. Study Methods

Potentially relevant reference literature, natural resource databases, and unpublished information were reviewed to determine the potential value of the site to biological and habitat resources with special status. Specific information on the project site was developed in part through careful general field evaluation of the project site and vicinity.

Subsequent to developing information on biological resources and habitats, all potentially relevant biological resource laws, regulations, and court precedent were analyzed with regard to the project area and project design. This information was then used as a basis to determine potential constraints to project implementation.

Biological Resources

To prepare for the initial field survey, a review of existing resource information related to the proposed project was performed to evaluate whether sensitive species or other sensitive biological resources (e.g., wetlands) could occur in the AOE. Pertinent sources reviewed were:

- California Native Plant Society’s (CNPS’s) Inventory of Rare and Endangered Plants of California (Skinner and Pavlik 2004).
- California Natural Diversity Database (CNDDB) records search for the San Bernardino South quadrangle and the eight adjacent quadrangles (San Bernardino North, Harrison Mountain, Redlands, Sunnymead, Riverside East, Riverside West, Fontana, Devore) (California Department of Fish and Game 2003C).

- Biological Technical Memorandum for the Mount Vernon Avenue Bridge Replacement Project (Parsons Brinckerhoff 2003).
- Jones & Stokes file information and existing literature (see citations).

A general field evaluation of the project area was performed by Kurt F. Campbell on 24 April 2004 between the hours of 1400 and 1700. Weather conditions were 89°F, 3 to 10 mph winds, 0% cloud cover, ground surface dry, and visibility judged good. The field survey consisted of examining on foot all potentially relevant, accessible portions of the proposed AOE. No access was available beneath most of the existing bridge during this visit; however, most of the bridge was visible in a cursory manner with the use of binoculars. The project area was located and boundaries determined using Parsons Brinckerhoff (2003 – Figure 1) and a base map produced by Lan & Nascimento Engineering (2004). All potentially relevant information for the current work was mapped directly onto a base map during the site visit, at a scale of 1 inch = 80 feet (1:960). Areas immediately adjacent to the project area were also briefly evaluated to provide context and enable preliminary evaluation of potential indirect impacts to off-site resources.

Based on the results of the initial field evaluation it was determined that an additional site visit with improved access to the underside of the bridge would likely allow evaluation of some additional issues relevant to natural resources. On that basis, the biologist revisited the site on 14 January 2005 with a safety flagman and full access to examine the underside of the bridge. During this second visit, the entire underside of the bridge was examined, and the remainder of the project area was briefly reviewed to confirm that no substantial changes in condition had occurred there.

Judgments regarding the conditions, habitats, and resources on and potentially on the project area are based on a complex and carefully evaluated array of information including: (1) published and unpublished information on local and regional ecosystems and on identification and evaluation of resources, (2) extensive personal and professional experience and training, and (3) careful observations made during the site visits.

Taxonomy and nomenclature used in this report follow Hickman (1993) for plants, American Ornithologists' Union (AOU) (1998) and supplements (AOU 2000, 2002, 2003) for birds, and Jones et al. (1997) for mammals. All special-status plant species, animal species, and natural communities of California were evaluated for potential to occur on the project area.

Resources used to determine regulatory status include Skinner and Pavlik (2004), California Department of Fish and Game (CDFG) (2002a, b; 2003a, b), and U.S. Fish and Wildlife Service (USFWS) (2002), along with many other recent publications. Resources utilized for information on biological status, habitats, and current distribution include (as applicable) the

California Natural Diversity Database (CDFG 2003c), Munz (1974), Orsak (1978), Mattoni (1990), Hogue (1993), Opler and Wright (1999), Stebbins (1972, 1985), Jennings and Hayes (1994), Garrett and Dunn (1981), Grinnell and Miller (1944), Hall and Kelson (1959), Ingles (1965), Hall (1981), Williams (1986), Zeiner et al. (1988), Zeiner et al. (1990), references on particular species and species groups, varied unpublished sources such as prior experience of the biologist, Jones and Stokes' data files, and regular communications with other expert and professional biologists.

3. Environmental Setting

The following discussions briefly address conditions and biological resources found to occur at the AOE. Any such study of the site can provide only a sampling and not an exhaustive list of everything that has, does, or will occur. Additional species beyond those observed in an evaluation certainly use any given site but may not have been detected because, for example, they were not present at the time of day or time of year the fieldwork was conducted or because special survey methods would be required to determine their presence or absence (e.g., nighttime surveys for bats). Nevertheless, the information developed through the initial background evaluation, current fieldwork, and checks of relevant background information forms a sound and effective basis for evaluating the potential for occurrence of resources and their habitats, functions, and values in the context of potential constraints to the project.

3.1. Description of the Existing Biological and Physical Conditions

The AOE lies within an intensely developed, long-established urban landscape composed of high-density residential neighborhoods and industrial development. As provided in Parsons Brinckerhoff (2003), the Metrolink station and associated parking facilities, along with the historic train depot, are adjacent to the AOE for the project. Residential development is found adjacent to portions of the proposed AOE, including those areas on West 2nd, West 3rd, West 4th Streets, and West Kingman Avenue (Figure 2). The staging area for equipment and supplies is a small area of undeveloped land at the intersection of West 3rd Street and the bridge. This open area is an existing gravel rail yard parking lot with no natural landscape features present.

Soils on exposed parts of the project area are generally sand and loam and disturbed by development associated with the railroad and surrounding urban development. Continued railroad use and adjacent urban uses have resulted in very low biological values for the project area.

No natural vegetation community is present on or in close vicinity of the project area. Where the land is not covered by rural residential housing, industrial development, and associated urban infrastructure, it is vegetated by ruderal and/or nonnative plant species. Those plants common or characteristic of the area included Peruvian Pepper-Tree (*Schinus molle*), Oleander (*Nerium oleander*), Common Horseweed (*Conyza canadensis*), Treasureflower (*Gazania linearis*), Prickly Lettuce (*Lactuca serriola*), Common Dandelion (*Taraxacum officinale*), Short-pod Mustard (*Hirschfeldia incana*), Lamb's-Quarter (*Chenopodium album*), Mexican Palo Verde (*Parkinsonia aculeata*), Shamel Ash (*Fraxinus uhdei*), Tree-of-Heaven (*Ailanthus altissima*), Canary Island Date Palm (*Phoenix canariensis*), California Fan Palm (*Washingtonia filifera*), Mexican Fan Palm (*Washingtonia robusta*), and nonnative grasses [oat (*Avena* sp.), bromes (*Bromus* spp.), barley (*Hordeum* spp.)].

The bridge understructure is complex and provides nesting habitat for Rock Pigeon (*Columba livia*) and European Starling (*Sturnus vulgaris*), both common, nonnative species. No other wildlife was observed nesting or roosting on the bridge; however, it is feasible that bats or raptors might be present.

Other wildlife detected during the site visit included Painted Lady (*Vanessa cardui*), American Crow (*Corvus brachyrhynchos*), House Finch (*Carpodacus mexicanus*), House Sparrow (*Passer domesticus*), California Ground Squirrel (*Spermophilus beecheyi*), and Domestic Dog (*Canis familiaris*). All of these species are highly adapted to disturbed, human landscapes.

3.3-3.2. Regional Species and Habitats of Concern

As a basis to evaluate potential project impacts to species with special regulatory status (e.g., CDFG 2003a, b), we compiled an initial list of all such species that might have reasonable potential to occur, using the California Natural Diversity Data Base (CDFG 2003c), the California Native Plant Society's on-line Electronic Inventory, and file information and professional knowledge of Jones and Stokes biologists. After the site fieldwork was conducted and additional review was performed, species were then eliminated from this list where there was no reasonable potential for substantial impacts either because the species did not in fact have reasonable potential to occur, or because under the current project design, no substantial impacts would result to any such individuals that may be present. For the current project, we concluded that there is no reasonable potential for substantial impacts to any species with special regulatory status.

Evaluation of potential impacts included review of those that are broad, affecting the functions and value of whole communities or ecosystem processes. Specific issues evaluated against the

current project design included potential impacts to depleted natural communities, raptor foraging and nesting, habitat linkages and wildlife corridors, development buffers, jurisdictional waters, wetlands and riparian areas, designated and proposed critical habitat, and existing or proposed Natural Community Conservation Plans, habitat conservation plans, and other local protections afforded to natural resources. For each of these, we have concluded that there is no reasonable potential for any substantial adverse impacts under NEPA.

3.3. Vegetation

A total of 32 special-status plants are known to occur within the area of the San Bernardino South, California, and eight surrounding USGS quadrangles. Of the 32 listed and non-listed special-status plants initially reviewed for occurrence on the project site, none have reasonable potential to occur on or adjacent to the project site. These judgments are based on existing site conditions, including soils, elevation, absence of natural vegetation communities, invasion of nonnative plant species, hydrology or lack thereof, current land use and disturbance, as well as the geographical location of the project site.

3.4. Animals

Eleven listed animal species were initially reviewed as potentially occurring based on the general geographic location of the project site (San Bernardino South, California, and eight surrounding USGS quadrangles). After evaluation of the site, none of the 11 species are expected to occur. Of the 29 non-listed special-status animals having potential for occurrence based simply on the geographic location of the site, two species of bats are judged to have a low but reasonable potential for occurrence in a legally constraining role. The remaining 27 non-listed special-status animals are judged to have no reasonable potential for occurrence in constraining roles. Factors considered in determining a species' potential for occurrence in a constraining role included presence of potential habitat, type of potential use of the site (e.g., foraging during migration versus nesting), location of the project area relative to a species' range, and existing site resources and disturbances.

Although no sign of bat roosts was detected during the initial site visit, it was concluded at that time that a reasonable potential exists that the bridge provides suitable conditions for two species of special-status, non-listed bats: Pallid Bat and California Western Mastiff Bat. Both species will congregate in colonies of up to 100 individuals (CDFG 2002b). The bridge underside is complex in structure, and viewing access to areas underneath the bridge was extremely limited during the initial site visit due to railroad security fencing. If bats were to be present during project actions, it is assumed that the bats would be disturbed and would be

required to find alternative roost and/or nesting locations for the duration of the project. Depending on the resulting bridge design, this may be a temporary effect only. However, if the relevant design of the bridge changes appreciably and results in loss of suitable roosting and/or nesting habitat for individuals of these two species, effects could be permanent unless mitigating measures are implemented.

Due in part to this issue, a second visit to the project area was performed on 14 January 2005, with full access to the underside of the bridge. The bridge, the ground and structures beneath the bridge, and the immediate surroundings were studied at close range during daylight hours, including the use of binoculars as needed. Small to moderate amounts of roosting evidence (e.g., guano) by nonnative Rock Pigeons (*Columba livia*) and small amounts of roosting by House Sparrows (*Passer domesticus*) was documented, but no evidence was detected for the routine presence of bats or nesting or roosting by native birds.

4. Project Impacts

The presence of any particular special-status species or other resource does not legally constrain a project unless there is an applicable regulation that establishes relevant prohibitions or requirements under those circumstances.

The bulleted items below summarize these findings, listing each potential constraint along with the relevant resources and regulations.

- Though not present, at this time, based on the bridge structure and environment, a very low potential exists for two non-listed special-status bats (Pallid Bat and California Western Mastiff Bat) to use the underside of the bridge for roosting and/or breeding. Both are state Species of Special Concern. Both Pallid Bats and California Western Mastiff Bats will congregate in colonies of up to 100 individuals (CDFG 2002b; Brown-Berry 1992). Pallid Bat, although a state Species of Special Concern, remains at this time a relatively common species throughout southern California.

No other potential constraints to the project are identified. No appreciable effects to federal and/or state listed species would result as the project is currently proposed.

5. Avoidance and Minimization Measures

We recommend the following measures to address the potential constraints to the project. The full incorporation of standard, applicable best management practices into the project design has

been assumed for interpretations and judgments provided throughout this report. Below are measures to address the potential constraints identified in Section 4 of this report.

Recommended Measures to Address Potential Constraints

- The potential, future presence of a large colony (roughly 100 individuals) of California Western Mastiff Bat may pose a constraint to the project. Based on the absence of such a colony during the current fieldwork, we conclude that there is a less-than-reasonable potential for such a colony to form within the next 1 year (i.e., through 13 January 2006). If project-related work potentially resulting in disturbance to such a colony commences after that date, we recommend a new evaluation of the bridge by a qualified biologist, consisting of a single visit to the project site, with full access to the underside of the bridge, to determine whether the bridge is being used at that time by bats in a potentially constraining role for the project. If indirect and/or direct sign of bats is found and it indicates use of the bridge by a sizeable number of bats, a focused bat survey should be implemented and performed by a trained bat biologist to determine the species present. The initial visit should be within 1 year of the start of project construction. Resulting focused surveys should be conducted between 15 May and 15 September and also no more than 1 year from the start of project construction in order to obtain conclusive evidence of relevant bat presence/absence. If it is determined that a colony of California Western Mastiff Bats is present that may number 100 individuals or more, the following measures would apply:
 - Work on the bridge will take place only between 1 October and 1 April (non-breeding season) unless absence of California Western Mastiff Bat is confirmed on the project site within 1 month of initial project construction. This minimizes the risk of destruction or failure of a large, active maternity colony.
 - Prior to any work that may result in potential disturbance to bats during the non-breeding season, measures would be taken to ensure any California Western Mastiff Bats are passively relocated from those areas of the bridge that will be physically modified and where mortality of bats is a concern. Measures may include excluding access to roost sites under the bridge as conducted under the direction and concurrence of a qualified bat biologist.
 - For the bridge retrofit project alternative, it may be feasible to replace any lost habitat for California Western Mastiff Bat with artificial roosts during construction efforts, minimizing the need for relocation from the area. A qualified bat biologist must approve the design and placement of the artificial

roosts. The feasibility of this measure may vary with details and timing of project construction. Supplemental concrete panels or other types of bat roost structures should retain as closely as possible the original configuration of occupied crevices, including widths. If California Western Mastiff Bats were known to be present, the new bridge design or retrofit design should incorporate permanent structural features that provide such habitat as well.

6. Permits Required

No environmental permitting is judged necessary for the project as currently proposed, given that no federally and/or state-listed species or jurisdictional waters are potentially present.

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