City Council Staff Report

Date: November 4, 2009 NEW BUSINESS

Subject: ADOPTION OF MITIGATED NEGATIVE DECLARATION FOR THE INDIAN CANYON DRIVE AND BRIDGE WIDENING PROJECT, CITY PROJECT NO. 01-11, FEDERAL AID PROJECT NO. STPLN 5282(016) & BRLO 5282(017)

From: David H. Ready, City Manager

Initiated by: Public Works and Engineering Department

SUMMARY

The environmental review process for the Indian Canyon Drive and Bridge Widening Project has been completed pursuant to the California Environmental Quality Act ("CEQA") and the National Environmental Policy Act ("NEPA") requirements coordinated by Caltrans and Federal Highway Administration ("FHWA"). The final environmental document is ready for review and approval by the City Council, including adoption of the Mitigated Negative Declaration. Completion of this process allows the City to move forward with final design, right-of-way acquisition, and construction of this project. During the public review process, there were no requests for a Public Hearing; therefore, none is required in the City's approval of the final environmental document and adoption of the Mitigated Negative Declaration.

RECOMMENDATION:

Adopt Resolution No. _____ "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM SPRINGS, CALIFORNIA, ADOPTING AND ORDERING THE FILING OF A MITIGATED NEGATIVE DECLARATION FOR THE INDIAN CANYON DRIVE AND BRIDGE WIDENING PROJECT, CITY PROJECT NO. 01-11, FEDERAL AID PROJECT NO. STPLN 5282(016) & BRLO 5282(017)."

ITEM NO. _____

STAFF ANALYSIS:

Project History

After the City initiated the Indian Canyon Drive / Interstate 10 Interchange Project ("I-10 Project") in 2000, the Public Works and Engineering Department ("Department") turned its attention to widening Indian Canyon Drive through the Whitewater River up to Garnet Avenue to correspond with the ultimate 6-lane roadway to be constructed from Garnet Avenue over Interstate 10 as part of the I-10 Project. In pursuit of this goal, the Department applied for and obtained federal grants for widening Indian Canyon Drive, from the Union Pacific Railroad ("UPRR") bridge to Garnet Avenue, from 2 lanes to 6 lanes. One of the federal grants the Department obtained is $177,000 from the Surface Transportation Program ("STP"), and the other is $4,286,000 from the Highway Bridge Program ("HBP"), both of which are administered through the California Department of Transportation ("Caltrans").

In May 2001, the Department obtained approval from Caltrans to proceed with the preliminary engineering phase for this project. Subsequently, the City Council awarded a contract to Dokken Engineering on March 20, 2002, for professional environmental and engineering design services for this project. Since that time, environmental analysis and review of this project has occurred.

Project Description

The City of Palm Springs proposes to widen Indian Canyon Drive from Garnet Avenue to the UPRR bridge in accordance with Caltrans and Federal Highway Administration ("FHWA") regulations and standards. The Indian Canyon Drive bridge over the UPRR would also be widened.

This project will widen Indian Canyon Drive from two to six lanes between the UPRR bridge and Garnet Avenue, and from two to five lanes (two southbound and three northbound) from the UPRR bridge south, ultimately transitioning to match the existing two lanes within the Whitewater River. A separate roadway widening project will widen Indian Canyon Drive from two to four lanes extending through the Whitewater River.

The primary purpose and objectives of the proposed project are to:

- Alleviate traffic congestion,
- Improve intraregional travel by improving "directional mobility,"
- Improve local access to commercial and industrial areas within the City of Palm Springs, and
- Develop a transportation facility consistent with the Circulation Element of the General Plan.

One Build Alternative and one No Build Alternative were selected for detailed study. The No Build Alternative was analyzed to identify the impacts if the project is not approved.

Environmental Analysis

As this project is funded in part with federal funds made available through FHWA, the environmental analysis was performed pursuant to the requirements of CEQA and NEPA. An environmental document, consisting of an Initial Study (pursuant to CEQA) and Categorical Exclusion (pursuant to NEPA) was required for this project. The purpose of the Initial Study / Categorical Exclusion ("IS/CE") is to evaluate the potential environmental impacts associated with construction of the proposed Indian Canyon Drive and Bridge Widening Project. This document has been prepared to fulfill and to comply with the environmental regulations of the City, Caltrans, and FHWA. The City is the lead agency for CEQA compliance, and Caltrans, as designated by FHWA, is the federal lead agency for NEPA compliance. Following public circulation of the draft Initial Study from July 13 to August 12, 2009, the Build Alternative became the Preferred Alternative for the project.

The Initial Study evaluated the following areas:

- Human Environment
- Physical Environment
- Biological Environment
- Cumulative Impacts
- Climate Change

Public Participation

Early and continuing coordination with the general public and appropriate public agencies was an essential part of the environmental process for this project, as a way to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, scoping meetings, and coordination with resource agencies and Native American individuals and organizations.

Consultation with several agencies occurred as part of preparing the project technical reports and the Initial Study. These agencies are identified in the various technical reports and include:

- Native American Heritage Commission
- United States Fish and Wildlife Service
- California Department of Fish and Game
- Southern California Association of Governments
- United States Environmental Protection Agency (USEPA)

The draft Initial Study and Mitigated Negative Declaration (MND) was circulated for public comment from July 13 through August 12, 2009. A public notice announcing

circulation and availability of the document was published in the *Desert Sun* on July 13, 2009. The draft Initial Study was also available for review at the Public Works Department and the Palm Springs Public Library, and was posted on-line at the City's website.

A total of five project/comment letters were received during the availability period for the draft IS/MND. Letters were received from the following:

- Rosa Munoz, Public Utilities Commission, State of California
- Craig Weightman, Inland Deserts Region California Department of Fish and Game
- Mark Johnson, Director of Engineering, Coachella Valley Water District
- Alfonso Hernandez, General Manager, Sunline Transit Agency
- Kris Flanigan, Senior Civil Engineer, Riverside County Flood Control and Water Conservation District

Copies of the letters, along with the responses, are included in Chapter 4 – Comments and Coordination in the final IS/MND.

Findings

The Initial Study prepared for this project has concluded, and following public review, it has been determined that the proposed project will not have a significant effect on the environment for the following reasons:

- The project will have no effect on sole source aquifer, coastal zone, wild and scenic rivers, farmlands and timberlands, state lands, agricultural resources, land use, growth, population and housing, relocations, mineral resources, environmental justice, cultural resources, paleontological resources, and no businesses or residences would be acquired;
- The project will have no significant effect on aesthetics, traffic and transportation, utilities and emergency services, wetlands and other waters, hydrology and floodplains, geology and seismicity, hazards and hazardous materials, air quality, noise, and natural communities;
- In addition, the project will have no significant effect on water quality and runoff, plant and animal species, threatened and endangered species, and invasive species through the implementation of avoidance and mitigation measures.

A Mitigated Negative Declaration has been prepared that identifies various avoidance and mitigation measures related to water quality, natural communities, biological resources, and invasive species. Implementation of the avoidance and mitigation measures, as identified on the Environmental Commitment Record (otherwise known as a "Mitigation Monitoring and Reporting Program"), will ensure that the proposed project will have no significant effect on the environment. The Environmental Commitment Record is included as Appendix B to the Final IS/MND.

The NEPA Categorical Exclusion was signed by Caltrans on September 24, 2009. Following the City Council's adoption of the Mitigated Negative Declaration, full compliance with NEPA and CEQA for this project, including required environmental clearance, will be completed.

FISCAL IMPACT:
None.

Prepared by:

Marcus L. Fuller
Assistant Director of Public Works

Recommended by:

David J. Barakian
Director of Public Works/City Engineer

Approved by:

Thomas J. Wilson, Asst. City Manager

David H. Ready, City Manager

ATTACHMENTS:

1. Final Initial Study/Mitigated Negative Declaration
2. Resolution

ATTACHMENT 1

FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (IS/MND)

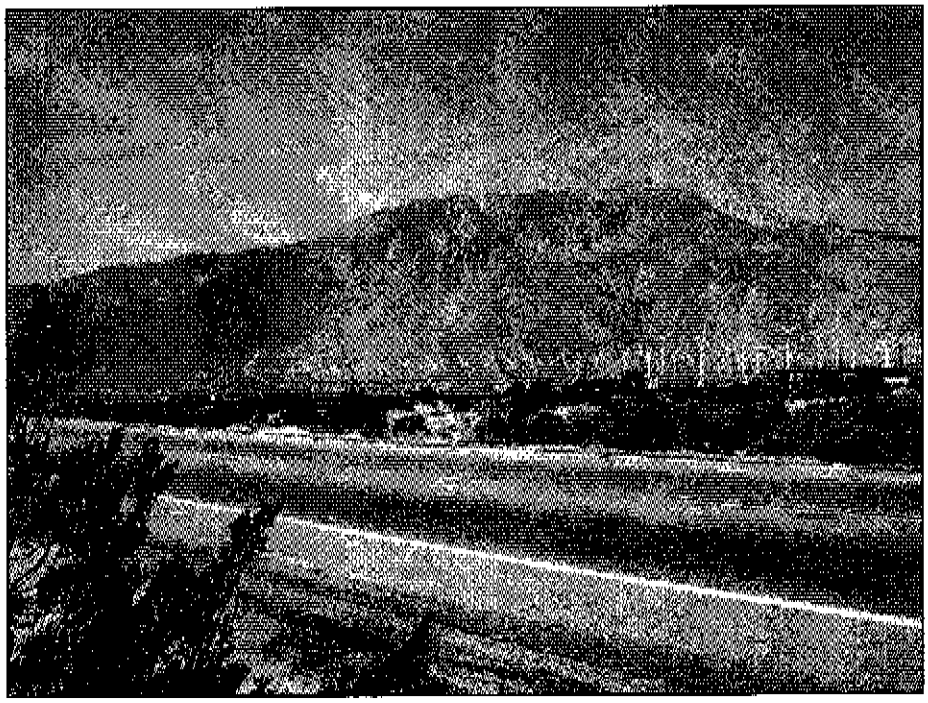
Initial Study with Mitigated Negative Declaration, Pages 7 through 251, is on file in the Office of the City Clerk, and is available on the City's website.

Indian Canyon Drive and Bridge Widening

CITY OF PALM SPRINGS
RIVERSIDE COUNTY, CALIFORNIA

08-RIV-Palm Springs
STPLN 5282 (016)
BRLO 5282 (017)
SCH# 2009071044

Initial Study with Mitigated Negative Declaration



Prepared by the
City of Palm Springs

October 2009

General Information About This Document

What's in this document?

This document is a Mitigated Negative Declaration which examines the environmental effects of the proposed project located in the northern portion of Palm Springs, Riverside County, California. The document describes why the project has been proposed and the existing environment that could be affected by the project.

The Initial Study and Mitigated Negative Declaration were circulated to the public from July 13 to August 11, 2009. Comment letters were received on the draft document. These comments and their responses are shown in the Comments and Responses section of this document, which ahs been added since the draft. Elsewhere throughout this document, a line in the margin indicates a change made since the draft document circulation.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to the City of Palm Springs, Attn: Marcus Fuller, P.E., P.L.S., Assistant Director of Public Works/Assistant City Engineer, City of Palm Springs, 3200 E. Tahquitz Canyon Way, Palm Springs, CA 92262. Phone No. (760) 323-8253.

SCH# 2009071044
08-RIV-Palm Springs
STPLN 5282 (016)
BRLO 5282 (017)

The proposed Indian Canyon Drive and Bridge Widening Project is located within Palm Springs, California, in Riverside County. The City of Palm Springs proposes to widen Indian Canyon Drive for a distance of approximately 1,219 meters (4,000 feet) south of its intersection with Garnet Avenue (south of Interstate 10) in accordance with Caltrans and FHWA regulations and standards. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would also be widened. Indian Canyon Drive would be widened from its current width of 18 meters (60 feet) to 26 meters (86 feet), which would expand the road from two traffic lanes to six lanes between Garnet Avenue and 61 meters (200 feet) north of the existing Indian Canyon Drive Bridge. The road would expand from two lanes to five travel lanes (three northbound and two southbound lanes) from approximately 61 meters (200 feet) north of the bridge to approximately 46 meters (150 feet) south of the bridge. The bridge would be widened to accommodate the three additional travel lanes. South of the bridge, the roadway would transition from five to three lanes for about 91 meters (300 feet). The southernmost portion of the improved roadway would be two lanes, with new north- and south-turn pockets to Palm Springs Station Road.

INITIAL STUDY
with Mitigated Negative Declaration

CITY OF PALM SPRINGS

Oct. 13, 2009
Date of Approval

Marcus L. Fuller, P.E. P.L.S.
Assistant Director of Public Works /
Assistant City Engineer City of Palm Springs
Department of Public Works

SCH# 2009071044

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code 21000

Project Description

The City of Palm Springs proposes to widen Indian Canyon Drive for a distance of approximately 1,219 meters (4,000 feet) south of its intersection with Garnet Avenue (south of Interstate 10) in accordance with California Department of Transportation and the Federal Highway Administration regulations and standards. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would also be widened.

Indian Canyon Drive is currently a two-lane road, except for that portion within approximately 122 meters (400 feet) of Garnet Avenue, where it widens to four lanes (three lanes southbound and one lane northbound), to transition to the improved six-lane roadway south of Garnet Avenue. Indian Canyon Drive would be widened from its current width of 18 meters (60 feet) to 26 meters (86 feet), which would expand the road from two traffic lanes to six traffic lanes between Garnet Avenue and 61 meters (200 feet) north of the existing Indian Canyon Drive Bridge. The road will be widened to five traffic lanes (three northbound and two southbound) from approximately 61 meters (200 feet) north of the bridge to approximately 46 meters (150 feet) south of the bridge. The bridge will be widened to accommodate the three new travel lanes. South of the bridge, the roadway will transition to three lanes for about 91 meters (300 feet). The southernmost portion of the improved roadway will be two lanes, with new north- and south-turn pockets to Palm Springs Station Road.

Determination

This Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the City's intent to adopt an MND for this project. This does not mean that the City's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

The City of Palm Springs has prepared an Initial Study for this project, and pending public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would be consistent with existing land use and with the Palm Springs General Plan.
- The proposed project would not result in displacements or substantially affect residences, businesses, public facilities, or other socioeconomic features of the project area.
- The proposed project would not impact pedestrian or bicycle traffic.
- The proposed project would not generate traffic, increase the number of vehicles operating in the cold start mode, or worsen congestion. Pollutant emissions would likely be the same or less than without the project. Neither average nor maximum daily estimated fine particulate matter equal to or less than 10 microns

in size, carbon monoxide, or reactive organic compounds emissions from construction activities would exceed threshold limits.

- The proposed project would result in no impacts to the visual quality of the project area.
- The proposed project would not impact hydrology and floodplains. Although southern portion of the project area falls within the 100-year floodplain, there would be no impact because proposed improvements to that section of the roadway is limited to restriping on existing road surface. Final design of drainage facilities would meet all federal, state, and local requirements.
- There are no wetlands in the proposed project area.
- The proposed project would not impact jurisdictional waters of the U.S. Although the southern portion of the project area is adjacent to potential jurisdictional waters of the U.S., there would be no impact because proposed improvements to that section of the roadway is limited to restriping on existing road surface.
- The proposed project would not result in noise impacts.

The proposed project would have no effect on wild and scenic rivers, parks and recreation, farmlands/timberlands, cultural resources, or paleontology

The proposed project would have no significantly adverse effect on water quality and natural communities, plant species, animal species, and threatened and endangered species because mitigation measures would reduce potential effects to insignificance.

The proposed project would not impact water quality due to adherence to a Storm Water Pollution Prevention Program and best management practices.

The proposed project would result in impacts to sensitive, endangered, or threatened plant and wildlife species; however, with implementation of conservation and other minimization measures, the impacts would be less than significant.

Marcus Fuller

Marcus Fuller, Assistant Director of Public Works
Assistant City Engineer, City of Palm Springs

Oct. 13, 2009
Date

Executive Summary

The proposed Indian Canyon Drive and Bridge Widening Project (proposed project) is located in the northern portion of the City of Palm Springs, in Riverside County, California. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would be widened. The City of Palm Springs proposes to widen Indian Canyon Drive for a distance of approximately 1,219 meters (4,000 feet) south of its intersection with Garnet Avenue (south of Interstate 10) in accordance with California Department of Transportation (Caltrans) and Federal Highway Administration (FHWA) regulations and standards.

This environmental document has been prepared in conformance with the requirements of the California Environmental Quality Act (CEQA) Public Resources Code §§ 21000-21178. A Categorical Exclusion is also being prepared for the proposed project in compliance with the National Environmental Policy Act (NEPA). Compliance with NEPA is required as a result of federal funding for the project, which includes a combination of Surface Transportation Improvement Program funds and Highway Bridge Replacement and Rehabilitation Program funds. Funding requirements would be coordinated by the Riverside County Transportation Commission; the Coachella Valley Association of Governments; and, as a Local Assistance Project, by Caltrans, District 8, Office of Local Assistance. The City of Palm Springs is the Lead Agency for CEQA implementation, as the proposed project is within the City's boundaries and would be a City-maintained facility.

The primary purpose and objectives of the proposed project are to:

- Alleviate traffic congestion,
- Improve intraregional travel by improving "directional mobility,"
- Improve local access to commercial and industrial areas within the City of Palm Springs, and
- Develop a transportation facility consistent with the Circulation Element of the General Plan.

The Indian Canyon Drive/Garnet Avenue intersection is currently congested during peak periods, resulting in lengthy queues. Average daily traffic on Indian Canyon Drive between Garnet Avenue and Palm Springs Station Road is forecasted to increase by more than double from current baseline traffic volumes by the Year 2015 and is projected to continue to increase through 2025, the ultimate year modeled for this project. Included in the traffic study, a Design Period Recommendation until 2030 was granted by Caltrans for the Indian Avenue Interchange project (memorandums include the February 2, 2005, Caltrans memo; the October 29, 2004, Dokken Engineering and LSA Associates memo regarding 2025 vs 2030 Traffic Analysis; and the January 24, 2005, Caltrans Synchro Analysis memo from Operations-Surveillance for updated sensitivity analysis, Appendix D). Caltrans staff have concurred that no substantial additional traffic increases are predicted between 2025 and 2030 as documented in the above memorandums applies for this project as well (June 5, 2007 Caltrans memo, Appendix D).

The Circulation Element of the Palm Springs General Plan seeks to move people and goods safely and efficiently through the community. In the document, Indian Canyon Drive is identified as a Major Thoroughfare (4 or 6 Lane Divided facility), defined as a roadway that forms the basic element of the city's circulation system, connecting Palm Springs to regional highways and tying together different areas of the city. Improvements to Indian Canyon Drive (and other roadways extending into adjacent jurisdictions) are considered "critical" by the Circulation Element to achieve acceptable operational levels in the city.

The Widening Within Existing City Right-of-Way Limits Alternative was determined to be the only feasible build alternative and is also considered to be the Locally Preferred Alternative. Three additional alternatives were evaluated and rejected. These alternatives, together with the No Build Alternative, are discussed briefly below.

Under the Widening Within Existing City Right-of-Way Limits Alternative (Locally Preferred), hereafter referenced as the Build Alternative (Locally Preferred), Indian Canyon Drive would be widened from its current width of 18 meters (60 feet) to provide three traffic lanes in each direction from Garnet Avenue to 61 meters (200 feet) north of the existing Indian Canyon Drive Bridge. There would be five travel lanes from approximately 61 meters (200 feet) north of the bridge (three northbound and two southbound) to about 46 meters (150 feet) south of the bridge. The bridge would be widened to accommodate the three new travel lanes. South of the bridge, the roadway would transition to three lanes for about 91 meters (300 feet). The southernmost portion of the improved roadway would be two lanes, with new north and south turn pockets to Palm Springs Station Road. Under the Build Alternative (Locally Preferred), all improvements would be made within the existing City right-of-way. The total project cost is estimated at $6,537,000.

The proposed project, including the project limits, is captured within two entries (RIV011203 and RIV990727) from both the 2008 Regional Transportation Plan (RTP) and 2006 Regional Transportation Improvement Program (RTIP). The 2008 RTP and 2006 RTIP entries include limits with a minor overlap. Entry RIV990727 includes a short stretch of roadway widening approximately 200 feet south of the Union Pacific Railroad Bridge (UPRR Bridge). This is the southern end of the proposed Indian Canyon Drive and Bridge Widening Project where the widening tapers down to the existing two-lane configuration. Entry RIV011203 includes planned roadway widening (two to four lanes) from the UPRR Bridge extending south to Tramview Road. These two entries include the approximate 200-foot overlap just south of the UPRR Bridge. These two RTP/RTIP entries do not discretely represent the proposed Indian Canyon Drive and Bridge Widening Project but instead cover the proposed Indian Canyon Drive and Bridge Widening Project and a future project to the south. The future project's limits would improve the tapered portion of the proposed Indian Canyon Drive and Bridge Widening Project and widen the roadway from the UPRR Bridge to Tramview Road.

This proposed project's reference to both RIV011203 and RIV990727 is necessary given this project's limit overlap. The funding identified in the two RTP/RTIP entries totals $8,369,000. The proposed Indian Canyon Drive and Bridge Widening Project's total cost is estimated at $6,537,000. The remaining funding ($1,832,000) is allocated for the future project.

Under the No Build Alternative, Indian Canyon Drive would remain in its current two-lane configuration. There would be no improvements or widening to the roadway or to the bridge. Based on the current traffic needs and the anticipated growth within the region, traffic volume along Indian Canyon Drive is expected to increase. The No Build Alternative would result in a future Level of Service (LOS) F. Aside from ongoing maintenance costs, there are no project costs associated with the No Build Alternative.

Three additional Build Alternatives were considered but withdrawn from further evaluation. These Build Alternatives are described briefly below.

The Widen East Side Alternative would maintain the western edge of pavement and shift the current centerline. This alternative would also expand the roadway to the east and widen the bridge structure to the east as well. Additional right-of-way would be required. Implementation of the Widen East Side Alternative was rejected due to prohibitive project features. This alternative would require the relocation of an existing 69-kilovolt (kV) overhead transmission line that parallels the roadway. Cost estimates place this relocation at approximately $2,000,000. Considering this relocation cost together with the costs of right-of-way required for this alternative, the project cost would be double that of the proposed cost for the Build Alternative (Locally Preferred). Furthermore, under this alternative, the bridge would be widened out to the east, which would create unacceptably low railroad clearance. This alternative was therefore dropped from further consideration.

The Widen West Side (New Centerline at Garnet Ave) Alternative, like the Build Alternative (Locally Preferred), would keep the east edge of the existing pavement in place, and the roadway would be expanded along the west side. This alternative would require additional right-of-way. The right-of-way take (0.61 hectare [1.5 acres]) necessary for this alternative would result in substantial impacts to businesses located on the west side of Indian Canyon Drive at the intersection with Garnet Avenue. Additionally, the cost of this right-of-way would raise the project cost to nearly double the Build Alternative (Locally Preferred) cost, at approximately $5,100,000. This alternative was dropped from further consideration.

The Widen Both Sides Alternative would expand the roadway to either side of the existing centerline. In addition to the road construction, the existing bridge structure would also be widened on both sides. Like the Widen East Side Alternative, this alternative was rejected because it would require the relocation of the 69 kV overhead transmission lines that parallel the east side of Indian Canyon Drive. Relocation would cost approximately $2,000,000 and would require a new electrical distribution easement; together, these would double the project costs. This alternative was dropped from further consideration.

Two transportation projects are proposed in the vicinity of the Indian Canyon Drive and Bridge Widening Project. Both actions would be interchange improvements along Interstate 10, one at Indian Avenue north of Indian Canyon Drive and one at Palm Drive/Gene Autry Trail.

Summary of Major Potential Impacts From Alternatives

Potential Impact		Widening Within Existing City Right-of-Way Limits Alternative (Build Alternative [Locally Preferred])	No Build Alternative
Land use	Consistency with the Palm Springs *General Plan*	No adverse impact. The Build Alternative (Locally Preferred) is the improvement of existing transportation facilities. As such, it would not promote development along the alignment or to the south. The Build Alternative is consistent with the existing and future land uses in the area and is also consistent with the City of Palm Springs Circulation Element, which designates Indian Canyon Drive in the study area as a Major Thoroughfare.	Current roadway width is inconsistent with the General Plan designation as a Major Thoroughfare.
	Consistency with the Riverside County *General Plan*	No adverse impact. The proposed roadway widening is also consistent with the County of Riverside's designation of Arterial, although the proposed right-of-way would be less than 39 meters (128 feet).	Current roadway width is inconsistent with the General Plan designation as an Arterial.
Farmland		No impact. The study area has not historically supported agricultural activities.	No impact.
Social and economic		No impact. There would be no take of land, and no businesses in the area would be affected.	No impact.
Relocation	Business displacements	No impact. The proposed widening would be within existing right-of-way. No businesses would be displaced.	No impact.
	Housing displacements	No impact. The proposed widening would be within existing right-of-way. No homes would be displaced.	No impact.
	Utility service relocation	No impact. Utility lines run along the east side of Indian Canyon Drive. All construction would be on the west side.	No impact.
Joint development		No impact. There is no other development proposed in conjunction with the proposed project.	No impact.
Pedestrian and bicycle facilities		No adverse impact. There is very low pedestrian use in the area. The project design includes a 1.5-meter-wide (5-foot-wide) shoulder that is available for cyclists. The project is in compliance with the Americans with Disabilities Act.	No impact.
Air quality		No adverse impact. The proposed project would not generate traffic, increase the number of vehicles operating in the cold start mode, or worsen congestion. Pollutant emissions would likely be the same or less than without the project, and South Coast Air Quality Management District (SCAQMD) thresholds would not be exceeded. Neither average nor maximum daily estimated fine particulate matter equal to or less than 10 microns in size, carbon monoxide, or reactive organic compounds emissions from construction activities would exceed threshold limits. No mitigation is necessary, but the following measures would minimize potential effects:	No impact.

Potential Impact	Widening Within Existing City Right-of-Way Limits Alternative (Build Alternative [Locally Preferred])	No Build Alternative
	1. Nitrogen Oxides (NO_X) - On average, daily emissions would not exceed the NO_X threshold; however, the project would potentially exceed the threshold for NO_X emissions during grading activities. The following measures would reduce NO_X emissions: • Grading activities for the bridge construction and the road widening shall occur sequentially, not simultaneously. • The construction contractor would be required, when feasible, to replace at least one piece of diesel-operated equipment with a gas-operated piece of equipment. 2. Respirable Particulate Matter - No significant PM_{10} air quality impacts would result from the proposed project; however, the following measures will be incorporated into the project to further minimize construction emissions: • A Fugitive Dust (PM_{10}) Mitigation Plan shall be prepared and shall be included as part of the construction contract specifications prior to the issuance of a grading permit. The mitigation plan shall specify steps that will be taken to comply with the City of Palm Springs' Fugitive Dust and Erosion Control Ordinance. Measures outlined in the mitigation plan shall include, but not be limited to, daily watering of graded areas, washing of equipment tires before leaving the construction site, and use of SCAQMD-approved chemical stabilizers or soil binders. • The proposed project shall incorporate into the project specifications the applicable provisions of the Final Coachella Valley PM_{10} State Implementation Plan and SCAQMD Rule 403 and 403.1. • The contractor shall discontinue construction activities during first- and second-stage smog alerts. • When feasible, the contractor shall utilize existing power sources (i.e., temporary power poles) to minimize the use of diesel generators.	
Noise	No adverse impact. There are no sensitive noise receptors in the project area.	No impact.
Waterways and hydrologic systems	No adverse impact. Final design of drainage facilities would meet all federal, state, and local standards and requirements.	No impact.
Water quality	No adverse impact. A Storm Water Pollution Prevention Plan and best management practices would prevent adverse impacts.	No impact.
Wetlands and "waters of the U.S."	No impact. There are no wetlands or "waters of the U.S." in the project vicinity.	No impact.

Potential Impact	Widening Within Existing City Right-of-Way Limits Alternative (Build Alternative [Locally Preferred])	No Build Alternative
Wildlife	May affect, and is likely to adversely affect. Direct and indirect adverse impacts to 13.53 hectares (33.44 acres) of wildlife habitat, as calculated using the methodology outlined in the Conservation Plan, would be mitigated to below a level of significance through the replacement of this habitat, on a 2:1 basis for direct impacts and on a 1:1 basis for indirect impacts. The replacement land will be debited from a Conservation Bank already established as a follow-up to adoption and implementation of the Conservation Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects (Caltrans 2003).	No impact.
Floodplain	No adverse impact. No buildings or structures are proposed. That portion of the site located within the Whitewater River "water body" area would not be impacted by a major storm event.	No impact.
Threatened or endangered species	Not likely to adversely affect. Project implementation, using the methodology outlined in the Conservation Plan, would result in direct and indirect adverse impacts to 13.53 hectares (33.44 acres) of desert, consisting primarily of desert sand fields. Desert sand fields in the project vicinity provide habitat for several federally listed species, including the federally listed Coachella Valley milk-vetch (18 individuals of which were encountered in the Biological Study Area), the state protected and state species of concern flat-tailed horned lizard, and the federally listed Coachella Valley fringe-toed lizard. This impact to the threatened or endangered species habitat would be mitigated to below a level of significance through the replacement of this habitat, on a 2:1 basis for direct impacts and on a 1:1 basis for indirect impacts. The replacement land will be debited from a Conservation Bank already established as a follow-up to adoption and implementation of the Conservation Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects, August 2003.	No impact.
Historic and archaeological preservation	No adverse impact. Results of an archaeological survey of the project study area were negative. There are no archaeological sites in the Area of Potential Effects. The Indian Canyon Drive Bridge and Union Pacific Railroad, built prior to 1957, are not eligible for the National Register of Historic Places. The Federal Highway Administration and the State Historic Preservation Officer (SHPO) must concur with the finding that the project will not adversely affect properties potentially eligible for the National Register, pursuant to Section 106 of the National Historic Preservation Act. SHPO provided concurrence with this finding for this project on June 11, 2004.	No impact.

Potential Impact	Widening Within Existing City Right-of-Way Limits Alternative (Build Alternative [Locally Preferred])	No Build Alternative
Hazardous waste sites	No adverse impact. No hazardous wastes, spills, or landfills were identified within the project area.	No impact.
Visual	No adverse impacts. There are no sensitive viewers in the area. No vertical elements would be introduced into the viewscape. Views from motorists and train passengers would be short term.	No impact.
Energy	Slight beneficial impact. The improved roadway would facilitate a more efficient flow of traffic, thereby slightly reducing fuel use in automobiles and trucks that would use Indian Canyon Drive.	No impact.
Construction	No adverse impacts. Construction activities would result in temporary equipment emissions (see Air Quality above). Construction activities may result in temporary delays. These temporary impacts could be reduced by developing and implementing a traffic management plan and a construction phasing plan.	No impact.
Cumulative impacts	No adverse impacts. The proposed project is consistent with the roadway designations promulgated by the City of Palm Springs and the County of Riverside. Resources potentially impacted by this project have been evaluated and no adverse cumulative impacts are expected to result from this project.	No impact.

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List of Abbreviated Terms

ADA	Americans with Disabilities Act
ADT	Average Daily Trips
AMSL	above mean sea level
APE	Area of Potential Effects
AQMP	Air Quality Management Plan
BLM	Bureau of Land Management
blowsand	windblown sand
BMP	best management practice
BO	Biological Opinion
BSA	Biological Study Area
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	carbon monoxide
Conservation Plan	Conservation Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects
CVAG	Coachella Valley Association of Governments
CVMSHCP	Coachella Valley Multiple Species Habitat Conservation Plan
CVSIP	Coachella Valley State Implementation Plan
CWA	Clean Water Act
CYPF	cubic yards per one-foot-wide path
dBA	decibels (A-weighted scale)
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
HBRRP	Highway Bridge Replacement and Rehabilitation Program
I-10	Interstate 10
IRIS	Integrated Risk Information System
IS	Initial Study
KOA	Katz, Okitsu and Associates
kV	kilovolt(s)

LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake
MLD	Most Likely Descendent
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NAHC	Native American Heritage Commission
NATA	National Air Toxics Assessment
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NESR	Natural Environmental Study Report
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_3	nitrogen trioxide
NO_X	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
O_3	ozone
PA	Programmatic Agreement
Pb	lead
PM_{10}	fine particulate matter equal to or less than 10 microns in size
$PM_{2.5}$	fine particulate matter equal to or less than 2.5 microns in size
POAQC	projects of air quality concern
PRC	Public Resources Code
RAP	Relocation Assistance Program
RBC	Regional Business Center
RCRA	Resource Conservation and Recovery Act
ROC	reactive organic compounds
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SER	Standard Environmental Reference
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
SSAB	Salton Sea Air Basin
STIP	Surface Transportation Improvement Program
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCWG	Transportation Conformity Working Group
TDM	Transportation Demand Management

TMDL	total maximum daily load
TSM	Transportation System Management
TSM	Transportation System Management
UPRR Bridge	Union Pacific Railroad Bridge
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compounds
$\mu g/m^3$	micrograms per cubic meter
°F	degrees Fahrenheit

Chapter 1 Proposed Project

1.1 Introduction

The Indian Canyon Drive and Bridge Widening Project (proposed project) is located in the northern portion of Palm Springs, Riverside County, California. The subject road segment extends from Garnet Avenue to approximately 262 meters (860 feet) south of Palm Springs Station Road (Figures 1-1 and 1-2). The northern project boundary begins just south of Interstate 10 (I-10) at the intersection of Garnet Avenue and Indian Canyon Drive. Funding for the project includes a combination of Surface Transportation Improvement Program (STIP) funds and Highway Bridge Replacement and Rehabilitation Program (HBRRP) funds.

1.2 Purpose and Need

The primary purpose and objectives of the project are to:

- Alleviate traffic congestion.
- Improve intraregional travel by improving "directional mobility."
- Improve local access to commercial and industrial areas within the City of Palm Springs, and
- Develop a transportation facility consistent with the Circulation Element of the General Plan.

The roadway segment was calculated to have Level of Service (LOS) C in 2001 (KOA 2002). Modeling established that this LOS would quickly deteriorate to LOS F. The proposed project is intended to reestablish traffic operation on the roadway segment to LOS C and to maintain this level until 2030. Indian Canyon Drive, a north-south roadway, currently maintains one traffic lane in each direction within the project area.

The Circulation Element of the Palm Springs General Plan (1993) seeks to move people and goods safely and efficiently through the community. In the document, Indian Canyon Drive is identified as a Major Thoroughfare, defined as a roadway that forms the basic element of the city's circulation system, connecting Palm Springs to regional highways and tying together different areas of the city. Improvements to Indian Canyon Drive (and other roadways extending into adjacent jurisdictions) are considered "critical" by the Circulation Element to achieve acceptable operational levels in the city.

The Build Alternative (Locally Preferred) proposes to expand Indian Canyon Drive from its current width of 18 meters (60 feet) at the two-lane locations to 26 meters (86 feet) to provide three traffic lanes in each direction. The existing two-lane bridge over the Union Pacific Railroad tracks would be widened on the west side to accommodate the additional lanes. The bridge is currently a three-span, concrete-deck structure with steel girders. The project would stay within existing right-of-way

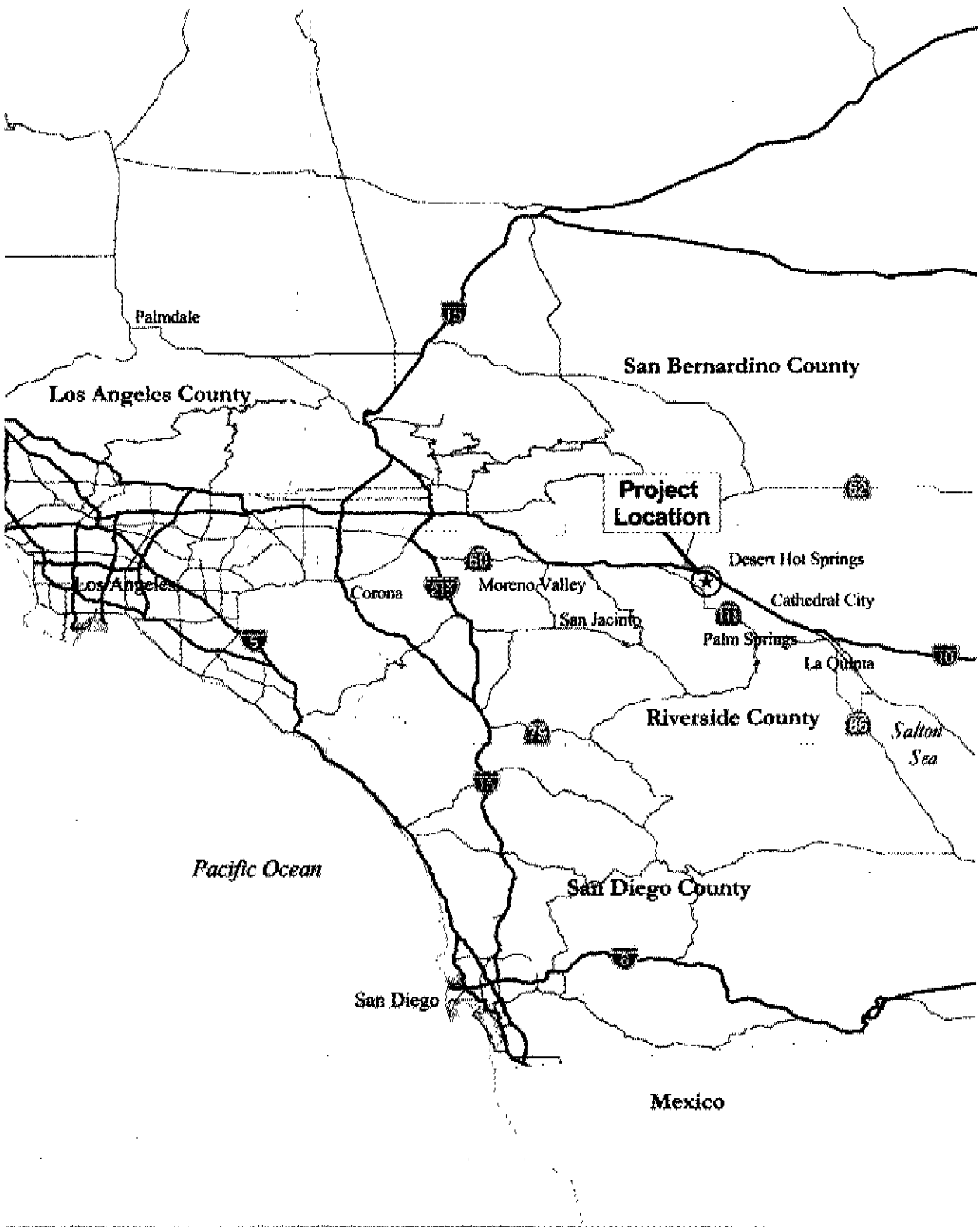
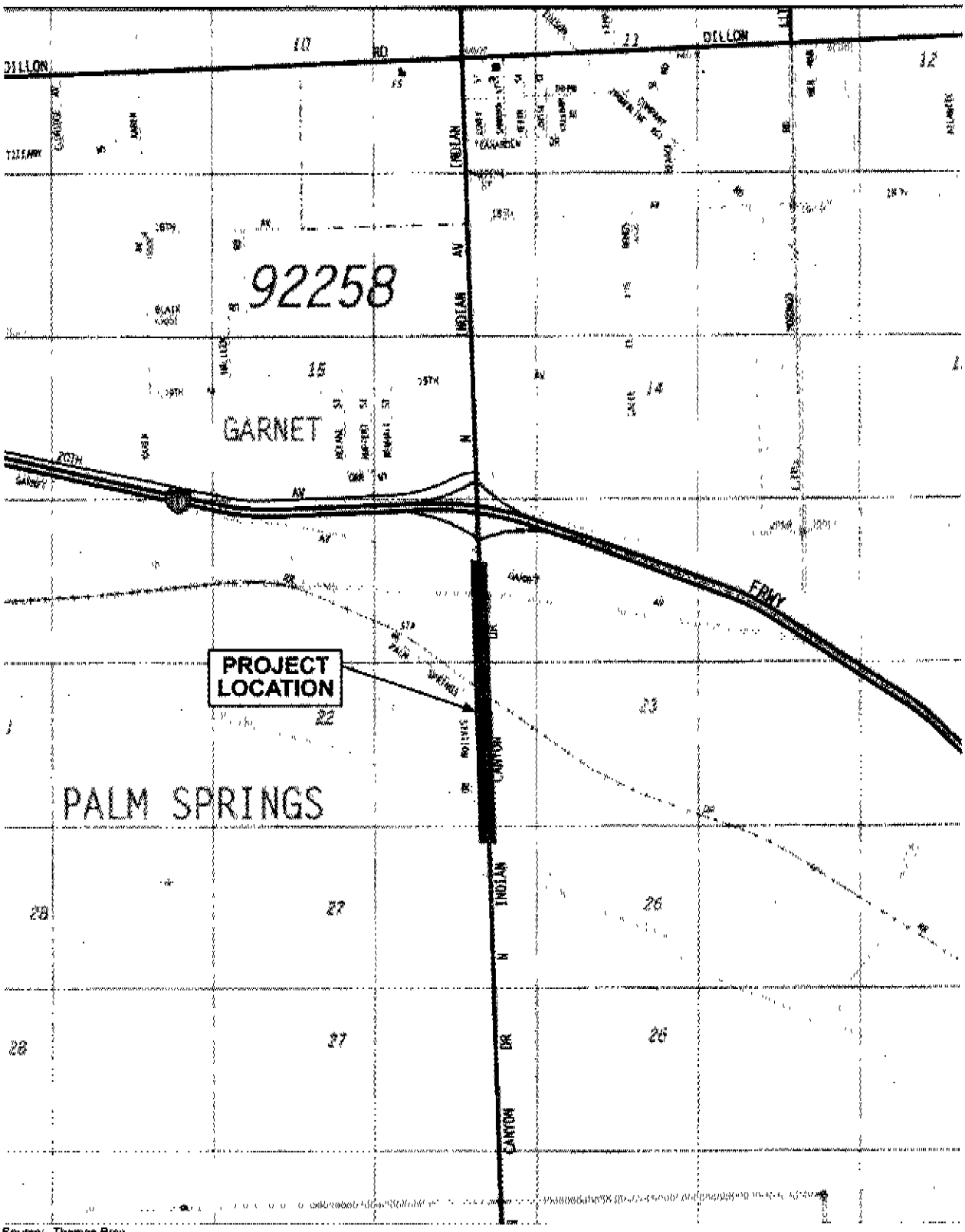


Figure 1-1
Locality Map



Source: Thomas Bros.

0 2400 Feet

Figure 1-2
Vicinity Map

boundaries and would keep the east edge of the existing pavement mostly in place. The roadway would be expanded primarily along the west side (Figure 1-3). The existing bridge structure would also be widened on the west side. A maximum 6.7-meter-high (22-foot-high), 218-meter-long (714-foot-long) retaining wall would be required on the west side of the road, to the south of the bridge, between Palm Springs Station Road and Indian Canyon Drive.

Indian Canyon Drive and I-10 in the vicinity of Indian Avenue are fast-growing transportation corridors in the Coachella Valley. Continued development in the immediate area has necessitated the reconfiguration of the I-10/Indian Avenue interchange and the widening of Indian Canyon Drive (Indian Canyon Drive becomes Indian Avenue north of its intersection with I-10). The County of Riverside has designated Indian Canyon Drive as a 39-meter-wide (128-foot-wide) Arterial in their General Plan. The Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) have designated Indian Canyon Drive as a National Highway System Connector from I-10 to the Palm Springs Regional Airport. The Palm Springs General Plan has designated Indian Canyon Drive as a 34-meter-wide (110-foot-wide) Major Thoroughfare.

Indian Canyon Drive provides access to a new Amtrak train station, via Palm Springs Station Road, that was constructed to serve the western portion of the Coachella Valley. A Foreign Trade Zone is planned adjacent to the train station that is predicted to attract a high volume of truck traffic. There is also an existing truck stop on the northwest quadrant of the Garnet Avenue/Indian Canyon Drive intersection.

The Indian Canyon Drive/Garnet Avenue intersection is currently congested during peak periods, resulting in lengthy queues. Future traffic volumes were forecasted by Katz, Okitsu and Associates (KOA 2002). Projected traffic volumes on Indian Canyon Drive are shown in Table 1-1. As shown, average daily traffic on Indian Canyon Drive between Garnet Avenue and Palm Springs Station Road is forecast to increase by more than double from the baseline traffic volumes by the Year 2015. As indicated in Table 1-1 below, traffic volumes are projected to continue to increase through 2025. The 2025 volumes adequately reflect 2030 volumes, however, as no substantial additional traffic increases are predicted for this period (see Appendix D for June 5, 2007 and August 21, 2007 Caltrans approval memos).

Table 1-1 Existing and Forecasted Traffic Volumes*

	Year 2001 Baseline		Year 2005 Forecast		Year 2015 Forecast		Year 2025 Forecast	
	NB	SB	NB	SB	NB	SB	NB	SB
AM Peak	332	778	446	1,000	637	1,467	752	1,748
PM Peak	840	518	1,109	680	1,690	1,500	2,038	1,732
Average Daily Traffic	7,586	6,813	10,033	8,996	17,847	16,053	21,109	18,983
LOS with Locally Preferred Build Alternative	LOS C (ADT 14,399)		LOS C (ADT 19,029)		LOS C (ADT 33,900)		LOS C (ADT 40,092)	
LOS with No Build Alternative	LOS C (ADT 14,399)		LOS F (ADT 19,029)		LOS F (ADT 33,900)		LOS F (ADT 40,092)	

*Indian Canyon Drive between Garnet Avenue and Palm Springs Station Road (KOA 2002)
ADT = Average Daily Trips LOS = Level of Service NB = Northbound SB = Southbound

As indicated in Table 1-1, roadway segment traffic operation was modeled at LOS C in 2001. Forecasting of future volumes and modeling of the resulting operational conditions indicate a rapid deterioration to LOS F that would continue to worsen over time. Traffic volumes, measured at 14,399 Average Daily Trips (ADT) in 2001, are projected to increase to 40,092 by 2025 (KOA 2002). The proposed project is needed to restore current roadway segment operation to LOS C and to maintain this level until 2030. Table 1-2 describes LOS A through F. Table 1-3 presents the LOS for the subject roadway segment, both with and without the project, for the baseline year and future years to 2025.

Table 1-2 Street Segment Level of Service Threshold Descriptions

Level of Service	Technical Descriptors
A	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed. **No delays.**
B	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability. **No delays.**
C	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing. **Minimal delays.**
D	Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Less maneuverability and driver comfort. **Minimal delays.**
E	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort. **Significant delays.**
F	Forced traffic flow. Speed and flow may drop to zero with high densities. **Considerable delays.**

Table 1-3 Street Segment Level of Service – Baseline Year Through 2025

Year	ADT	No Build LOS	With Project LOS
2001	14,399	LOS C	LOS C or better
2005	19,029	LOS F	LOS C or better
2015	33,900	LOS F	LOS C or better
2025	40,092	LOS F	LOS C or better

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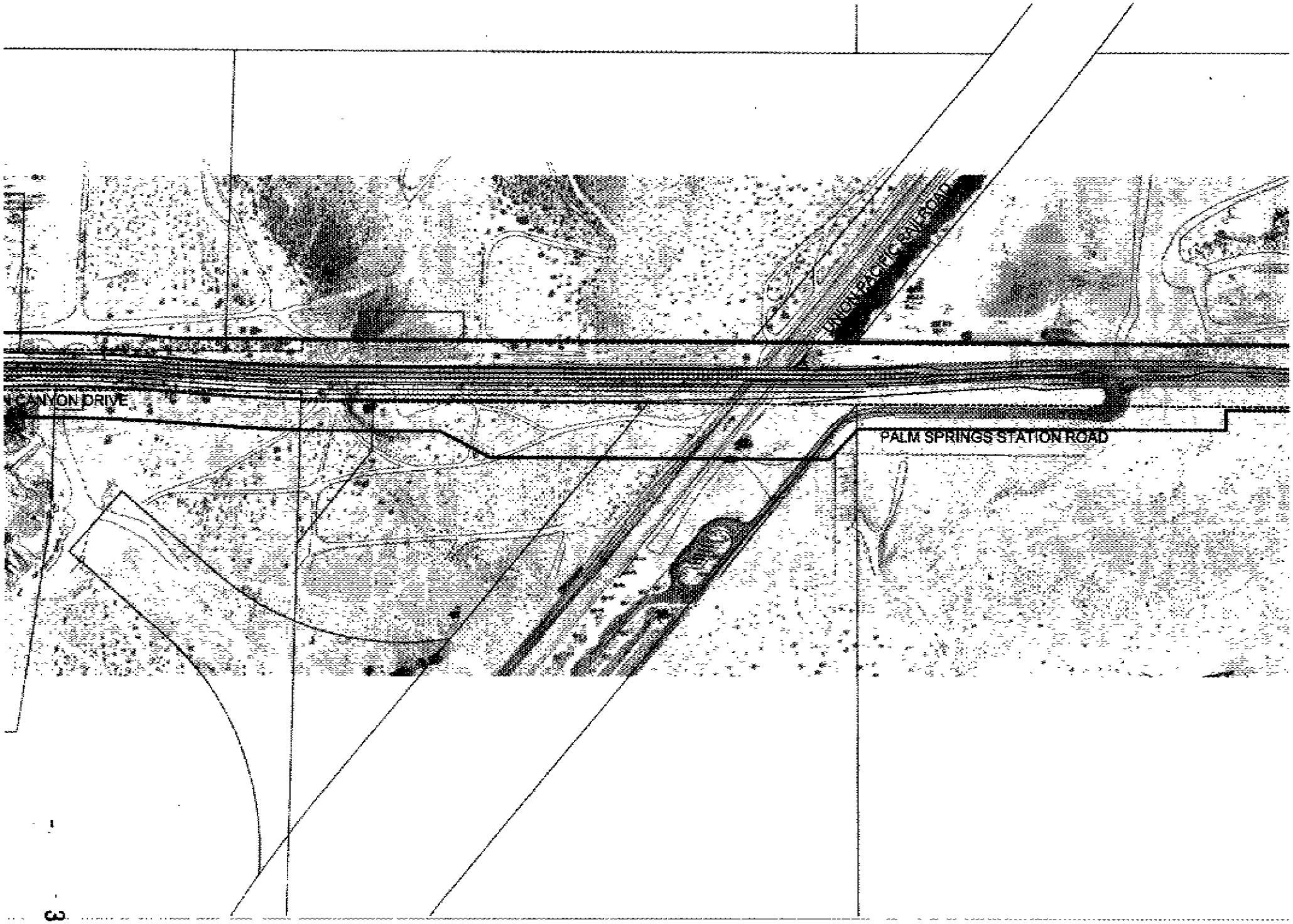

UNION PACIFIC RAILROAD
CANYON DRIVE
PALM SPRINGS STATION ROAD
300
600 Feet

1.3 Project Description

The City of Palm Springs proposes to widen Indian Canyon Drive for a distance of approximately 1,219 meters (4,000 feet) south of its intersection with Garnet Avenue (south of I-10) in accordance with Caltrans and FHWA regulations and standards. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would be widened.

Indian Canyon Drive is currently a two-lane road, except for that portion within approximately 122 meters (400 feet) of Garnet Avenue, where it widens to four lanes (three lanes southbound and one lane northbound), to transition to the improved six-lane roadway south of Garnet Avenue. Indian Canyon Drive would be widened from its current width of 18 meters (60 feet) to 26 meters (86 feet), which would expand the road from two traffic lanes to six traffic lanes between Garnet Avenue and 61 meters (200 feet) north of the existing Indian Canyon Drive Bridge. The road would widened to five travel lanes (three northbound and two southbound) from approximately 61 meters (200 feet) north of the bridge to approximately 46 meters (150 feet) south of the bridge. The bridge would be widened to accommodate the three new travel lanes. South of the bridge, the roadway would transition to three lanes for about 91 meters (300 feet). The southernmost portion of the improved roadway would be two lanes, with new north- and south-turn pockets to Palm Springs Station Road.

1.4 Alternatives

The primary purpose and objectives of the proposed project are to:

- Alleviate traffic congestion,
- Improve intraregional travel by improving "directional mobility,"
- Improve local access to commercial and industrial areas within the City of Palm Springs, and
- Develop a transportation facility consistent with the Circulation Element of the General Plan.

To accomplish this, the roadway must be widened from its current two-lane configuration. Widening the roadway to six lanes – three northbound and three southbound lanes – would reduce current traffic queues and future traffic congestion from LOS F to LOS C (KOA 2002) as described in the Roadway Classifications section of the Circulation Element regarding Major Thoroughfare (6 Lane Divided). All build alternatives that were considered involve the widening of Indian Canyon Drive.

Each build alternative would vary the location of the roadway expansion; the roadway would be widened either on the west side, east side, or on both sides. Each build alternative would also involve the widening of the Indian Canyon Drive Bridge over the Union Pacific Railroad tracks. The roadway widening locations were

determined based on existing roadway configurations, engineering requirements, environmental concerns, right-of-way restrictions, and location of existing utilities.

One Build Alternative and one No Build Alternative were selected for detailed study. The No Build Alternative was analyzed to identify the impacts if the project is not approved.

1.4.1 Proposed Build Alternative

1.4.1.1 Widening Within Existing City Right-of-Way Limits Alternative

After comparing and weighing the benefits and impacts of all of the feasible alternatives, the project development team identified the Widening Within Existing City Right-of-Way Limits Alternative as the locally preferred alternative, subject to public review. The review period ended on August 11, and based on the lack of comments and controversy relating to alternative selection, this alternative will remain the preferred alternative.

This alternative was selected for further study because it meets the purpose and need of the proposed project. This alternative was found to be reasonable and feasible from an engineering and cost standpoint. It is referred to hereafter as the Build Alternative (Locally Preferred).

The Build Alternative (Locally Preferred) proposes to expand Indian Canyon Drive from its current width of 18 meters (60 feet) at the two-lane locations to 26 meters (86 feet) to provide three traffic lanes in each direction. The existing two-lane bridge over the Union Pacific Railroad tracks would be widened on the west side to accommodate the additional lanes. The bridge is currently a three-span, concrete-deck structure with steel girders. The project would stay within existing right-of-way boundaries and would keep the east edge of existing pavement mostly in place. The roadway would be expanded primarily along the west side (Figure 1-3). The existing bridge structure would also be widened on the west side. A maximum 6.7-meter-high (22-foot-high), 218-meter-long (714-foot-long) retaining wall would be required on the west side of the road, to the south of the bridge, between Palm Springs Station Road and Indian Canyon Drive.

The roadway segment was calculated to have LOS C in 2001 (KOA 2002). Forecasting of future volumes and modeling of the resulting operational conditions indicate a rapid deterioration to LOS F that would continue to worsen over time. Traffic volumes, measured at 14,399 ADT in 2001, are projected to increase to 40,092 by 2025. The Build Alternative (Locally Preferred) would increase roadway capacity to reestablish LOS C on the roadway segment. LOS C would be maintained until 2030.

The Build Alternative (Locally Preferred) would allow traffic to flow along the existing northbound and southbound lanes during construction of the new lanes; construction lanes to the west of the traffic would flow along the new lanes while work is being completed on the existing lanes.

Under this alternative, all improvements would be made within the existing City right-of-way. Total project cost is estimated at $6,537,000. The proposed project, including the project limits, is captured within two entries (RIV011203 and

RIV990727) from both the 2008 Regional Transportation Plan (RTP) and 2006 Regional Transportation Improvement Program (RTIP). The 2008 RTP and 2006 RTIP entries include limits with a minor overlap. Entry RIV990727 includes a short stretch of roadway widening approximately 200 feet south of the Union Pacific Railroad Bridge (UPRR Bridge). This is the south end of the proposed Indian Canyon Drive and Bridge Widening Project where the widening tapers down to the existing two-lane configuration. Entry RIV011203 includes planned roadway widening (two to four lanes) from the UPRR Bridge extending south to Tramview Road. The two entries include the approximately 200-foot overlap just south of the UPRR Bridge. These two RTP/RTIP entries do not discretely represent the proposed Indian Canyon Drive and Bridge Widening Project but instead cover the proposed Indian Canyon Drive and Bridge Widening Project and a future project to the south. The future project's limits would improve the tapered portion of the proposed Indian Canyon Drive and Bridge Widening Project and widen the roadway from the UPRR Bridge to Tramview Road.

This proposed project's reference to both RIV011203 and RIV990727 is necessary given this project limit overlap. The funding identified in the two RTP/RTIP entries totals $8,369,000. The proposed Indian Canyon Drive and Bridge Widening Project's total cost is estimated at $6,537,000. The remaining funding ($1,832,000) is allocated for the future project.

1.4.2 No Build (No Action) Alternative

Under the No Build Alternative, Indian Canyon Drive would remain in its current two-lane configuration. There would be no improvements or widening to the roadway or to the bridge. Based on the current traffic needs and the anticipated growth within the region, traffic volume along Indian Canyon Drive is expected to increase. The No Build Alternative would result in a future LOS F. Aside from ongoing maintenance costs, there are no project costs associated with the No Build Alternative.

1.5 Alternatives Considered but Eliminated from Further Discussion

Each of the Build Alternatives discussed below would satisfy the project purpose and need in that they would provide adequate roadway and bridge configurations for future traffic operations. They were withdrawn, however, due to cost and design factors.

1.5.1 Widen East Side Alternative

The Widen East Side Alternative would maintain the existing western edge of pavement and shift the current centerline. This alternative would expand the roadway and widen the bridge structure to the east. Additional right-of-way would be required.

This alternative would require the relocation of an existing 69-kilovolt (kV) overhead transmission line that parallels the roadway. Cost estimates place this relocation at approximately $2,000,000. Transmission line relocation, together with the costs of right-of-way required for this alternative, would result in a project cost double that of

the estimated cost of the Build Alternative (Locally Preferred). Furthermore, the widening of the bridge only in an easterly direction would create unacceptably low railroad clearance. Relocation of the electrical transmission facilities would involve additional impacts to sensitive species habitat. For these cost, biological, and design reasons, this alternative was dropped from further consideration.

1.5.2 Widen West Side (New Centerline at Garnet Ave) Alternative

The Widen West Side (New Centerline at Garnet Ave) Alternative, like the Build Alternative (Locally Preferred), would keep the east edge of existing pavement in place. All roadway expansion would occur on the west side of the existing roadway. Bridge widening would also occur to the west. Unlike the Build Alternative (Locally Preferred), however, this alternative maintains a centerline completely to the intersection with Garnet Avenue. The Build Alternative (Locally Preferred) alignment shifts to meet the existing centerline.

The Widen West Side (New Centerline at Garnet Ave) Alternative was rejected due to excessive cost with no realized benefit over the Build Alternative (Locally Preferred). Additional right-of-way would be required to the west of the existing City right-of-way. These acquisitions would potentially result in substantial impacts to businesses located on the west side of Indian Canyon Drive at the intersection with Garnet Avenue. The cost of this right-of-way, totaling 0.61 hectare (1.5 acres), would raise the project cost to nearly double the Build Alternative (Locally Preferred) cost, at approximately $5,100,000. This alternative was dropped from further consideration.

1.5.3 Widen Both Sides Alternative

The Widen Both Sides Alternative would expand the roadway to either side of the existing centerline. In addition to the road construction, the existing bridge structure would also be widened on both sides.

Like the Widen East Side Alternative, this alternative was rejected because it would require relocation of the 69 kV overhead transmission line that parallels the east side of Indian Canyon Drive. Relocation would cost approximately $2,000,000 and would require a new electrical distribution easement; together these would double the project costs. Additionally, these project features would increase the impacts to sensitive biological resources, further increasing project mitigation measures. For these cost and biological reasons, this alternative was dropped from further consideration.

1.5.4 Transportation System Management Alternative

Transportation System Management (TSM) is a term used to refer to strategies and techniques employed to increase the efficiency, safety, capacity, or LOS of a transportation facility without increasing its size. TSM strategies attempt to maximize the efficient use of an existing transportation facility without having to employ expensive capital improvements. As such, TSM strategies can usually be employed without right-of-way acquisition and often require no construction. Examples of TSM strategies include the coordination of traffic signals, restriping lanes, and channelizing intersections. Per Caltrans' Standard Environmental Reference

guidance (2007 EIR/EIS Annotated Outline), consideration of TSM strategies is required when a project is located in a city where the population is 200,000 persons or more. Since the City of Palm Springs has approximately 47,806 permanent residents, a TDM/TSM alternative was not considered.

1.6 Permits and Approvals Needed

Federal Endangered Species Act. Under the Federal Endangered Species Act (FESA), *take* (defined as *hunt, pursue, catch, capture, or kill; or attempt to hunt, pursue, catch, capture, or kill*) of listed species is prohibited unless authorized by the U.S. Fish and Wildlife Service (USFWS). The project has the potential to affect federally listed endangered or threatened species, species proposed for listing, and candidate species (refer to Chapter 4). The FHWA has consulted with the USFWS, pursuant to Section 7 of the FESA. As part of the Section 7 consultation process, a Biological Assessment was submitted to the USFWS outlining the potential impacts to federally listed, proposed, and candidate species. On September 23, 2004, the USFWS issued a Programmatic Biological Opinion (BO) (USFWS 2004). The BO documents the effects of the proposed project on the long-term viability of the species affected, discusses required mitigation measures, and provides for limited incidental take. Based on the outcome of the Section 7 consultation with the USFWS for this project, an Appended BO was issued on October 11, 2007. The BO permits an incidental take of the endangered Coachella Valley fringe-toed lizard *(Uma Inornata)* and the Coachella Valley milk vetch *(Astragalus lentiginosus* var. *coachellae).*

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) restricts the killing, taking, collecting, and selling or purchasing of native bird species or their parts, nests, or eggs. Certain gamebird species are allowed to be hunted for specific periods determined by federal and state governments. The intent of the MBTA is to eliminate any commercial market for migratory birds, feathers, or bird parts, especially for eagles and other birds of prey. Although no permit is issued under the MBTA, if vegetation removal within the project area occurs during the breeding season for raptors and migratory birds (February 15 through September 15), the USFWS requires that surveys be conducted to locate active nests within the construction area. If active raptor or migratory bird nests are detected, project activities may be temporarily curtailed or halted.

California Endangered Species Act. The California Endangered Species Act (CESA) parallels the FESA. As a responsible agency, the California Department of Fish and Game (CDFG) has regulatory authority over state-listed endangered and threatened species. The state legislature encourages cooperative and simultaneous findings between state and federal agencies. If a federal BO has been prepared for a species, the CDFG generally uses the BO in lieu of its own findings unless it is inconsistent with the CESA. By adopting the federal BO per Section 2080.1, the CDFG need not issue a take permit per Section 2081 of the state code. If the federal BO is found to be inconsistent with the CESA, the CDFG would issue a 2081 take permit with conditions of approval.

Clean Water Act. The proposed project involves major ground disturbance and drainage modifications. No dredging or filling of "waters of the U.S. will occur; therefore, a Section 404 permit will not be required. Construction activity will,

however, likely result in discharge via runoff into waters of the U.S. Runoff from the project area will enter the Whitewater River Wash. Due to the potential for water pollution from the project, a Water Quality Certification from a Regional Water Quality Control Board (RWQCB) per Section 401 of the Clean Water Act (CWA) will be required.

California Fish and Game Code, Section 1600 et seq. Under these sections of the Fish and Game Code, the City of Palm Springs is required to notify the CDFG prior to any project which would divert, obstruct, or change the natural flow or bed, channel or bank of any river, stream, or lake. The current project description does not include potential to impact any river, stream, or lake. A Section 1600 Streambed Alteration Agreement will not be required.

National Historic Preservation Act, Section 106. This act declares a national policy of historic preservation to protect, rehabilitate, restore, and reuse districts, sites, buildings, structures, and objects significant in American architecture, history, archaeology, and culture. Section 106 mandates that federal agencies take into account the effect of an undertaking on a property which is included in, or eligible for inclusion in, the National Register of Historic Places. There are no resources eligible for inclusion in the National Register of Historic Places; therefore, no Section 106 consultation will be required.

The following permits, reviews, and approvals would be required for project construction:

Table 1-4 Permits and Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species	Consultation requested beginning 07/29/2002. Appended BO was issued on 10/11/2007. If vegetation removal within the project area occurs during the breeding season for raptors and migratory birds (February 15 through September 15), the USFWS requires that surveys be conducted to locate active nests within the construction area. If active raptor or migratory bird nests are detected, project activities may be temporarily curtailed or halted.
California Regional Water Quality Control Board	NPDES General Permit, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity, (Order No. 99-08-DWQ,	Application will be submitted during the Plans, Specifications, & Estimates phase

Agency	Permit/Approval	Status
	NPDES No. CAS000002)	
California Regional Water Quality Control Board	National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements for Riverside County Flood Control District for the Whitewater River Watershed, (Order No. 01-077, NPDES No. CAS617002)	Application will be submitted during the Plans, Specifications, & Estimates phase
California Regional Water Resources Quality Control Board	Section 401 Permit Water Quality Certification	Application will be submitted during the Plans, Specifications, & Estimates phase
Department of Transportation	Section 106 of the National Historic Preservation Act	Determination of no historic properties affected 6/11/2004.
California Public Utilities Commission – Rail Crossings Engineering Section	Authorization in the form of concurrence from all parties (Railroad, local agency, and the Commission) must be obtained to permit the proposed changes to the existing Indian Canyon Drive Overpass.	A request for authorization will be submitted during the Plans, Specifications, & Estimates phase

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization &/or Mitigation Measures

This chapter discusses various elements of the environment that may be affected by the proposed improvements to Indian Canyon Drive. After outlining the regulatory setting for each issue, the affected environment and impacts are detailed. Each topic is then concluded with the avoidance, minimization, and/or mitigation measures that have been proposed.

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- Wilderness/Wild and Scenic Rivers: This project is located in Riverside County in southern California. The San Jacinto Wilderness is located approximately 5 miles west of the project but is limited to the mountains and uplands and therefore does not extend to the project area located on the desert floor. All Wild and Scenic portions of the Tuolomne, American, Middle Fork of the Feather, Smith, Klamath, Trinituy and Eel Rivers, are located in counties north of the project area.
- Parks and Recreation: There are no parks in the vicinity of the proposed project. No impacts to parks and recreation would occur.
- Farmlands/Timberlands: There is no farmland or timberland land use areas designated in the project area (General Plan 1993).
- Cultural Resources: No prehistoric or historic archaeological sites were identified within the APE. Determination of no historic properties affected was issued July 11, 2004.
- Paleontology: Geologic sediments within the project area are Quaternary age alluvium and are not likely to harbor paleontological specimens. Fossils in the region are found along the southern edge of Garnet Hill, away from the proposed project site.

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Affected Environment

Existing Land Use

The Indian Canyon Drive and Bridge Widening Project is located within an incorporated area of Palm Springs in north-central Riverside County. The Build

Alternative (Locally Preferred) site is located approximately 0.5-mile south of the intersection of Indian Canyon Drive and I-10.

I-10 in north-central Riverside County is an east-west-trending freeway (northwest-southeast near the site) that has minimal adjacent development in the northern portion of the Coachella Valley it traverses, except near intersecting streets. Several businesses, many of them freeway-oriented commercial enterprises, are located within the project study area. Fast-food restaurants are located on two of the quadrants of the Indian Canyon Drive/Garnet Avenue intersection: Jack-in-the-Box on the southwest and Wendy's on the northwest. A Pilot gas station that services both automobiles and large trucks is attached to the Wendy's on the northwest side of this intersection. Across the street to the east is a Chevron gas station. The southeast corner of the intersection is occupied by a warehouse. A welding company, the "Hole-in-the-Wall," with a distinctive spider sculpture, is located on the west side of the road, south of the Jack-in-the-Box. The General Plan shows this area near the intersections of Garnet Avenue/Indian Canyon Drive and I-10/Indian Canyon Drive designated as Regional Business Center. Office, commercial, and industrial uses are all consistent with this land use designation.

Transportation-related commercial land uses are also located on the north side of I-10 along Indian Avenue and along 20th Avenue, which runs parallel to the freeway. A gas station and mini-mart are located on the west side of Indian Avenue. A hotel and restaurant are located on 20th Avenue. Farther to the north on Indian Avenue is a small "mini-mall" with commercial and office uses, several office/industrial buildings, and a recently constructed electric power generation plant. A residential neighborhood in North Palm Springs is located approximately 1 mile to the north of the I-10/Indian Avenue interchange.

A set of railroad tracks owned by the Union Pacific Railroad bisects the proposed project site. Located west of the proposed project site and south of the Union Pacific Railroad right-of-way is the Palm Springs Rail Station that has Amtrak service from the Sunset Limited and Texas Eagle trains. This unmanned station is accessed by Palm Springs Station Road. Immediately west of the proposed project site and north of the railroad tracks, the land use is designated Regional Business Center. South of the railroad tracks, the land use is designated Open Space – Water. East of the proposed project site and north of the railroad tracks, the land use is designated Regional Business Center, Desert, and Open Space – Mountain. South of the railroad tracks, the land use is designated Desert.

To the south of the Build Alternative (Locally Preferred) site, the Whitewater River area precludes the construction of structures. About 2.7 kilometers (1.7 miles) to the south of Palm Springs Station Road is residential land use.

New developments are proposed within the vicinity of the proposed project study area, but not within the project study area. Two projects are proposed outside the project study area: a 12-hectare (30-acre), 11-lot industrial subdivision at the northeast corner of Indian Canyon Drive and Garnet Avenue, and a 60-unit hotel on Garnet Avenue. Both of these developments are consistent with existing and future land use plans, and no amendments to the adopted Land Use Plan are anticipated.

Consistency with State, Regional, and Local Plans

The proposed project is consistent with all of the following plans that would apply to the project vicinity. The related goals and policies are summarized in Table 2-1.

Transportation Plans/Programs

The proposed project is identified as two individual projects in the 2008 RTP and Final Adopted 2006 RTIP with Approved Amendments 1 through 12, 14 through 16, and 18 Local Highway Projects (2006 RTIP). The portion of the proposed project extending from Garnet Road to the south end of the Indian Canyon Drive Bridge is identified in the 2008 RTP and 2006 RTIP as project RIV990727. The portion of the proposed project extending from the south end of the bridge to Palm Springs Station Road is included in the 2008 RTP and 2006 RTIP as a part of project RIV011203.

City of Palm Springs

The Build Alternative (Locally Preferred) site is located in Riverside County within the jurisdiction of the City of Palm Springs. No annexation will be required as part of this project.

The City of Palm Springs General Plan has several land use designations that overlay the site, as discussed above. The General Plan does specifically note, in the Land Use element, that improvements to Indian Canyon Drive near I-10 are anticipated. These improvements will increase roadway capacity and will facilitate the expansion of office, industrial, and regional commercial developments near the I-10/Indian Canyon Drive intersection (City of Palm Springs 2007, p. 2-43).

The proposed widening of Indian Canyon Drive is consistent with the roadway designations identified by the City of Palm Springs and the County of Riverside. Project implementation, taken together with eventual improvement of the I-10/Indian Avenue interchange, could accelerate the build-out of Highway Commercial land uses in the immediate vicinity of the interchange, as well as the land designated for Business/Industrial development between Garnet Avenue and the railroad right-of-way. Such development is consistent with the planned land use for the area, however. As such, no adverse land use impacts are anticipated.

Table 2-1 Applicable Planning Documents

Plan/Document	Relevant Policy/Goal/Objective
City of Palm Springs General Plan - Circulation Element	• The Circulation Element of the General Plan seeks to move people and goods safely and efficiently through the community. • Indian Canyon Drive is identified as a Major Thoroughfare (4 or 6 Lane Divided facility), defined as a roadway that forms the basic element of the city's circulation system, connecting Palm Springs to regional highways and tying together different areas of the city. • Improvements to Indian Canyon Drive (and other roadways extending into adjacent jurisdictions) are considered "critical" by the Circulation Element to achieve acceptable operational levels in the city. • The Recreational Trails and Bikeways section of the Circulation Element proposes a bike lane along Indian Canyon Drive between Garnet Avenue and Racquet Club Road. The proposed project includes adequate right-of-way for a Class II bicycle facility.
2008 Regional Transportation Plan and 2006 Regional Transportation	• The 2008 RTP and 2006 RTIP entries include limits with a minor overlap. • Entry RIV990727 includes a short stretch of roadway widening south of the Union Pacific Railroad Bridge (UPRR Bridge), approximately 61

Plan/Document	Relevant Policy/Goal/Objective
Improvement Program	meters (200 feet). This is the south end of the proposed Indian Canyon Drive and Bridge Widening Project where the widening tapers down to the existing two-lane configuration. • Entry RIV011203 includes planned roadway widening (2 to 4 lanes) from the UPRR Bridge stretching south to Tramview Road. These two entries include the approximate 61-meter (200-foot) overlap just south of the UPRR Bridge. • The 2008 RTP air quality conformity determination was approved by FHWA and FTA on June 5, 2008 (FHWA 2008a). The 2006 RTIP Amendment 15 was approved by FHWA and FTA on May 6, 2008 (FHWA 2008b). Therefore, the proposed project conforms to the regional transportation plans.
City of Palm Springs General Plan - Aesthetic Resources	• The Palm Springs General Plan indicates that Indian Canyon Drive is designated as a "City-designated Scenic Corridor." • Scenic corridors are intended to be designed to take advantage of their scenic qualities by such methods as providing greater setbacks from the street and providing landscaping to accent vistas and mask unsightly views. • The Palm Springs General Plan Aesthetic Resources map indicates that Garnet Hill east of Indian Canyon Drive is considered a "Viewshed Area." • There are no identified Focal Points, Focal Areas, or Views to the project area.
Draft Coachella Valley Multi-Species Habitat Conservation Plan	• Impacts to the habitats of listed species would be offset via the purchase and conservation of an equivalent amount of habitat in a Conservation Bank. • An intent of the Conservation Plan is to allow a finding that impacts to threatened and endangered species have been reduced below a level of significance pursuant to both CEQA and NEPA. • Implementation of the mitigation outlined in the Conservation Plan would allow a project coverage under the Draft Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP) pursuant to a permit issued under Section 10a of the Endangered Species Act. • Required mitigation shall be met through the replacement of desert sand fields habitat, on a 2:1 basis in the case of direct impacts, and a 1:1 basis in the case of indirect impacts, in an established Conservation Bank under the CVMSHCP.
Riverside County General Plan	• The proposed roadway widening is consistent with the County of Riverside's designation of Arterial, although the proposed right-of-way would be less than 39 meters (128 feet).
City of Palm Springs General Plan	• There are several land uses that overlay the project site, including Regional Business Center, Business/Industrial, Desert, and Watercourse. • The proposed project would not change or impede any of the existing or planned land uses and would conform to those listed in the General Plan. • The Health and Safety Element of the General Plan states that the Whitewater River would not pose a threat to life or property during an intermediate regional stage flood.

The proposed project, the widening of the northernmost 1,219 meters (4,000 feet) of Indian Canyon Drive, is anticipated by the Circulation Element of the City of Palm Springs General Plan. The roadway will conform to the Major Thoroughfare designation contained in the Circulation Element. The planned roadway improvements will also conform to the roadway's Arterial designation as applied by the County of Riverside.

There is a considerable quantity of vacant land, and land that is currently occupied by low-intensity uses, in the project vicinity. Land in the vicinity that is available for development, however, is limited primarily to the area north and immediately south of the Indian Canyon Drive/I-10 interchange. Improvements to the interchange are currently under design. These improvements would result in a facility capable of accommodating horizon-year or "build-out" traffic volumes. Due to funding uncertainties, no schedule for interchange improvement is currently available. Similar improvements are planned for the other I-10 interchanges in the Coachella Valley and the Banning Pass.

County of Riverside

The County of Riverside does not have land use designations for the area surrounding the proposed project since it is within the jurisdiction of the City of Palm Springs. Indian Canyon Drive is designated as a 39-meter-wide (128-foot-wide) Arterial with four to six lanes.

2.1.1.2 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

The proposed project is consistent with the City of Palm Springs General Plan, which designated improvements to Indian Canyon Drive as "critical". Additional right-of-way would not be required as all improvements would be within the city's existing right-of-way. Construction activities and operation would not affect current or proposed land uses along the alignment or vicinity of the project as the Build Alternative will neither preclude future use or development nor necessitate changes to land use designations.

Temporary/Construction

Construction activities would not affect current or proposed land uses along the alignment or vicinity of the project as the Build Alternative will neither preclude future use or development nor necessitate changes to land use designations.

No Build Alternative

Under the No Build Alternative, there would be no modifications made to Indian Canyon Drive or the Indian Canyon Drive Bridge. No impacts to land use would occur as a result of this alternative

2.1.1.3 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse impacts to land use as a result of the Build Alternative or No Build Alternative. Therefore, no avoidance, minimization, and/or mitigation measures are proposed for land use.

2.1.2 Population and Housing: Growth

2.1.2.1 Regulatory Setting

The California Environmental Quality Act (CEQA) requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could

foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment...."

2.1.2.2 Affected Environment

There is a considerable quantity of vacant land, and land that is currently occupied by low-intensity uses, in the project vicinity. Land in the vicinity that is available for development, however, is limited primarily to the area north and immediately south of the Indian Canyon Drive/I-10 interchange. Improvements to the interchange are currently under design. These improvements would result in a facility capable of accommodating horizon-year or "build-out" traffic volumes. Due to funding uncertainties, no schedule for interchange improvement is currently available. Similar improvements are planned for the other I-10 interchanges in the Coachella Valley and the Banning Pass.

Because of existing land use patterns, underlying ownership, and land use designations, development in the proposed project vicinity in the future will likely be concentrated in the area immediately surrounding the Indian Canyon Drive/I-10 interchange. As was discussed in Section 2.1.1, land use in the vicinity of the interchange is designated HC - Highway Commercial. Highway Commercial uses are retail or service businesses that serve freeway travelers. Permitted uses in the Highway Commercial areas include hotels, auto service stations, and restaurants. At this time, there are only two planned new developments in the proposed project vicinity. Both of these are located in areas covered by the HC designation. A 12-hectare (30-acre), 11-lot industrial subdivision has been approved by the City at the northeast corner of Indian Canyon Drive and Garnet Avenue. A 60-unit hotel fronting Garnet Avenue east of Indian Canyon Drive has also been approved.

Limited future land development opportunities exist along the proposed project corridor. Future development, consistent with the City's IND – Business/Industrial designation, could occur on either side of the roadway between the existing development fronting Garnet Avenue and the railroad right-of-way. To the south of the railroad right-of-way, the land is already developed, albeit with low-intensity uses. To the east of the roadway, the land is occupied by a construction operation. To the west of the roadway, the land is occupied by a commuter rail station and existing wind energy farms. Uses south of the proposed project corridor are precluded by the Whitewater River floodplain.

Since the primary objective of the proposed project is to improve current and future traffic capacity and LOS, it is not anticipated that the project would promote economic or population growth, nor would it indirectly induce growth by reducing or removing barriers to growth or by creating a condition that attracts additional population or new economic activity that is not currently planned. As previously stated in Section 2.1.1, Land Use, the proposed project would not promote development along the alignment or to the south.

2.1.2.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

Under the Build Alternative (Locally Preferred), growth in Riverside County and the City of Palm Springs is anticipated to occur in accordance with California Department of Finance projections. The Build Alternative would not affect these estimates.

The proposed project is intended to provide improved capacity on Indian Canyon Drive and Indian Canyon Bridge. The City and County have accounted for potential growth in their plans and have planned for community facilities, including the widening of Indian Canyon Drive and Indian Canyon Bridge, to accommodate this growth. The proposed project would not likely result in an adverse indirect effect since the proposed project has been included and considered in local agency planning documents.

Following implementation of the project, the pattern and rate of population and housing growth would be expected to remain consistent with that which is anticipated by existing plans for the area. Furthermore, no new or expanded infrastructure, housing or other similar permanent physical changes to the environment would be necessary as an indirect consequence of the proposed project.

Temporary/Construction

Temporary construction activities and operation would not affect current or proposed commercial land uses along the project corridor.

No permanent or temporary adverse impacts on growth within and adjacent to the proposed project area would occur from implementation of the Build Alternative (Locally Preferred).

No Build Alternative

Under the No Build Alternative, there would be no modifications made to Indian Canyon Drive or the Indian Canyon Drive Bridge. No impacts to growth would occur as a result of this alternative.

2.1.2.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse impacts to growth as a result of the Build Alternative or No Build Alternative. No avoidance, minimization, and/or mitigation measures are proposed.

2.1.3 Population and Housing: Community Impacts

2.1.3.1 Regulatory Setting

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.1.3.2 Affected Environment

The proposed project is located in the northern section of Palm Springs and provides a north-south link from I-10 to both Palm Springs to the south and Desert Hot Springs to the north. The roadway provides a transportation connection for individual motorists and for the movement of goods and products, as is consistent with the Circulation Element of the General Plan for Major Thoroughfares, such as Indian Canyon Drive.

Several businesses are located at the intersection of Indian Canyon Drive and Garnet Avenue, in the northern portion of the study area. A gas station, several fast-food restaurants, a furniture storage building, and a welding company surround the intersection. The freeway-oriented commercial establishments receive much of their business from travelers on I-10.

The Palm Springs Rail Station, an Amtrak train station, is located to the west of Indian Canyon Drive, south of the railroad tracks. Passengers include residents and visitors of the Palm Springs area. An abandoned quarry is located to the east of the train station.

2.1.3.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

The assessment of whether, and to what extent, the proposed project would adversely affect the cohesiveness of the adjacent businesses depends largely on whether the project is likely to physically divide those land uses. Because Indian Canyon Drive and Indian Canyon Bridge is an existing feature and because no dislocation of neighboring businesses would occur, implementation of the proposed project would not divide or directly impact any identified neighborhood or community. Implementation of the build alternative would also not result in discrimination, denied benefits, or exclusion from participation, because of race, color, religion, national origin, sex, age, or handicap.

Roadway widening would occur south of the intersection of Indian Canyon Drive and Garnet Avenue. All road improvements would be located within existing city right-of-way. No take of private property would be required, and operation of the road would not affect businesses in that area.

There would be no negative social or economic impacts with the Build Alternative (Locally Preferred). The widening of Indian Canyon Drive would improve traffic circulation and would provide a safer travel environment, which would have a beneficial effect on the flow of people and goods. Likewise, there would be no negative impacts with regard to public services such as fire, police, or emergency medical response because of the improved traffic circulation and safer travel environment.

The City of Palm Springs is committed to compliance with Title VI of the Civil Rights Act, which provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of,

or be subjected to discrimination under any program or activity receiving federal financial assistance.

Temporary/Construction

The proposed project construction would include a traffic management plan and would not affect businesses in the area. Potential impacts to human health due to the construction or operation of the proposed project are not anticipated to be significant. The population of the affected community within the wider vicinity of the proposed project would be proactively encouraged to participate in the public comment process of the proposed project. The proposed project would not impact community cohesion. All best management practices (BMPs) will be adhered to during the period of construction. No health and safety impacts to children would result from the proposed project.

No Build Alternative

Under the No Build Alternative, no changes to the existing conditions would occur; therefore, there would be no beneficial effects from improved traffic circulation.

2.1.3.4 Avoidance, Minimization, and/or Mitigation Measures

No adverse social or economic impacts would occur from the Build Alternative (Locally Preferred) or the No Build Alternative. The characteristics of the proposed project corridor are such that no disproportionate impacts to low-income or minority populations would occur. No avoidance, minimization, and/or mitigation measures are proposed.

2.1.4 Population and Housing: Relocations

2.1.4.1 Affected Environment

There are several businesses at the intersection of Indian Canyon Drive and Garnet Avenue, in the northern portion of the study area. A gas station, several fast-food restaurants, a furniture storage building, and a welding company surround the intersection. The Palm Springs Rail Station, an Amtrak train station, is located to the west of Indian Canyon Drive, south of the railroad tracks. An abandoned quarry is located to the east of the train station. All work would occur within city right-of-way and no additional right-of-way is needed. Therefore, no relocations would take place due to the proposed project.

2.1.4.2 Environmental Consequences

Build Alternative (Locally Preferred)

The proposed widening of Indian Canyon Drive and bridge would be confined to the City of Palm Springs' right-of-way limits. No full or partial acquisition of property would occur, and relocation of businesses within the study area would not be necessary. There would therefore be no adverse impacts associated with the Build Alternative (Locally Preferred).

The project would not have an adverse effect on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. This determination was made using Census 2000 data. Low income is

defined based on the Department of Health and Human Services poverty guidelines. For 2007, this was $20,650 for a family of four.

No Build Alternative

There would be no change in the existing environment with the No Build Alternative. No full or partial acquisition of property would occur. There would be no impacts resulting from the No Build Alternative.

2.1.4.3 Avoidance, Minimization, and/or Mitigation Measures

No relocation of businesses would occur as a result of the proposed project for either the Build Alternative (Locally Preferred) or the No Build Alternative; therefore, no avoidance, minimization, and/or mitigation measures are proposed.

2.1.5 Utilities and Emergency Response

2.1.5.1 Affected Environment

A 69- kV overhead transmission line is located east of and parallel to Indian Canyon Drive within the proposed project limits. No other water, sewer, or telecommunication utilities would be affected by this project.

2.1.5.2 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

Because widening of the roadway will occur primarily to the west, the 69-kV transmission line will not be affected. Roadway construction would not affect any other utilities in the project vicinity. No permanent impacts to public utilities are anticipated.

There would be no negative impacts to public services such as fire, police, or emergency medical response. The proposed project would not create additional demand for these services. Emergency response times would improve because of the improved traffic circulation and safer travel environment.

Temporary/Construction

No temporary impacts to utility systems would occur.

Traffic along Indian Canyon Road would continue to use the existing north- and southbound lanes during construction. This would allow emergency responders to continue to use the roadway. There would be no temporary negative impacts to public services such as fire, police, or emergency medical response.

No Build Alternative

No impacts to utility services or emergency response would occur as a result of the No Build Alternative.

2.1.5.3 Avoidance, Minimization, and/or Mitigation Measures

No adverse utility impacts would occur as a result of the Build Alternative (Locally Preferred) or the No Build Alternative; therefore, no avoidance, minimization, or mitigation measures are proposed.

2.1.6 Traffic & Transportation

2.1.6.1 Regulatory Setting

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." [CA Public Resources Code Section 21001(b)]

The City of Palm Springs is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.1.6.2 Affected Environment

Indian Canyon Drive is a major access route to and between the Cities of Palm Springs and Desert Hot Springs and ultimately intersects with SR-62 north of Desert Hot Springs. Within the immediate vicinity of the proposed project site, Indian Canyon Drive and Bridge exists as a two-lane roadway. Indian Canyon Drive extends from SR-62 in the north in Desert Hot Springs to Camino Parocela in Palm Springs in the south. Currently, there are no buildings along Indian Canyon Drive and Bridge.

The Indian Canyon Drive/Garnet Avenue intersection is currently congested during peak periods, resulting in lengthy queues. Future traffic volumes were forecasted by Katz, Okitsu and Associates (KOA 2002). Projected traffic volumes on Indian Canyon Drive are shown in Table 2-3. As shown, average daily traffic on Indian Canyon Drive between Garnet Avenue and Palm Springs Station Road is forecast to more than double from the baseline traffic volumes by the Year 2015. As indicated in Table 2-3 below, traffic volumes are projected to continue to increase through 2025.

Table 2-3 Existing and Forecasted Traffic Volumes*

	Year 2001 Baseline		Year 2005 Forecast		Year 2015 Forecast		Year 2025 Forecast	
	NB	SB	NB	SB	NB	SB	NB	SB
AM Peak	332	778	446	1,000	637	1,467	752	1,748
PM Peak	840	518	1,109	680	1,690	1,500	2,038	1,732
Average Daily Traffic	7,586	6,813	10,033	8,996	17,847	16,053	21,109	18,983
LOS with Locally Preferred Build Alternative	LOS C (ADT 14,399)		LOS C (ADT 19,029)		LOS C (ADT 33,900)		LOS C (ADT 40,092)	

LOS with No Build Alternative	LOS C (ADT 14,399)	LOS F (ADT 19,029)	LOS F (ADT 33,900)	LOS F (ADT 40,092)

*Indian Canyon Drive between Garnet Avenue and Palm Springs Station Road (KOA 2002)
ADT = Average Daily Trips LOS = Level of Service NB = Northbound SB = Southbound

As indicated in Table 2-3, roadway segment traffic operation was modeled at LOS C in 2001. Forecasting of future volumes and modeling of the resulting operational conditions indicate a rapid deterioration to LOS F that would continue to worsen over time. Traffic volumes, measured at 14,399 Average Daily Trips (ADT) in 2001, are projected to increase to 40,092 by 2025 (KOA 2002). The proposed project is needed to restore current roadway segment operation to LOS C and to maintain this level until 2030. Table 1-2 describes LOS A through F. Table 2-3 presents the LOS for the subject roadway segment, both with and without the project, for the baseline year and future years to 2025. Caltrans produced supplemental approval memorandums for 2030 horizon issues. The predicted 2025 volumes accurately reflect 2030 volumes (see Appendix D).

One of the two east/west roadways in the study area is Palm Springs Station Road which connects to Indian Canyon Drive south of the rail line overcrossing. This roadway extends into the Palm Springs Station, which provides Amtrak and Greyhound bus service. On the east side of the roadway, there is a dirt road which extends to the east for the Granite Construction property. Trucks and other vehicles access Indian Canyon Drive from this roadway. The intersection of Palm Springs Station Road and Indian Canyon Drive is currently unsignalized.

There are currently no facilities for pedestrians along Indian Canyon Drive, with the exception of sidewalks at the Garnet Avenue intersection. The considerable distance between land uses at the Indian Canyon Drive/Garnet Avenue intersection and those to the south, frequent high winds with windblown sand (blowsand), and periodic flood hazards to the south combine to make pedestrian traffic on Indian Canyon Drive impractical.

There is currently no specific bike lane or other accommodation for bicycle travel within the study area. Traffic along Indian Canyon Drive south of Garnet Avenue travels at a relatively fast rate of speed due to the minimal number of intersections and the lack of curves, creating a potentially hazardous situation for bicyclists traveling within the shoulder or travel lane of Indian Canyon Drive.

The Recreational Trails and Bikeways section of the Circulation Element in the General Plan proposes a bike lane along Indian Canyon Drive between Garnet Avenue and Racquet Club Road. Shoulders constructed by this project will accommodate bicycles but will not be marked as formal bike lanes. A 4-inch white outside-edge-of-lane stripe is included in the current roadway design and meets the Caltrans Highway Design Manual's Section 1004.4 "Bike Routes" considerations. Therefore, while there are no current or proposed formal facilities, the project will accommodate bicycles in a way that meets both the City's General Plan and Caltrans' Design Manual.

2.1.6.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

Construction of the Build Alternative will have beneficial impacts on Indian Canyon Drive by improving traffic operations. The design of the Indian Canyon Drive widening does not include the construction of sidewalks to facilitate pedestrian traffic. This would not be an impact to pedestrian traffic, as this area is not commonly traversed on foot because of the relatively long distance between destinations and the frequent high winds and blowsand.

Project design of the Indian Canyon Drive widening includes adequate right-of-way for a standard Class II bikeway with a 1.5-meter-wide (5-foot-wide) striped lane, and curb and gutter on both sides of the roadway. There would thus be a beneficial impact to pedestrians or bicyclists as a result of the proposed road widening. The project is in compliance with the ADA.

Temporary/Construction

Because the majority of Indian Canyon Drive is a two-lane roadway, construction activities may result in temporary delays and obstacles because traffic may need to be slowed, stopped, or detoured. This would be considered a negative impact, but the impact would not be adverse due to its temporary nature.

No Build Alternative

There would be no adverse impacts to pedestrians or bicyclists associated with the No Build Alternative.

2.1.6.4 Avoidance, Minimization, and/or Mitigation Measures

Impacts to traffic flow as a result of construction activities could be reduced by developing and implementing a traffic management plan and a construction phasing plan.

2.1.7 Visual/Aesthetics

2.1.7.1 Regulatory Setting

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." [CA Public Resources Code Section 21001(b)]

2.1.7.2 Affected Environment

The following discussion describes not only the visual setting as it occurs today, but also as it may exist in the future if development occurs consistent with the City of Palm Springs General Plan, because the viewscape of the study area could be different with that potential development.

Project Viewshed

The viewshed for a project is defined as the surrounding geographic area from which the project is likely to be seen, based on topography, land use patterns, and landscaping. The viewshed for the proposed project is very localized because of the low profile of the roadway and bridge, and because of the limited topographic diversity of the study area and surrounding land.

There are few viewing opportunities of the project site except from the node of commercial development at the Garnet Avenue/Indian Canyon Drive intersection, from cars on Indian Canyon Drive, and from trains on the Union Pacific Railroad. Therefore, the viewshed extends on the north to the commercial area at the intersection of Garnet Avenue and Indian Canyon Drive and to the south of Palm Springs Station Road. There is little development to the west or east of the roadway, and the only location from which Indian Canyon Drive can be seen is from the Palm Springs Amtrak station and from a passing passenger train.

Overview of Existing Landscape Characteristics

In general, disturbed, open, desert landscape dominates the viewshed, although freeway-oriented commercial development surrounds the intersection of Garnet Avenue and Indian Canyon Drive. Also, an abandoned quarry is located on the east side of Indian Canyon Drive, south of the railroad tracks. The area is predominantly flat, although Garnet Hill, to the east of Indian Canyon Drive, adds some topographic relief to the immediate area. Also, a corridor through the natural terrain has been graded to accommodate the railroad tracks of the Union Pacific Railroad, and sand has been mounded between the quarry and the roadway.

Stabilized alluvial sand fields blanket those areas that have not been developed. The sands lack dune formations and are stabilized by vegetation, predominantly Sonoran creosote bush scrub. The overall look of the undeveloped area is dry, with the light beige sand color punctuated with the low-lying green to brownish-green creosote bushes. Indian Canyon Drive, the railroad tracks, and a utility line cut through the viewscape, add linear, man-made elements.

The small commercial area at the intersection of Indian Canyon Drive and Garnet Avenue consists of several buildings of various shapes and sizes that are not visually cohesive. The recently constructed Jack-in-the-Box has been designed with muted desert colors and is accented with desert plants and rock gardens. The red-and-white box logo sign is the tallest sign in the area. The Hole in the Wall welding company to the south of Jack-in-the-Box is fronted with a wall of large rocks and sand, partially hiding the quonset hut-type front building. Several palm trees and a distinctive metal "spider" sculpture accent the front yard.

On the southeast corner of intersection is a large, windowless A-frame building that lacks architectural character and has minimal landscaping. Two gas stations and another fast-food restaurant to the north of Garnet Avenue contribute to the disturbed, urban character of the intersection, as do colorful billboards and utility substations. Numerous utility lines add to the visually cluttered look of the immediate area (Figure 2-1).

The quarry site, east of Indian Canyon Drive and south of the railroad tracks, has an open quonset hut, water tank, and several large pieces of equipment that are scattered throughout the site. A bank of sand that parallels the roadway hides portions of the site from motorists on Indian Canyon Drive (Figure 2-1). The Palm Springs Amtrak Station is located adjacent to the south side of the railroad tracks.

In the distance, particularly to the southwest and south, and to a lesser extent to the north, sharply ascending mountains add a dramatic backdrop to the flat desert floor. Middle ground views to the southwest include a sea of windmills that add angular, white vertical elements that are highlighted by the brown and purple hues of the mountains.

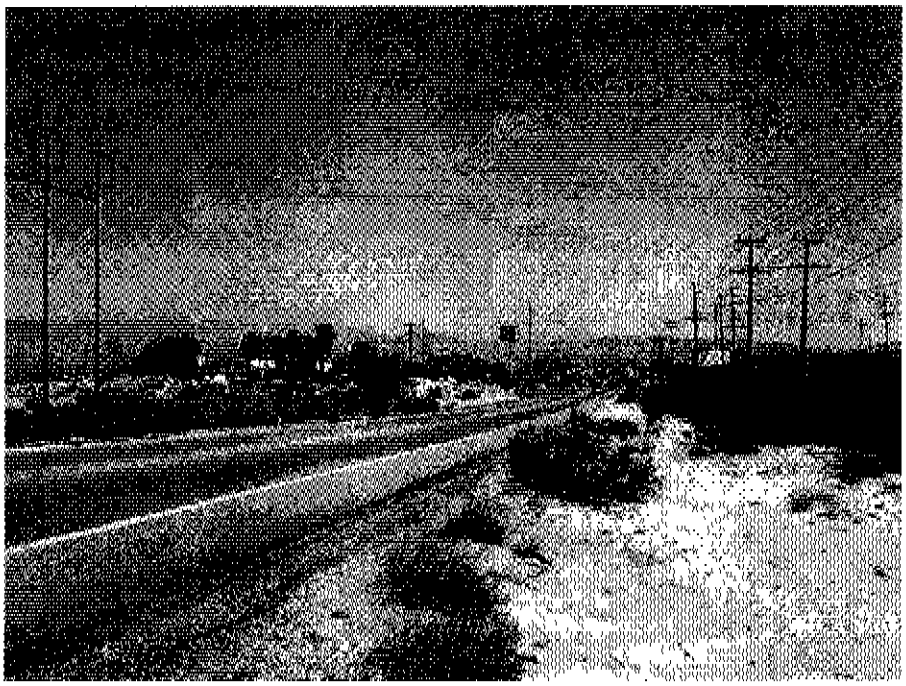
Landscape Units

Land uses and topographic patterns create a number of landscape units with distinct character. Three landscape units have been identified for the existing environment.

Commercial/Industrial – As described above, a small packet of primarily freeway-serving commercial uses are centered around the Garnet Avenue/Indian Canyon Drive intersection. An abandoned quarry is located east of Indian Canyon Drive and south of the railroad tracks.

Open Space – The majority of the viewshed is undisturbed, unused open space. This landscape unit encompasses most of the area south of the commercial area.

Transportation Corridor – Two transportation corridors traverse the viewshed: Indian Canyon Drive and the Union Pacific Railroad. A train station at the end of Palm Springs Station Road is a part of the transportation system.



View north toward Garnet Avenue

View north toward Indian Canyon Drive Bridge from abandoned quarry location

Figure 2-1 Key Views

Applicable Planning Documents

The Palm Springs General Plan indicates that Indian Canyon Drive is designated as a "City-designated Scenic Corridor." Scenic corridors are intended to be designed to take advantage of their scenic qualities by such methods as providing greater setbacks from the street and providing landscaping to accent vistas and mask unsightly views.

The Palm Springs General Plan Aesthetic Resources map indicates that Garnet Hill east of Indian Canyon Drive is considered a "Viewshed Area." There are no identified Focal Points, Focal Areas, or Views to the project area.

Viewer Types and Anticipated Viewer Response

Viewer responses to visual changes were inferred from a variety of factors, including viewer exposures, type of viewer, number of viewers, duration of view, and viewer activities. Viewer exposure includes distance and viewing angle. The viewer type, and associated viewer sensitivity, is distinguished among project viewers in recreational, residential, and commercial and industrial areas, with the first two having relatively high sensitivity and the last having low sensitivity. Activities can either encourage a viewer to observe the surroundings more closely (such as recreational activities) or discourage close observation (commuting in heavy traffic). All of these viewer elements were considered when expected viewer response was evaluated.

Sensitive viewers are those who utilize the outdoor environment or value a scenic viewpoint to enhance their daily activity and are typically recreation users or

residents. There are no parks, recreational areas, or residences within the viewshed of the proposed project.

There are a number of viewing opportunities in the study area from the surrounding area. These viewing opportunities are available from Indian Canyon Drive, the Union Pacific Railroad, and from the commercial development at Garnet Avenue.

2.1.7.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

The Build Alternative (Locally Preferred) would result in the widening of Indian Canyon Drive and the Indian Canyon Drive Bridge over the railroad tracks. The proposed project would add a relatively narrow, linear, horizontal element onto an existing roadway. There would be no introduction of vertical elements to the desert viewscape that could be seen from surrounding locations. A retaining wall would be constructed adjacent to Palm Springs Station Road, which could only be seen by motorists using the road or passengers on the rail line.

There are no residences in the area, and there are no parks or recreational areas in the vicinity. Therefore, no sensitive viewers would be impacted by the proposed road widening.

Motorists on Indian Canyon Drive would have a short-term view of the expanded roadway. Although a large number of motorists pass through the area, the viewing experience would not be noticeably different with the proposed project; also, motorists are not considered sensitive viewers. Passengers on the railway line would have short-term views of the expanded bridge and retaining wall (eastbound).

Viewers from the commercial or industrial areas are not considered sensitive viewers since there is no expectation of scenic views from these areas.

The Build Alternative (Locally Preferred) would not have a permanent adverse impact on visual quality because of the low profile of the proposed project and the absence of sensitive viewers.

Temporary/Construction

All construction would occur on the west side of the road within the existing right-of-way. Garnet Hill, identified as a viewshed area in the Palm Springs General Plan, would not be affected.

The Build Alternative (Locally Preferred) would not have a temporary adverse impact on visual quality because of the low profile of the proposed project and the absence of sensitive viewers.

No Build Alternative

The existing viewscape would not be altered with the No Build Alternative. There would be no impacts to the visual quality of the area.

2.1.7.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no adverse visual quality impacts resulting from the Build Alternative (Locally Preferred) or No Build Alternative. No avoidance, minimization, and/or mitigation measures are proposed. The new retaining wall on the west side of Indian Canyon Drive would include an aesthetic treatment to mitigate future graffiti problems.

2.2 PHYSICAL ENVIRONMENT

2.2.1 Hydrology

2.2.1.1 Regulatory Setting

Chapter 8.68 of the City of Palm Springs Municipal Code includes regulations regarding Flood Damage Prevention for areas within special flood hazards within the jurisdiction of the City. Under Chapter 8.68.080, "No structure or land shall...be constructed, located, extended, converted, or altered without full compliance with the terms of [Chapter 8.68] and other regulations," within special flood hazard areas. Special flood hazards areas are those identified by Federal Emergency Management Agency (FEMA).

2.2.1.2 Affected Environment

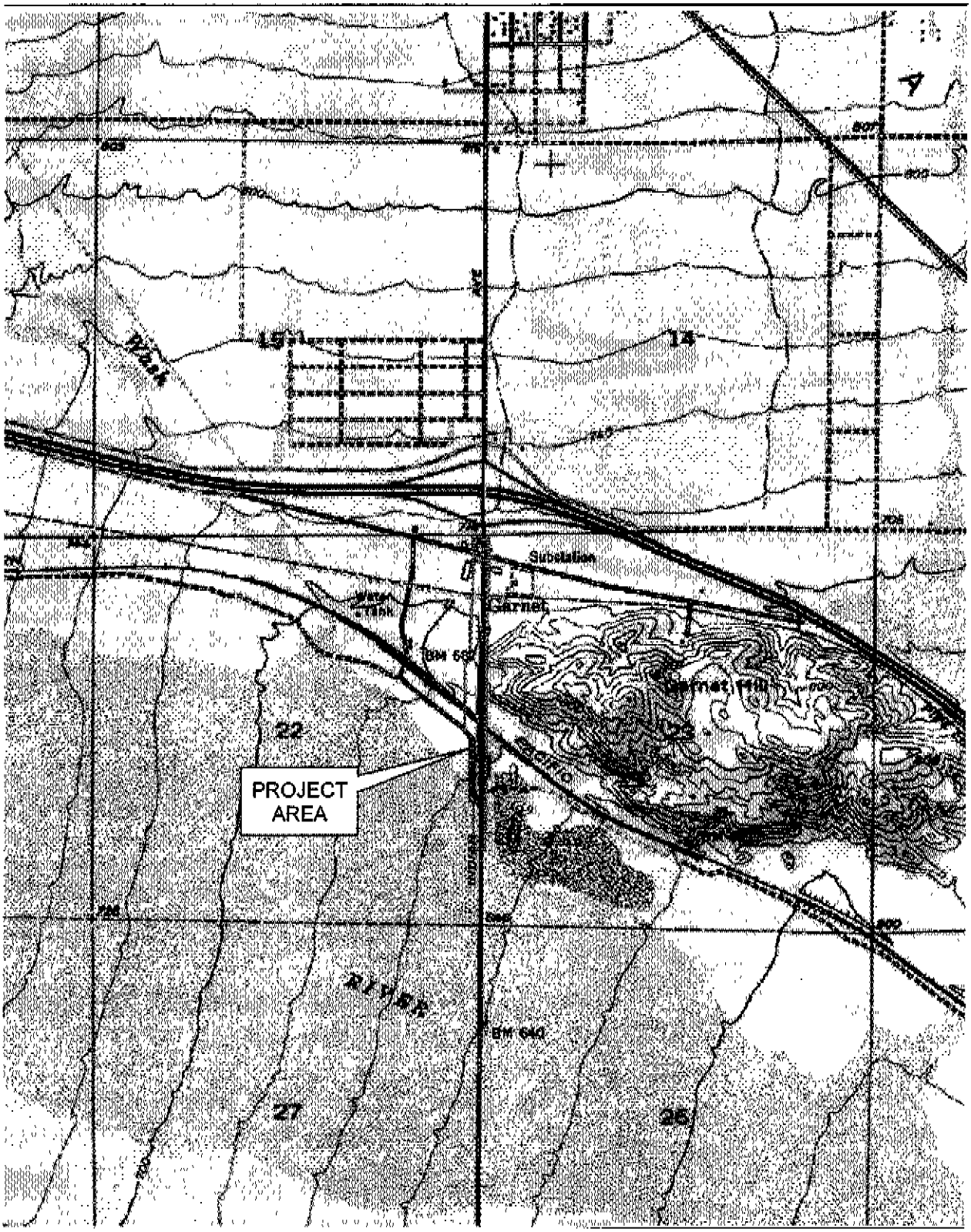
The proposed project is located in a desert region of the Coachella Valley, a large basin between the Little San Bernardino Mountains and the San Jacinto Mountains. The principal water source for the Coachella Valley is groundwater, which is naturally recharged by precipitation and runoff from the surrounding mountains. The average annual precipitation ranges between 13 and 38 centimeters (5 and 15 inches). The proposed project study area is located within the Whitewater River subbasin, which is the primary groundwater repository for the Coachella Valley. The subbasin covers about 1,036 square kilometers (400 square miles) of the valley floor and generally extends from the junction of I-10 and Highway 111 about 70 kilometers (43.5 miles) southeast to the Salton Sea.

The Whitewater River subbasin is divided into four subareas; Palm Springs, Thermal, Thousand Palms, and Oasis. The Palm Springs subarea underlies the project site. The subarea contains approximately 4.6 million acre-feet of groundwater that is in storage in the first 305 meters (1,000 feet) below the ground surface. Composed of alluvial fan deposits exceeding 305 meters (1,000 feet) in depth, the subarea is naturally recharged by infiltration of runoff from the San Jacinto Mountains and the Whitewater River, and from subsurface inflow from the San Gorgonio Pass subbasin to the west. The Whitewater River subbasin has historically had a declining water table because the demand for water has exceeded the amount of recharge into the groundwater basin.

The primary drainage feature in the area of the proposed project is the Whitewater River located at the south end of the project limits. The river, considered a *wash* since it remains predominantly dry, traverses the valley from northwest to southeast, carries runoff generated from the surrounding hills, and ultimately discharges into the Salton Sea, approximately 80 kilometers (50 miles) from the project site. Most of the tributary watershed areas fall outside the project limits.

The elevation within the proposed project area ranges between 198 meters (650 feet) above mean sea level (AMSL) and 488 meters (1,600 feet) AMSL. Garnet Hill is a significant physical feature located east of Indian Canyon Drive and north of the railroad tracks (Figure 2-2). The hill, containing slopes from 15 to 75 percent, consists of well-drained alluvial soils underlain by sandstone. Coarse gravels, cobbles, and sands that are stabilized by disturbed vegetation cover the remainder of the project site. These soils typically form an indefinite pattern of braided stream channels such as those found within the Whitewater River.

An 8-meter-high (25-foot-high) berm consisting of recyclable materials including sands and gravel is located south of the Union Pacific Railroad tracks along the east side of Indian Canyon Drive. The City of Palm Springs is requesting that the material, owned by Granite Construction, be removed and/or relocated. The berm is currently an obstruction to southeasterly regional flows during large storm events.



Source: USGS, Desert Hot Springs Quad, 2002

2000 1000 0 2000 Feet

Scale: 1 . 24,000. 1 inch = 2000 feet

Figure 2-2
Topographical Map

Existing Drainage System

The overall drainage pattern within the proposed project area is from northwest to southeast in the direction of the Whitewater River. For descriptive purposes, the project is divided into four quadrants by Indian Canyon Drive and the Union Pacific Railroad tracks.

Northwest Quadrant

In the northwest quadrant of the project area, water drains away from Indian Canyon Drive and generally flows south to the drainage swale located along the north side of the railroad tracks. The water then flows southeast beneath the bridge and away from the project limits.

Northeast Quadrant

In the northeast quadrant, ridgelines divide the region into four sections. In section 1, drainage from the roadway and surrounding area ponds in the basin at the foot of the steep slope. Freeway drainage diverted through culverts beneath the eastbound on-ramp of the interchange is conveyed across Garnet Avenue to this area as well. Section 2 comprises approximately 0.2 hectare (0.5 acre) and drains directly onto a high point in the profile of Indian Canyon Drive. From the roadway, half the drainage flows north and down the slope to the basin within section 1. The other half flows south into section 3. In section 3, storm water drains toward the 0.8-hectare (2-acre) low area located at the base of the steep slopes. The low area gradually drains to a swale adjacent to Indian Canyon Drive. Water within the swale flows south to section 4 to be conveyed away from the project limits. Section 4 drains in a southerly direction to a swale located along the north side of the railroad tracks. The swale drains to the southeast away from the project limits.

Southwest Quadrant

The Whitewater River, which drains to the southeast, encompasses most of the southwest quadrant. The area south of the ridgeline drains directly into the wash. The berm adjacent to the west side of Indian Canyon Drive diverts drainage coming from the west to the south away from the proposed project limits. The area between the ridgeline and Palm Springs Station Road drains to a swale west of the portion of Palms Springs Station Road that parallels Indian Canyon Drive. The swale carries the drainage in a southerly direction and around the 90-degree bend in Palm Springs Station Road. The area east of the berm drains directly onto Indian Canyon Drive and is carried south away from the project limits.

Southeast Quadrant

Storm water runoff north of the ridgeline that parallels the railroad drains into a swale adjacent to the south side of the tracks and away from the proposed project limits. Drainage south of the ridgeline generally flows southeasterly away from the project area. Storm water west of the berm that parallels the east side of Indian Canyon Drive drains directly toward Indian Canyon Drive. The City has requested removal of this berm.

Floodplain Considerations

The southernmost portion of the proposed project, south of Palm Springs Station Road, is located within the Whitewater River, as indicated on an ESRI/Federal

Emergency Management Agency (FEMA) web site (2002). According to the Palm Springs General Plan Health and Safety Element (1993), the Whitewater River would not pose a threat to life or property during flooding during an intermediate regional stage flood (Figure 2-3). During a Standard Project Flood (associated with a 100-year storm), the existing levees could be breached and certain developed areas could be threatened. Such a flood could threaten transportation circulation in the city by causing closure of transportation links including Indian Canyon Drive.

2.2.1.3 Environmental Consequences

Build Alternative (Locally Preferred)

The proposed project would widen an existing roadway and bridge. The improvements would not result in temporary or permanent impacts to hydrology or any floodplain.

No new buildings or structures are proposed as part of the project. The portion of the roadway that is located within the Whitewater River area is located south of Palm Springs Station Road, and the only proposed improvement to that section of the roadway is restriping to accommodate the widened roadway farther to the north. No roadway construction would occur within the floodplain. The proposed project would not encroach into the floodplain.

Permanent

Widening Indian Canyon Drive would not result in a potential hazard from flooding. A major storm event could close Indian Canyon Drive south of the project site regardless of whether Indian Canyon Drive is improved. There would be no adverse impacts to the floodplain as a result of project implementation.

Drainage System

This section provides a description of the proposed drainage system designed to maintain existing drainage patterns as well as to correlate with the Build Alternative (Locally Preferred). Four curb inlets are proposed to intercept roadway drainage. Indian Canyon Drive would be crowned at about the centerline. There will be no temporary or construction impacts to the drainage system.

Northwest Quadrant

Two sump inlets are proposed to intercept drainage in this quadrant. The drainpipe between the two inlets would have a low slope requiring analysis of self-cleaning velocities. An outlet pipe, consisting of a flared end section and riprap material, would divert the flow to the northwest quadrant. As described for existing conditions, drainage within the northwest quadrant generally flows away from the roadway and south toward the Union Pacific Railroad tracks.

Inlets were analyzed for resultant flow depths and spread widths; clogging factors were not included. Final design of the inlet locations would take into account the amount of runoff, the effects of profile grades and cross slopes, the proposed roadway geometrics, the interaction of vehicles and pedestrians, allowable water spread, inlet capacity, maintenance accessibility, and the amount of debris. Pipes, typically designed for the full-flow condition, will be analyzed using software based on equations explained in the *Drainage of Highway Pavements Hydraulic Engineering Circular No. 22*. An acceptable slope would be proposed for each

drainpipe to provide a self-cleaning velocity of 0.9 meter (3 feet) per second for half-full flow conditions. A minimum pipe size of 61 centimeters (24 inches) is recommended per Caltrans guidelines.

Northeast Quadrant

Since the roadway would be primarily widened to the west, modifications within the northeast quadrant would be minimal. An inlet would divert flows to the bottom of the steep slope adjacent to the Union Pacific Railroad tracks and drain southeasterly away from the project limits. Because of the steep slope of the drainpipe, riprap material would be required at the outlet to reduce erosive velocities.

Southwest Quadrant

To facilitate the widening of the section of Indian Canyon Drive adjacent to Palm Springs Station Road, a retaining wall is proposed along the west edge of the new pavement. An inlet is proposed just north of the intersection of Indian Canyon Drive and Palm Springs Station Road. The storm water would be diverted beneath the berm to an area within the Whitewater River. The outlet would consist of a flared end section and riprap material.

The area behind the proposed retaining wall would drain to a low point located at the 90-degree bend in Palm Springs Station Road. A drain grate should be provided to divert the storm water runoff to the outlet pipe draining beneath Palm Springs Station Road.

Southeast Quadrant

The roadway section adjacent to the southeast quadrant would not be modified. At the request of the City of Palm Springs, the berm owned by Granite Construction would likely be relocated prior to project construction. Removal of the berm would improve hydrologic functions in this area by allowing drainage from the existing pavement to flow away from the roadway during flooding conditions.

Final design of drainage facilities for the proposed project would meet all federal, state, and local standards and requirements. There would be no significant adverse hydrologic impacts as a result of the Build Alternative (Locally Preferred).

Temporary/Construction

Temporary construction related impacts to the floodplain are not anticipated under the Build Alternative as no channel diversions or temporary structures are proposed.

No Build Alternative

Under the No Build Alternative, existing conditions would remain. There would be no hydraulic or floodplain impacts as a result of this alternative.

2.2.1.4 Avoidance, Minimization and/or Mitigation Measures

No adverse impacts to hydrology or any floodplain would occur as a result of either the Build Alternative (Locally Preferred) or the No Build Alternative; therefore, no avoidance, minimization, and/or mitigation measures are proposed.

INDIAN CANYON DRIVE
PALM SPRINGS
STATION ROAD
PALM SPRINGS
FREEWAY

Water Quality and Storm Water Runoff

2.2.1.5 Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Construction activities less than 1 acre require a Water Pollution Control Program.

2.2.1.6 Affected Environment

All domestic water comes from wells from the Coachella Valley groundwater basin. Groundwater quality can be affected by a number of factors including the type of water-bearing materials in which the water occurs, proximity to faults, water depth, and presence of surface contaminants. Water quality in the Coachella Valley is generally good to excellent. Exceptions are limited to some areas in the lower valley, where ongoing crop irrigation has increased the total dissolved solids.

The NPDES is a national program for regulating and administering permits for all discharges to receiving waters. The USEPA is the agency ultimately charged with regulating discharges to surface waters. The USEPA has, in many cases, delegated permitting authority to various states, including California. Discharges in California are regulated by RWQCBs. Discharges to water bodies in the project vicinity are regulated by the Colorado River Basin RWQCB. Storm water runoff from the project site would follow the existing drainage system, generally flowing from the northwest to southeast. The project area has no receiving water bodies and all surface flow/runoff is subject to natural percolation only.

2.2.1.7 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

The proposed project would not result in water quality impacts and would not contribute to total maximum daily loads (TMDLs) since the White Water River is not a 303d listed water body. Standard erosion control practices would be implemented to minimize soil erosion during and following construction activities. Permanent erosion and sedimentation control features may include, but would not be limited to,

revegetation of disturbed ground surfaces to minimize erosion, and improvement of drainage facilities to handle excess runoff.

Temporary/Construction
Standard erosion control practices would be implemented to minimize soil erosion during and following construction activities. Typical measures used during construction include applications of water or dust palliatives during earthwork activities, fiber rolls for slope stability and sediment control, temporary construction entrances to prevent sediment tracking on paved surfaces, gravel bags, temporary concrete washouts for concrete spoils, contour grading, no work during high wind days, and haul road sealing.

No Build Alternative

There would be no impacts to water quality as a result of the No Build Alternative.

2.2.1.8 Avoidance, Minimization and/or Mitigation Measures

For project areas exceeding 0.4 hectare (1 acre), NPDES guidelines necessitate the development of a SWPPP by the contractor prior to construction to establish project-specific permanent and temporary BMPs. During the design phase, a Water Pollution Control Plan would be prepared to determine the minimum control requirements to be included in the SWPPP.

BMPs include any facilities and methods used to remove, reduce, or prevent storm water runoff pollutants from entering receiving waters. Implementation of BMP goals may involve providing bioswales to reduce downstream pollutant concentrations, informing the public about runoff concerns to lessen impacts on receiving waters, and minimizing cuts and fills to curtail erosion.

Erosion control methods, temporary and permanent BMPs, and improvement of drainage facilities along the roadway would minimize impacts from storm water runoff. The SWPPP and NPDES-compliant measures would ensure no adverse impacts would occur to water quality associated with the Build Alternative (Locally Preferred).

2.2.2 Geology/Soils/Seismic/Topography

2.2.2.1 Regulatory Setting

Topographic and geologic features are protected under the California Environmental Quality Act. This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. The California Department of Transportation's Office of Earthquake Engineering is responsible for assessing the potential for seismic hazards. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over

2.2.2.2 Affected Environment

The geology of the northwestern end of the Coachella Valley, in which the proposed project corridor is situated, is dominated by the confluence of three natural

geomorphic provinces of California. These are the Transverse Ranges, represented by the San Bernardino Mountains to the northwest and the Little San Bernardino Mountains to the north; the Peninsular Ranges, represented by the San Jacinto Mountains to the west; and the valley floor, which forms an extension of the Colorado desert (Proctor 1968). The oldest geologic formations are the pre-Cambrian igneous-metamorphic rock of San Gorgonio Mountain. This peak, the largest in southern California and the source of the Whitewater River wash that crosses just south of the project corridor, dominates the northwestern horizon. Much closer to the west is the mass of Mount San Jacinto, which is formed by late Paleozoic metamorphic rock. Most of the project area is covered by a thick layer of alluvium derived from the gradual erosion of these two mountains. In the northern portion of the project area between the railroad tracks and the northern terminus at Garnet Avenue, the eastern existing roadway edge borders Garnet Hill. This topographic feature is formed by an outcropping of a much more recent geologic stratum, the Pliocene sedimentary deposits of the Imperial formation. These sediments resulted from when Lake Cahuilla, a northward extension of the modern Gulf of California, covered the valley floor (Proctor 1968).

The proposed project area is located in the Colorado Desert floor and is primarily overlain with alluvium soils: Carsitas gravelly sand in the area between Garnet Avenue and Garnet Hill and south of Palm Springs Station Road, Carsitas fine sand in the area between Garnet Hill and the railroad tracks, and Carsitas cobbly sand between the railroad tracks and Palm Springs Station Road. Lithic Torripsamments-Rock outcrop complex overlays Garnet Hill.

There are two faults located within the proposed project vicinity: the Garnet Hill and Banning faults. Recent alluvial deposits underlie the Garnet Hill fault; therefore, its location is estimated to be located approximately 0.4 kilometer (0.25 mile) south of the proposed project. The Banning Fault is a branch of the San Andreas Fault and is located approximately 2.4 kilometers (1.5 miles) north of the project site. Other faults in the project vicinity include the Hot Springs Fault and the Santa Rosa Fault, located approximately 29 and 43 kilometers (18 and 27 miles), respectively, south of the project area. The Hot Springs and Santa Rosa faults are both branches of the San Jacinto Fault Zone.

2.2.2.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

The proposed project site is relatively flat and there are no substantial slopes within its vicinity; therefore, the potential for hazards from landslides is considered low. Due to the proximity of the Garnet Hill and Banning faults, there is a potential for high levels of seismic ground shaking that could occur at the project site. Given that no new structures are planned for the project site, and that building code standards would be implemented to widen the existing bridge, impacts to people or structures as a result of strong ground movement and liquefaction would not be adverse. The project site would be paved for operational purposes; therefore, no long-term impacts would occur.

Temporary/Construction

Erosion and siltation impacts are anticipated to be minimal with the implementation of BMPs during construction. Typical BMPs include silt fences and a stabilized pad of aggregate underlined with a filter cloth located at points where traffic would be entering and leaving a construction site.

No Build Alternative

Under the No Build Alternative, there would be no modifications made to Indian Canyon Drive or the Indian Canyon Drive Bridge. There would be no impacts to geology and soils as a result of this alternative.

2.2.2.4 Avoidance, Minimization and/or Mitigation Measures

There would be no impacts to geology, soils, seismic, or topography as a result of the Build Alternative (Locally Preferred) or the No Build Alternative. No avoidance, minimization, and/or mitigation measures are proposed.

2.2.3 Hazardous Waste/Materials

2.2.3.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

2.2.3.2 Affected Environment

An Initial Site Assessment for hazardous waste sites was prepared for the Indian Canyon Drive and Bridge Widening Project (EDAW 2002c). An agency records search was conducted for the project vicinity to identify all state classified hazardous waste sites. The records search was conducted to identify business types located within the project study area likely to store, transfer, or utilize large quantities of hazardous materials. The records search did not identify any hazardous materials, hazardous spills, or landfills on the project site.

A database search was acquired from Environmental Data Resources. The search results identified two hazardous waste sites within 1 mile of the project site. Neither of these sites would pose a hazard to the project site. There were no hazardous waste sites in the immediate vicinity of the project site. No groundwater contamination has been recorded in the vicinity of the project study area.

A visual survey of the project area was conducted that consisted of visually inspecting the areas along and adjacent to Indian Canyon Drive. There was no visible evidence of any spillage or surface staining.

Analytical testing for asbestos and lead-based paint is anticipated to be required on the existing bridge over the railroad tracks, which will be performed during the design phase of the project. The results of this testing would determine whether an asbestos and/or a lead-base paint removal plan will be required prior to construction activities on the bridge. The Air Quality Management District must receive written notification a minimum of 10 days prior to any bridge work being performed during construction.

2.2.3.3 Environmental Consequences

Build Alternative (Locally Preferred)

No hazardous wastes, spills, or landfills were identified within the project area. Implementation of the Build Alternative (Locally Preferred) would not be impacted by hazardous wastes.

No Build Alternative

There would be no hazardous waste impacts associated with the No Build Alternative.

2.2.3.4 Avoidance, Minimization and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed for the Build Alternative (Locally Preferred) or No Build Alternative.

2.2.4 Air Quality

2.2.4.1 Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to

potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and particulate matter (PM). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as Southern California Association of Governments (SCAG) for Riverside County, and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires "hot spot" analysis if an area is "nonattainment" or "maintenance" for carbon monoxide (CO) and/or particulate matter. A region is a "nonattainment" area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called "maintenance" areas. "Hot spot" analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA and CEQA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in "nonattainment" areas the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

2.2.4.2 Affected Environment

For air quality classification, policy, and regulation, the proposed project is located in the SSAB and the Coachella Valley portion of the South Coast Air Quality Management District (SCAQMD). Air quality in the project area does not meet the federal or state ambient air quality standards for O_3 or PM_{10}. The principal pollutant of concern is PM_{10}, which comes mostly from wind erosion of the local soil, but also derives from construction activities and vehicle travel on paved and unpaved roads.

Applicable Standards

Federal and State Standards

The federal Clean Air Act (42 USC §§ 7401-7671q) requires the adoption of NAAQS to protect the public health and welfare from the effects of air pollution. The NAAQS have been updated as needed. Current standards are set for SO_2, CO, NO_2, O_3, PM_{10}, $PM_{2.5}$, and Pb. CARB has established additional standards, which are generally more restrictive than the NAAQS. Federal and state standards are shown in Table 2-4.

Regional Authority

In the Coachella Valley, the SCAQMD is the agency responsible for the administration of federal and state air quality laws, regulations, and policies.

Air Quality Regulations, Plans, and Policies

Included in the SCAQMD's tasks are monitoring of air pollution, preparation of the SIP, and promulgation of its Rules and Regulations. Each SIP includes strategies and tactics to be used to attain the relevant federal standard in the Coachella Valley – SSAB area. The Rules and Regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts. The local SIP of importance to the proposed project is the 2003 Coachella Valley PM_{10} SIP.

The most important SCAQMD rules pertaining to the proposed project are Rule 403, Fugitive Dust, and Rule 403.1, Wind Entrainment of Fugitive Dust. Rule 403.1 is specifically applicable in the Coachella Valley (SCAQMD 2002b).

Table 2-4 California and National Ambient Air Quality Standards

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
Ozone (O_3)[a]	1 hour 8 hours	0.09 ppm 0.070 ppm	–[b] 0.08 ppm	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically-produced ROG may also contribute.
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm[c] 6 ppm	35 ppm 9 ppm –	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM10)[a]	24 hours Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 –	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM10.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter (PM2.5)[a]	24 hours Annual	– 12 µg/m^3	35 µg/m^3 15 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the PM2.5 size range. Many aerosol and solid compounds are part of PM2.5.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO_x, sulfur oxides (SO_x), ammonia, and ROG.
Nitrogen Dioxide (NO_2)	1 hour Annual	0.25 ppm –	– 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm – 0.04 ppm –	– 0.5 ppm 0.14 ppm 0.030 ppm	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
Lead (Pb)[d]	Monthly Quarterly	1.5 µg/m^3 –	– 1.5 µg/m^3	Disturbs gastrointestinal system. Causes anemia,	Primary: lead-based industrial process like batter production

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
				kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 05/17/2006 (http://www.arb.ca.gov/aqs/aaqs2.pdf)
Sonoma-Marin Area Rail Transit Draft Air Pollutant Standards and Effects table, November 2005, page 3-52.
U.S. EPA and California Air Resources Board air toxics websites, 05/17/2006

Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

[a] Annual PM10 NAAQS revoked October 2006; was 50 $\mu g/m^3$. 24-hr. PM2.5 NAAQS tightened October 2006; was 65 $\mu g/m^3$.

[b] 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 ppm. Case is still in litigation.

[c] Rounding to an integer value is not allowed for the State 8-hour CO standard. A violation occurs at or above 9.05 ppm.

[d] The ARB has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the ARB and U.S. EPA have identified various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.

SCAQMD Significance Criteria

The SCAQMD has established thresholds of significance for air quality for construction activities and project operation (SCAQMD 1993), as shown in Table 2-5.

Table 2-5 SCAQMD Significance Criteria

Pollutant	Project Construction	Project Operation
CO	550 lb. per day	550 lb. per day
VOC	75 lb. per day	75 lb. per day
NO_X	100 lb. per day	100 lb. per day
PM_{10}	150 lb. per day	150 lb. per day
SO_X	150 lb. per day	150 lb. per day
Lead	3 lb. per day	3 lb. per day

Conformity of Federal Actions

The metropolitan planning organization responsible for the preparation of regional transportation plans and the associated air quality analyses is the Southern California Association of Governments (SCAG). The current adopted plans are the 2008 RTP and 2006 RTIP, which are discussed in detail in Section 3.11.2, Impacts (SCAG 2008b; 2006).

City of Palm Springs

The Air Quality Element of the City of Palm Springs General Plan includes objectives and policies for cooperation with the SCAQMD in compliance with the SIPs, improvement of air quality, and reduction of dust emissions from wind erosion and blowsand.

The City of Palm Springs also requires control of fugitive dust through Ordinance 1439 of the Municipal Code. The Fugitive Dust and Erosion Control Ordinance restricts the creation and emission of fugitive dust.

Existing Conditions

Meteorology, Climate, Winds, and Blowsand

This section summarizes the Coachella Valley's meteorology, climate, wind conditions, and blowsand, all of which contribute to the dusty conditions in the valley. High winds over the blowsand regions of the Coachella Valley can result in uncontrollably high PM_{10} levels and require significant levels of cleanup by local governments and developers.

The climate of the Coachella Valley is a continental desert type, with hot summers, mild winters, and very little annual rainfall. Precipitation is less than 15 centimeters (6 inches) annually and occurs mostly in the winter months from active frontal systems and in the late summer months from thunderstorms. Temperatures exceed 100 degrees Fahrenheit (°F), on the average, for 4 months each year, with daily highs near 110°F during July and August. Summer nights are very mild, with minimum temperatures in the mid-70s. During the winter season, daytime highs are quite mild, but the dry air is conducive to nocturnal radiational cooling, with early morning lows around 40°F.

The Coachella Valley is exposed to frequent gusty winds. The strongest and most persistent winds typically occur immediately to the east of Banning Pass, which is noted as a wind power generation resource area. Aside from this locale, the wind conditions in the remainder of the valley are geographically distinct. Stronger winds tend to occur in the open mid-portion of the valley, while lighter winds tend to occur closer to the foothills. Less frequently, widespread gusty winds occur over all areas of the valley.

Within the Coachella Valley, a natural sand migration process has direct and indirect effects on air quality. Called blowsand, this natural sand migration process produces PM_{10} in two ways: (1) by direct particle erosion and fragmentation (natural PM_{10}), and (2) by secondary effects, as sand deposits on road surfaces are ground into PM_{10} by moving vehicles and resuspended in the air (man-made PM_{10}).

The following is a summary description of the Coachella Valley's blowsand problem, as contained in a report prepared by Donald Weaver titled *Initial Blowsand Study for the Coachella Valley Portion of the SSAB as measured at Palm Springs* and prepared in October 1992.

> Under natural conditions, the overall region of blowsand activity encompasses approximately 130 square miles extending from near Cabazon to Indio, and lying primarily between the San Gorgonio Mountains and the Whitewater River channel on the southwest and San Bernardino Mountains and the Indio Hills on the northeast. Sands supplied by floodwaters to the westerly and northerly portions of the region are transported by strong, essentially unidirectional winds to the southerly portion of the region. Transporting winds emanate from the San Gorgonio Pass and occur most frequently and with the greatest intensity during the spring and early summer months. Once having entered the Valley, the winds tend to dissipate rapidly in the southeasterly direction, losing virtually their entire capability of transporting significant quantities of sand before reaching the lower portion of the Whitewater River channel near Indio.
>
> The alluvial floodplain of the Whitewater River extending between Windy Point and Indian Avenue, together with the alluvial floodplain extending along the base of the Indio Hills constitute the primary blowsand source areas. The large accumulation or deposition area, which presently contains over two billion cubic yards of wind deposited sand, extends over the southerly and easterly portions of the region.
>
> The blowsand process varies considerably over time, depending on the availability of flood-provided sand, fluctuations in the transporting wind regime, and to a lesser extent, changes in vegetative cover within the Valley. An average of 180,000 cubic yards of sand are transported by wind from the described sources annually. Mean annual rates of transport, expressed in terms of cubic yards per one-foot-wide path (CYPF) extending in the direction of sand movement, have been determined for the entire region under natural conditions, and range from near zero in the southeasterly portion near Indio to more than 35 CYPF near Indian Avenue.

Regional and Local Air Quality

Specific geographic areas are classified as either "attainment" or "nonattainment" areas for each pollutant based upon the comparison of measured data with federal and state standards. The attainment status for the SSAB portion of Riverside County is shown in Table 2-6.

Table 2-6 Attainment for the Salton Sea Air Basin Portion of Riverside County

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone1Hour	Not applicable	Non-attainment/Extreme
Ozone8Hour	Non-attainment/Serious	No State Standard
PM10	Non-attainment/Serious	Non-attainment
PM2.5	Unclassified/Attainment	Unclassified
Carbon Monoxide	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment
Lead Particulates	No Designation	Attainment

Ambient air pollutant concentrations in the Coachella Valley portion of the SSAB are measured at Palm Springs and Indio. The nearest air quality monitoring station to the project area is at the Palm Springs Fire Station. Table 2-7 presents a summary of the highest pollutant values recorded at this station and exceedances of federal and state standards for the last 3 years.

Table 2-7 Ambient Air Quality Summary
Palm Springs-Fire Station Monitoring Station

		Maximum Concentrations[a]				Standards		Number of Days Exceeding State Standard				Number of Days Exceeding Federal Standard			
	Time Averaging	2006	2007	2008	2009	National	State	2006	2007	2008	2009	2006	2007	2008	2009
Ozone (O3)	1 hour	0.126 ppm	0.126 ppm	0.112 ppm	0.065 ppm	None[b]	0.09 ppm	37	29	26	*	N/A	N/A	N/A	N/A
Ozone (O3)	8 hour	**0.109 ppm**	**0.102 ppm**	**0.101 ppm**	0.062 ppm	0.075 ppm	0.07 ppm	79	83	70	*	61	58	51	*
Carbon Monoxide (CO)	8 hour	0.90 ppm	0.8 ppm	0.5 ppm	0.6 ppm	9.0 ppm	9.0 ppm	0	0	0	*	0	0	0	*
Nitrogen Dioxide (NO2)	1 hour	0.093 ppm	0.063 ppm	0.049 ppm	0.048 ppm	---	.018 ppm	0	0	0	*	N/A	N/A	N/A	N/A
Nitrogen Dioxide (NO2)	Annual Average	0.0103 ppm	0.0104 ppm	0.027 ppm	0.023 ppm	0.053 ppm	0.030ppm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Particulates (PM10)	24 hour	226 µg/m3	83 µg/m3	75 µg/m3	Not Available	150 µg/m3	50 µg/m3	3	5	1	*	1	0	0	*
Particulates (PM10)	Annual Arith. Mean	**28.3 µg/m3**	**30 µg/m3**	**24.2 µg/m3**	Not Available	---	20 µg/m3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Particulates (PM2.5)	24 hour	24.7 µg/m3	32.5 µg/m3	17.3 µg/m3	Not Available	35 µg/m3	---	*	0	*	*	0	0	0	*
Particulates (PM2.5)	Federal Annual Arith. Mean	Not Avail-able	8.6	Not Avail-able	Not Available	15 µg/m3	12 µg/m3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes: "--" = Data Unavailable, "N/A" = Not Applicable. "*" = There was insufficient (or no) data available to determine the value.

[a] Concentration units for ozone, carbon monoxide, nitrogen dioxide, and sulfur dioxide are in parts per million (ppm). Concentration units for PM_{10} are in micrograms per cubic meter ($\mu g/m^3$).

[b] The federal O_3 1-hour standard was revoked in June 2004 and replaced with the 8-hour standard.

Source: CARB 2009a, 2009b, 2009c

As shown in Table 2-6, measurements indicate that the state 24-hour threshold for PM_{10} was exceeded between two and six times per year during the 3-year period. Although the data show one exceedance of the federal 24-hour threshold in 2006, these data may be excluded in accordance with the USEPA Natural Events policy because of a high wind event on July 16, 2006 (SCAQMD 2008).

As shown in Table 2-6, the SSAB is a federal and state nonattainment area for PM_{10}. This designation occurs principally because the federal and state 24-hour standards were frequently exceeded between 2005 and 2007 at the Indio-Jackson Street station, which is in the Coachella Valley and is approximately 32 kilometers (20 miles) southeast of the project area.

2.2.4.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

Transportation Conformity

The proposed project is located in an area designated as nonattainment for the federal PM_{10} and O_3 standards and attainment for the federal CO standards. Because PM_{10} and O_3 precursors are regional nonattainment pollutants, the proposed project must be evaluated under the transportation conformity requirements described earlier. An affirmative regional conformity determination must be made before the proposed project can proceed.

The proposed project is identified as two individual projects in the 2008 RTP and Final Adopted 2006 RTIP with Approved Amendments 1 through 12, 14 through 16, and 18 Local Highway Projects (2006 RTIP). The portion of the project extending from Garnet Road to the south end of the bridge is identified in the 2008 RTP and 2006 RTIP as project RIV990727. The portion of the project extending from the south end of the bridge to Palm Springs Station Road is included in the 2008 RTP and 2006 RTIP as a part of project RIV011203.

Project RIV990727 is described in SCAG's 2008 RTP Project List, on Page 63, as "In Palm Springs Widen Indian Canyon Dr 2 to 6 Lanes (Including UPRR Bridge (Replacement/Widening) from UPRR Bridge to Garnet Road at I-10 (HBBR#: 56C-0025)," and in SCAG's 2006 RTIP, Final Adopted 2006 RTIP with Approved Amendments 1-12, 14-16m 18 – Riverside County, on page 10, as "In Palm Springs Widen Indian Canyon Dr 2 to 6 Lanes (Including UPRR Bridge (Replacement/ Widening) from UPRR Bridge to Garnet Road at I-10 (HBRR BR#: 56C-0025))."

Project RIV011203 is described in SCAG's 2008 RTP, Project Lists, on Page 60, as "In Palm Springs - Widen Indian Canyon Drive from 2 to 4 Lanes at grade (No Bridge) from the UPRR Bridge to Tramview Road (Approx. 2 miles)," and in SCAG's 2006 RTIP, Final Adopted 2006 RTIP with Approved Amendments 1-12, 14-16m 18 – Riverside County, on page 9, as "In Palm Springs - Widen Indian Canyon Drive from 2 to 4 Lanes at grade (No Bridge) from UPRR Bridge to Tramview Road (Approx. 2 miles)."

The FHWA and the Federal Transit Administration (FTA) approved the air quality analysis and conformity finding for the 2008 RTP on June 5, 2008, and for the 2006 RTIP through Amendment 15, on May 6, 2008. Therefore, the proposed project

conforms to regional air quality plans. As such, no additional transportation conformity analysis is needed unless the scope of the project changes significantly.

Local Emissions (Hot Spots)

The Transportation Conformity Rules require a statement that:

> Federal projects must not cause or contribute to any new localized CO or PM_{10} violations or increase the frequency or severity of any existing CO or PM_{10} violations in CO and PM_{10} nonattainment and maintenance areas.

The air quality analyses of projects included in the 2004 RTP and 2006 RTIP do not include the analyses of local CO impacts; these must be addressed on a project level.

Carbon Monoxide. Procedures and guidelines for use by agencies that sponsor transportation projects in evaluating the potential local level CO impacts of a project are contained in Transportation Project-Level Carbon Monoxide Protocol (the Protocol) (UCD ITS 1997). The Protocol provides a methodology for determining the level of analysis, if any, required on a project. The guidelines comply with the Clean Air Act, federal and state conformity rules, NEPA, and CEQA. The Protocol states that the determination of project-level CO impacts should be carried out in accordance with the Local CO Analysis flow chart shown in Figure 3 of the Protocol. The following set of questions and answers follows the procedures of Figure 3 and references Table 2 of the Protocol.

Level 1
Question: Is the project in a CO nonattainment area?
Answer: No. The SSAB is an attainment area, as shown in Table 2 of this report.

Question: Was the area redesignated as "attainment" after the 1990 Clean Air Act?
Answer: No. (Note: By the procedure of Figure 3, a "No" answer leads to Level 7.)

Level 7
Question: Does the project worsen air quality?

a. Does the project increase the percentage of vehicles in the cold start mode by 2 percent or more?
   Answer: No. The purpose of the project is to improve traffic circulation and safety. The project would not change traffic patterns to increase cold starts.

b. Does the project increase traffic volumes?
   Answer: No.

c. Does the project worsen traffic flow by either a reduction in average speed or an increase of delay at an intersection?
   Answer: No. The project would improve traffic flow and probably result in an increase in average speed and a reduction of CO emissions. There are no intersections included in the project.

By the procedure of the Protocol, a "No" answer to the first question of Level 7, above, indicates "Project satisfactory, no further analysis needed." Therefore, in accordance with the Protocol, the project is satisfactory for local CO impacts.

Particulate Matter. On March 10, 2006, the USEPA published a final rule that establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed for local air quality impacts in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. Based on that rule, the USEPA and FHWA published Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas (PM Guidance) (FHWA 2006b).

Projects of Air Quality Concern

To meet statutory requirements, the March 10, 2006, final rule requires PM_{10} hot-spot analyses to be performed for "projects of air quality concern." Qualitative hot-spot analyses would be done for these projects. Projects not identified as projects of air quality concern have also met statutory requirements without any further hot-spot analyses.

Projects of air quality concern (POAQC) are projects within a PM_{10} nonattainment or maintenance area, funded or approved by FHWA or FTA, and are one of the following types of projects:

- New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;
- Projects affecting intersections that are Level of Service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- New bus and rail terminals, and transfer points, that have a significant number of diesel vehicles congregating at a single location;
- Expanded bus and rail terminals, and transfer points, that significantly increase the number of diesel vehicles congregating at a single location; and
- Projects in, or affecting locations, areas, or categories of sites that are identified in the PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The evaluation of a project as a potential POAQC is performed by an interagency consultation, a process described in the Transportation Conformity Rule. For projects in the Coachella Valley, the interagency consultation is performed by the Southern California Transportation Conformity Working Group (TCWG), organized by SCAG. Membership of the TCWG includes federal, state, regional, and sub-regional agencies and other stakeholders (SCAG 2007).

The Indian Canyon project was submitted to the April 22, 2008, TCWG meeting. It was determined at the meeting that the Indian Canyon Project was not a POAQC, pending concurrence by a USEPA representative, who was not present (SCAG

2008b). Subsequently, the USEPA representative reviewed the project information and provided concurrence on May 6, 2008.

Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, the USEPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The following discussion is based on the FHWA Memorandum, Subject: INFORMATION: Interim Guidance on Air Toxic Analysis in NEPA Documents, dated February 3, 2006.

The FHWA has developed a tiered approach for analyzing MSATs in NEPA documents. Depending on the specific project circumstances, the FHWA has identified three levels of analysis:

- No analysis for projects with no potential for meaningful MSAT effects, Category (1);
- Qualitative analysis for projects with low potential MSAT effects, Category (2); or
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects, Category (3).

The proposed project is a Category (2) project; that is, the project would have a low potential for MSAT effects. This category covers a broad range of projects, including those that serve to improve operations of highway, transit or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions. Examples of these types of projects are minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street or where design year traffic is not projected to approach 140,000 to 150,000 average daily trips (ADT). FHWA guidance states that projects that do not meet the criteria for Category (1) or Category (3) should be included in Category (2).

The proposed project would facilitate new capacity with the associated widened roadway. However, the project design year volume is anticipated to be approximately 40,000 ADT, which is considerably less than the FHWA threshold value of 140,000 ADT as the minimum volume for Category (3) - higher potential MSAT effects (FHWA 2006a). Furthermore, the proposed project is not located in proximity to populated areas or in rural areas near concentrations of vulnerable populations (i.e., schools, nursing homes, hospitals). Therefore, the proposed

project does not meet any of the Category (3) requirements, and the project would be included in Category (2), projects with low potential for MSAT effects.

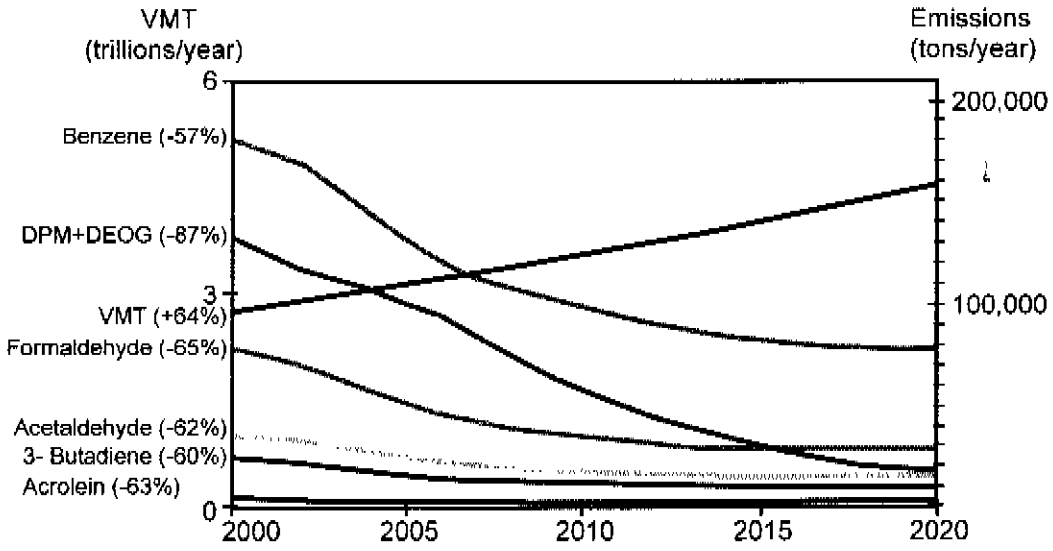
The USEPA is the lead federal agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The USEPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, the USEPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline program, its national low emission vehicle standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, the FHWA projects that even with a 64 percent increase in vehicle miles traveled (VMT), these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown below.

As a result, the USEPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of Clean Air Act Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

Unavailable Information for Project-Specific MSAT Impact Analysis

This Environmental Assessment/Initial Study and the associated air quality impact study include a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools cannot predict the project-specific health impacts of the emission changes associated with implementation of the proposed project. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information.

U.S. Annual Vehicle Miles Traveled vs.
Mobile Source Air Toxics Emissions
2000-2020



Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline Reid vapor pressure and oxygenate content are held constant. VMT: Highway Statistics 2000, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO_4 from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.

Information That Is Unavailable or Incomplete

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

Emissions

The USEPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model – emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time.

Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects and cannot adequately capture emissions effects of smaller projects.[1] For PM, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both PM and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, the USEPA has identified problems with MOBILE 6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE 6.2 is an adequate tool for projecting emissions trends and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

Dispersion

The tools to predict how MSATs disperse are also limited. The USEPA's current regulatory models, CALINE4 (used in California only), CALINE3, and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of CO to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The National Cooperative Highway Research Program is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, the FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

Exposure Levels and Health Effects

Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data

[1] For purposes of MSAT discussion, smaller projects are those with average daily traffic volumes of less than 140,000.

to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs

Research into the health impacts of MSATs is ongoing. For different emission types, there are various studies that show that some are either statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of USEPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level.

The USEPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The USEPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from the USEPA's IRIS database and represents the USEPA's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

Benzene is characterized as a known human carcinogen.

The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.

Formaldehyde is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.

1,3-butadiene is characterized as carcinogenic to humans by inhalation.

Acetaldehyde is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.

Diesel exhaust is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.

Diesel exhaust also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary

function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a nonprofit organization funded by the USEPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes – particularly respiratory problems. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and allow performing a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of Impacts Based upon Theoretical Approaches or Research Methods Generally Accepted in the Scientific Community

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow reasonable predictions relative to emissions changes between alternatives for larger projects, the amount of MSAT emissions from the proposed project and MSAT concentrations or exposures created by the project emissions cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

The impact evaluation below provides a qualitative assessment of MSAT emissions and acknowledges that the proposed project may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

Evaluation of Project MSAT Impacts

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a

study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, found at www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm.

The widening of Indian Canyon Drive and Bridge increases roadway capacity, thereby providing relief to currently congested arterial roadways. The amount of MSATs emitted would be proportional to the VMT for the Build and No Build alternatives, assuming that other variables such as fleet mix are the same. The VMT estimated for the Build Alternative may or may not be higher than that for the No Build Alternative because the additional capacity increases the efficiency of the roadway and may attract rerouted trips from elsewhere in the transportation network. A slight increase in VMT would lead to higher MSAT emissions for the proposed project alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase would be offset somewhat by lower MSAT emission rates due to increased speeds; according to the CARB's EMFAC2002 emissions model, emissions of all of the priority MSATs except for diesel PM decrease as speed increases. The extent to which these speed-related emissions decreases would offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

There are no sensitive receptors adjacent to or within the proposed project area. Existing land uses in the vicinity of the proposed project area include fast-food restaurants, a gas station, a welding company, and a furniture storage facility at the intersection of Indian Canyon Drive and Garnet Avenue, and a train station in the southwest portion of the study area. There are no parks or recreational areas in the proposed project area. There are also no schools, churches, libraries, or hospitals within the project study area.

Operation of this section of Indian Canyon Drive could lead to higher MSAT emissions along the alignment, with a corresponding decrease in MSAT emissions along the roadways in the network that lose traffic to this route. Emissions along the new roadway in future years will likely be lower than initial levels as a result of the USEPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great, even after accounting for an average national annual VMT growth, that MSAT emissions in the study area are likely to decrease in the future in nearly all cases.

The additional travel lanes contemplated as part of the project alternatives would have the effect of moving some traffic closer to nearby businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSATs could be higher under certain Build Alternatives than the No Build Alternative. However, as discussed above, the magnitude and the duration of these potential increases compared to the No Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In summary, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT

emissions). Also, MSATs would be lower in other locations when traffic shifts away from them. However, on a regional basis, the USEPA's vehicle and fuel regulations, coupled with fleet turnover, would over time cause substantial reductions that, in almost all cases, would cause regionwide MSAT levels to be significantly lower than current levels.

Temporary/Construction

The principal source of PM_{10} emissions would be fugitive dust from earth-moving activities, storage piles, and vehicle travel on unpaved and paved surfaces. The principal source of NO_X emissions would be the diesel engines of heavy construction equipment such as scrapers, graders, loaders, cranes, and heavy trucks. A quantitative estimate of project-related construction emissions was performed, though the project is still in the preliminary design stage. The model used for analysis is the Roadway Construction Emissions Model, which has been developed by the Sacramento Metropolitan Air Quality Control District (2003). This model allows for input of project-specific information and calculates estimated emissions resulting from the project. Results of the modeling are shown in Table 2-8, and details are provided in the Air Quality Analysis Indian Canyon Drive Street and Bridge Widening Project (EDAW 2002a).

Table 2-8 Construction Emission Modeling Results

	CO	NO_X	VOC	PM_{10}
Road Widening	56	65	11	6
Bridge Construction	47	56	9	5
SCAQMD Thresholds	550	100	75	150

Maximum daily emissions would occur during the grading phase for both the bridge construction and road-widening elements of the project. Based on the results of the model, maximum daily estimated PM_{10}, CO, and VOC emissions from the project would not exceed threshold limits. The emissions estimates program forecasts that maximum daily NO_X emissions could exceed the 100 pounds per day threshold if grading were to occur simultaneously for road widening and bridge construction. Measures to reduce potential NO_X maximum emissions are included in Section 3.11.3, Avoidance, Minimization, and/or Mitigation Measures. Section 3.11.3 also includes measures to reduce PM_{10} emissions.

Operations

As discussed above, the proposed project would not generate traffic, increase the number of vehicles operating in the cold start mode, or worsen congestion. Therefore, pollutant emissions would likely be the same or less than without the project, and the SCAQMD thresholds would not be exceeded.

No Build Alternative

Under the No Build Alternative, existing conditions would remain. There would be no air quality impacts as a result of this alternative.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

Build Alternative (Locally Preferred)

Nitrogen Oxides

The proposed project would potentially exceed the threshold for NO_X emissions during grading activities. The following measures should be incorporated into the project to reduce NO_X emissions to less than SCAQMD emissions thresholds:

- Upon development of the project construction details and schedule, the City shall reestimate NO_X emissions; and
- If emissions are forecast to exceed the SCAQMD NO_X threshold, the contractor shall use aqueous diesel fuel or one or more pieces of construction equipment with exhaust gas recirculation-type engines as necessary to reduce forecast emissions to less than the threshold limit.

Respirable Particulate Matter

No significant PM_{10} air quality impacts would result from the proposed project; however, the following measures will be incorporated into the project to further minimize construction emissions.

- A Fugitive Dust (PM_{10}) Mitigation Plan shall be prepared in compliance with Ordinance 1439 of the City of Palm Springs Municipal Code and shall be included as part of the construction contract specifications prior to the issuance of a grading permit. The Fugitive Dust Mitigation Plan shall specify steps that will be taken to comply with the City's Fugitive Dust and Erosion Control Ordinance, which restricts fugitive dust emissions. Measures outlined in the plan shall include but not be limited to daily watering of graded areas, washing of equipment tires before leaving the construction site, and use of SCAQMD-approved chemical stabilizers or soil binders.
- The proposed project shall incorporate into the project specifications the applicable provisions of the Final Coachella Valley PM_{10} SIP and SCAQMD Rule 403 and 403.1, as shown in the air quality technical report.
- The contractor shall discontinue construction activities during first- and second-stage smog alerts.
- When feasible, the contractor shall utilize existing power sources (i.e., temporary power poles) to minimize the use of diesel generators.
- The proposed project shall incorporate into the project specifications the applicable provisions of the Final Coachella Valley PM_{10} SIP and SCAQMD Rule 403 and 403.1, as shown in the air quality technical report.

No Build Alternative

No impacts to air quality would occur under this alternative. No avoidance, minimization, and/or mitigation measures are proposed.

2.2.5 Noise

2.2.5.1 Regulatory Setting

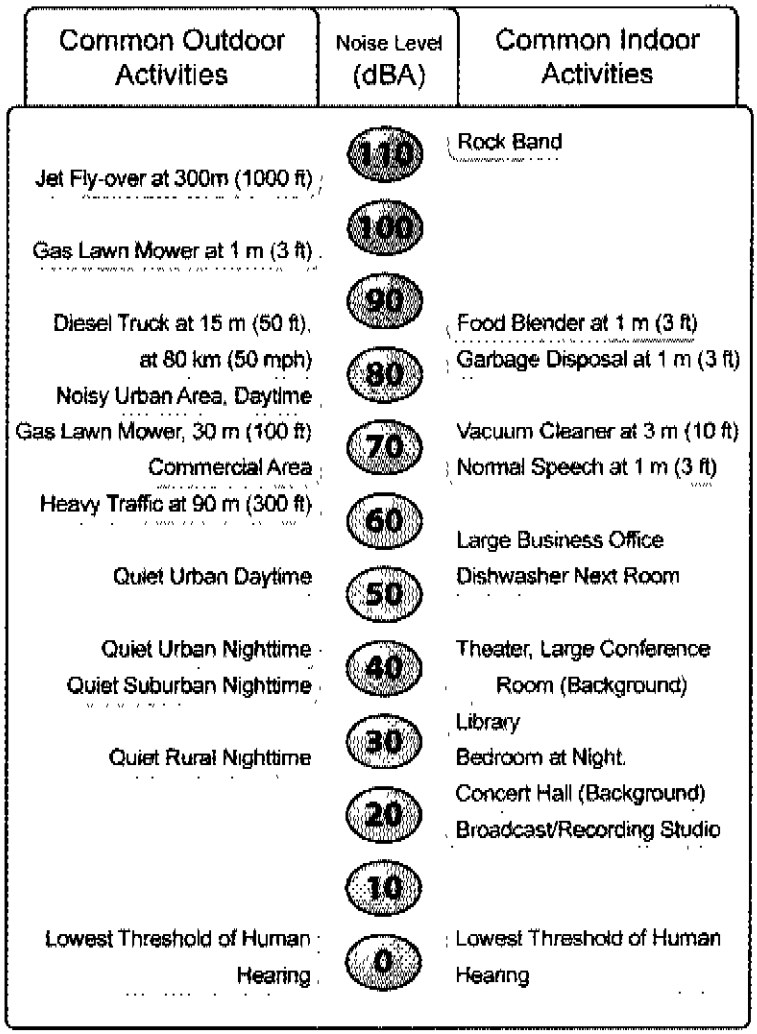
The California Environmental Quality Act (CEQA) provides the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

Table 2-9 Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	--	Undeveloped lands.
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Table 2-10 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

Table 2-10 Noise Levels of Common Activities



In accordance with the California Department of Transportation's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Department of Transportation's *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible.

Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

A technical noise study was requested as part of the environmental review for the proposed project. The *Traffic Noise Analysis Protocol for New Highway Construction and Highway Reconstruction Projects*, October 1998, hereinafter referred to as the Protocol, contains policies, procedures, and practices for evaluation of potential traffic and construction noise impacts. The Protocol is intended for use by sponsor agencies, and fulfills the noise analysis requirements of CEQA; 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*; and Section 216 of the California Streets and Highway Code. A copy of the Protocol Noise Analysis Screening Procedure Checklist is included in the *Noise Analysis Report for the Indian Canyon Drive Street and Bridge Widening Project* (EDAW 2002b).

The Protocol includes a screening procedure to determine whether a detailed analysis is necessary. The first step in the procedure is to determine if there are potentially impacted receivers. If there are no impacted receivers, no further analysis is necessary. Sensitive noise receivers are land uses and activities such as residences, hotels, schools, parks, churches, libraries, hospitals, and areas where serenity and quiet are of significance and serve an important public need.

2.2.5.2 Affected Environment

There are no sensitive noise receivers (including commercial) adjacent to or within the proposed project area. Existing land uses in the vicinity of the project area include fast-food restaurants, a gas station, a welding company, and a furniture storage facility at the intersection of Indian Canyon Drive and Garnet Avenue, and a train station in the southwest portion of the study area.

There are no parks or recreational areas in the proposed project area. There are also no schools, churches, libraries, or hospitals within the project study area. The nearest sensitive receptor location is a hotel located on the frontage road north of I-10.

2.2.5.3 Environmental Consequences

Since there are no sensitive noise receptors within the study area, there would be no noise impacts associated with implementation of the Build Alternative (Locally Preferred) or the No Build Alternative.

2.2.5.4 Avoidance, Minimization and/or Mitigation Measures

No adverse noise impacts would occur as a result of the Build Alternative (Locally Preferred) or the No Build Alternative. No avoidance, minimization, and/or mitigation measures are proposed.

2.3 Biological Environment

2.3.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section 2.4.5. Wetlands and other waters are also discussed in section 2.4.2."

2.3.1.1 Affected Environment

A Natural Environment Study Report (NESR) was prepared for the proposed widening of Indian Canyon Drive (EDAW 2002c). Biological investigations on the proposed project site were guided by correspondence with the relevant resource agencies. The Biological Study Area (BSA) was characterized as Indian Canyon Drive as the central feature with a 152-meter (500-foot) survey buffer on each side. The western and eastern regions of the BSA consist of disturbed vegetation; partially stabilized sand fields; and urban development such as roads, power lines, a gravel pit site, and the railway. The Area of Effect (AE), i.e., the area within which all proposed permanent and temporary construction activities would be restricted, is wholly encompassed by the BSA.

Natural communities are characterized by physical and topographical factors that help categorize diverse biological conditions. The BSA lies within the confines of the Colorado Desert, a subdivision of the Sonoran Desert, Riverside County, California. Stabilized Desert Sand Fields is the one natural community that occurs within the project area. This community is characterized by desert flats made up of alluvial sands lacking dune formations and stabilized by vegetation.

Vegetation types or communities are assemblages of plant species that usually coexist in the same area. The classifications of vegetation communities in this document correspond with Holland (1986) and are based upon the life-form of the dominant species within each community and the associated flora. Each vegetation type falls within a given ecosystem. These ecosystems are defined as the combination of a community and its environment functioning as an ecological unit in nature.

The vegetation types of the proposed project area consist of Sonoran creosote bush scrub, Desert saltbush scrub, Sonoran wash scrub, and tamarisk scrub (Table 2-11).

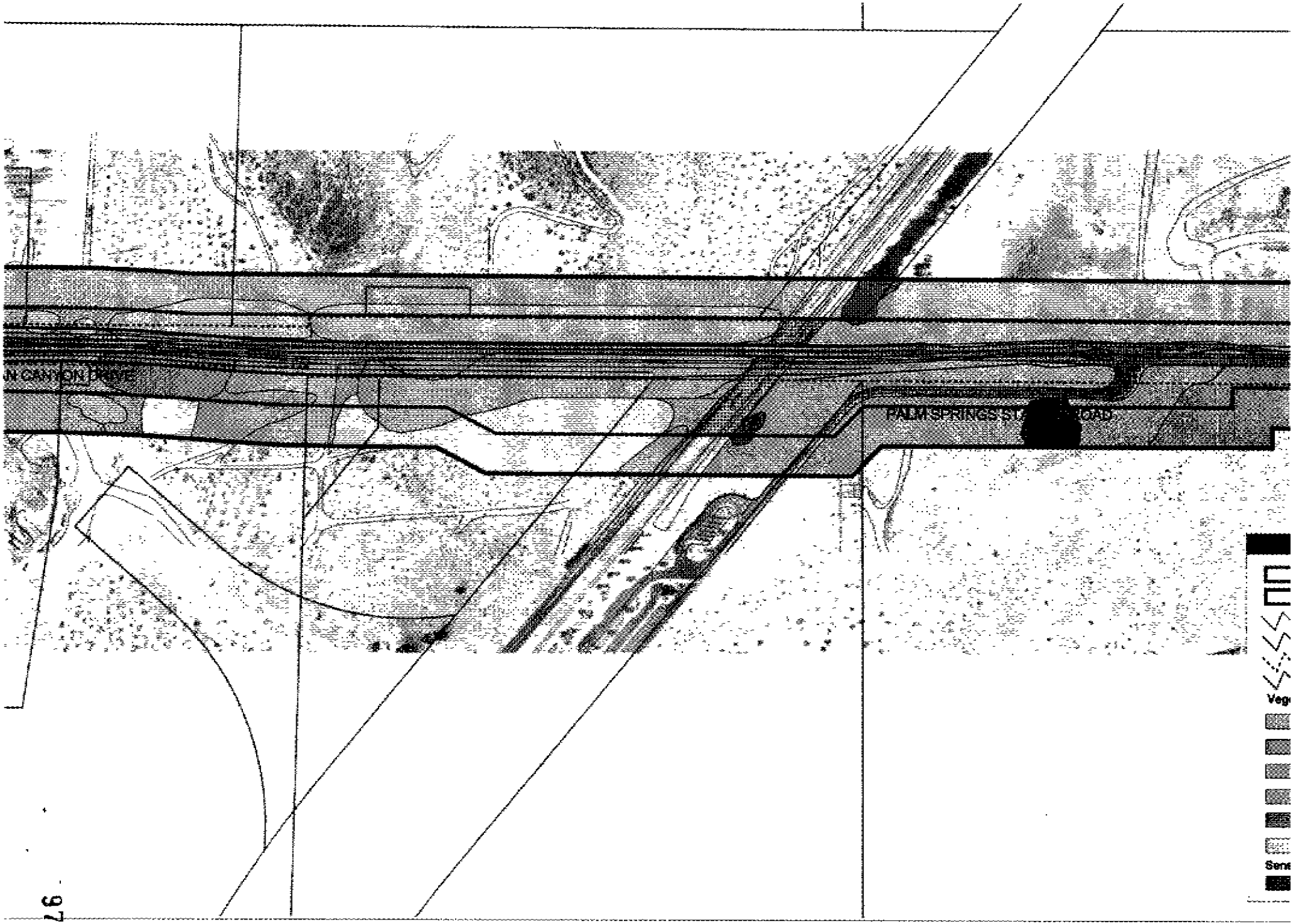
A depiction of the vegetation communities that occur within and adjacent to the proposed project site is shown in Figure 2-4. Sonoran creosote bush scrub dominates the project study area with perennial shrubs such as burro-bush (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*), indigo bush (*Psorothamnus schottii*), and brittlebush (*Encelia farinosa*). Subshrubs such as sandpaper plant (*Petalonyx thurberi*) and California croton (*Croton californicus*) dominate the western portion of the project area along Indian Canyon Drive and Palm Springs Station Road. Skeletons of the common annual apricot mallow (*Sphaeralcea ambigua* var. *rugosa*) dominate the roadsides as well as live individuals of rancher's fireweed (*Amsinckia menziesii*) and tiquilia (*Tiquilia plicata*).

Table 2-11 Vegetation Communities within the Biological Study Area

Vegetation Community	Within Biological Study Area (hectares [acres])
Stabilized desert sand fields/Sonoran creosote bush scrub (disturbed)	2.94 (7.27)
Stabilized desert sand fields/desert saltbush scrub	0.31 (0.76)
Stabilized desert sand fields	3.42 (8.45)
Stabilized desert sand fields (disturbed)	6.87 (16.97)
Tamarisk scrub	0.12 (0.30)
Sonoran wash scrub	1.10 (2.73)
TOTAL	14.76 (36.48)

West of Indian Canyon Drive, one palo verde tree (*Cercidium floridium*) and one smoke tree (*Psorothamnus spinosus*) were found on-site, indicating a past presence of a desert dry wash woodland community. Most of the area west of Indian Canyon Drive and north of the railroad tracks can be described as Sonoran wash scrub with cheesebush (*Hymenolcea salsola*) as the dominant perennial shrub; however, Sonoran creosote bush scrub and desert saltbush scrub occur along the western roadside with predominantly creosote bush and four-winged saltbush (*Atriplex canescens*).

A population of nonnative tamarisk (*Tamarix* sp.) occurs on the eastern side of the project area along the Union Pacific Railroad right-of-way. However, the majority of the project site is heavily disturbed from previous road construction, commercial development, and mining activities. Much of the site west of Indian Canyon Drive and north of the Southern Pacific Railroad tracks consists of open disturbed sand fields with dirt roads dissecting the desert vegetation, creating a sparse desert community with some diversity but limited numbers of individual plants.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PALM SPRINGS ST
OAD
Veg
Sens
300
600 Feet

2.3.1.2 Environmental Consequences

The proposed expansion of Indian Canyon Drive would result in the loss of up to 1.22 hectares (3.01 acres) of disturbed stabilized desert sand fields, 1.13 hectares (2.78 acres) of disturbed stabilized desert sand fields/Sonoran creosote bush scrub, 0.25 hectare (0.63 acre) of stabilized desert sand fields/desert saltbush scrub, 0.25 hectare (0.62 acre) of Sonoran wash scrub, and 0.02 hectare (0.06 acre) of tamarisk scrub (Table 2-11).

Table 2-12 Impacted Vegetation Communities within the Biological Study Area (hectares [acres])

Vegetation Community*	Total Area within BSA	Permanent Impacts	Temporary Impacts
Stabilized desert sand fields/Sonoran creosote bush scrub (disturbed)	2.94 (7.27)	0.69 (1.70)	0.44 (1.08)
Stabilized desert sand fields/desert saltbush scrub	0.31 (0.76)	0.23 (0.58)	0.02 (0.05)
Stabilized desert sand fields	3.42 (8.45)	–	–
Stabilized desert sand fields (disturbed)	6.87 (16.97)	0.77(1.91)	0.45 (1.10)
Tamarisk scrub	0.12 (0.30)	–	0.02 (0.06)
Sonoran wash scrub	1.10 (2.73)	–	0.25 (0.62)
TOTAL	14.76 (36.48)	1.69 (4.19)	1.18 (2.91)

*All vegetation communities, except tamarisk scrub, are considered suitable for the Coachella Valley milk-vetch and the Coachella Valley fringed toad lizard.

The proposed widening of Indian Canyon Drive would therefore result in the permanent and temporary loss of 2.87 hectares (7.1 acres) of desert habitat (Figure 2-5).

The Conservation Plan divides the arterials connecting with I-10 into segments. This Initial Study (IS) concerns a portion of the "Indian Avenue" segment extending from I-10 to San Rafael. There are four acreage categories. "Direct" refers to the actual area impacted permanently or temporarily by construction. In contrast to the calculations for the interchanges, there is no direct impact methodology described for the arterials. Analysis conducted in the preparation of this report calculated direct impacts at 2.87 hectares (7.1 acres). This 2.87 hectares (7.1 acres) would be a subset of the 11.96 hectares (29.56 acres) attributed to the construction of Indian Avenue/Indian Canyon Drive between I-10 and San Rafael.

"Indirect" impacts are calculated by measuring out 54.86 meters (180 feet) from the edge of roadway improvements. The resulting acreage calculation must be modified, however, by subtracting out "developed" areas, which are portions of road frontage already disturbed through development. After adjusting for development, consisting of the businesses at the Indian Canyon Drive intersection with Garnet Avenue and the railroad corridor, indirect impacts were calculated at 10.66 hectares (26.34 acres). This acreage would be a subset of the 45.25 hectares (111.76 acres) of indirect impacts attributed to Indian Avenue/Indian Canyon Drive between I-10 and San Rafael in the Conservation Plan. Calculation of the area already impacted by development yielded a total of 1.88 hectares (4.65 acres). The sum of direct and indirect impacts to desert vegetation communities and wildlife habitat would, using

the methodology included in the Conservation Plan, total 13.53 hectares (33.44 acres).

2.3.1.3 Avoidance, Minimization and/or Mitigation Measures

Although no natural communities of concern are present within the BSA; it has been identified that, construction of the Build Alternative will contribute to ongoing incremental loss of stabilized shielded sand fields and ephemeral sand fields in the region. The Coachella Valley Multiple Speces Habitat Conservation Plan (CVHCP) identifies direct and indirect effects for five Interstate 10 interchange projects and their associated arterials in the Coachella Valley and provides for mitigation of these effects through the acquisition of conservation lands.

Per the appended PBO (discussed in more detail in Section 2.3.5) dated June 22, 2006 (revised July 11, 2006), 101.51 hectares (250.84 acres) have been purchased by CVAG. In addition, the appended PBO dated November 7, 2005, states that CVAG will purchase an additional 37.41 hectares (92.44 acres) within the CVMSHCP Whitewater Floodplain conservaton area prior to the start of construction for the proposed project. These conservation efforts will also offset impacts to plant communities and habitats associated with the Build Alternative.

The mitigation and conservation measures of the Programmatic Biological Opinion (PBO) (USFWS 2005) are hereby incorporated by reference and are included in Appendix D of this report.

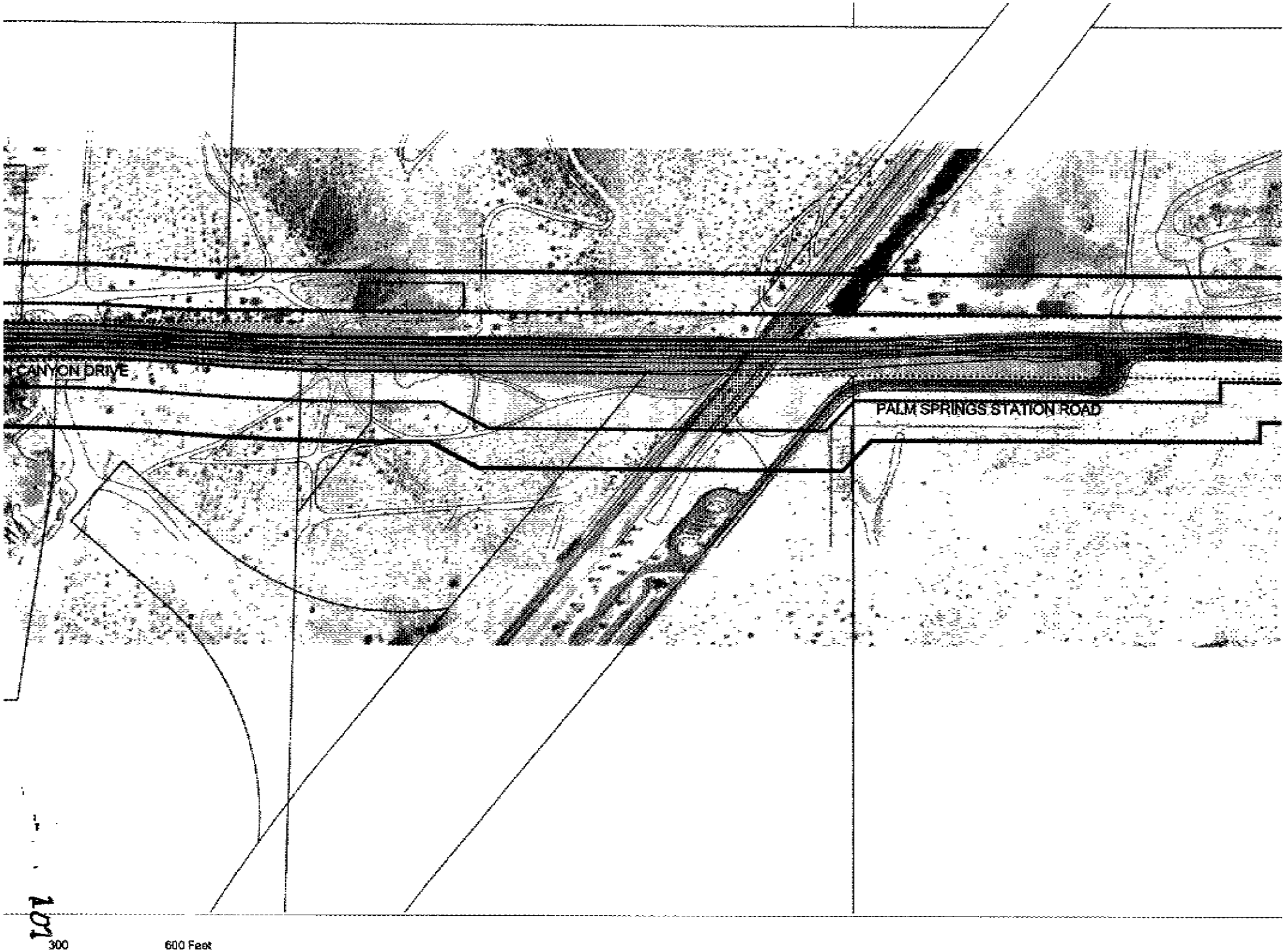
2.3.2 Wetlands and Other Waters

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (ACOE) with oversight by the Environmental Protection Agency (EPA).

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration,


N CANYON DRIVE
PALM SPRINGS STATION ROAD
1" = 300
600 Feet

cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If DFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

2.3.2.2 Affected Environment

Per the 2006 Natural Environment Study (EDAW 2006), the Indian Canyon Drive site is not located within any wetlands or other jurisdictional waters.

2.3.2.3 Environmental Consequences

Since the project site has no wetlands or other jurisdictional water, no impacts would occur as a result of the Build Alternative (Locally Preferred) or the No Build Alternative. No coordination would be necessary between the project proponents and the USACE or CDFG.

2.3.2.4 Avoidance, Minimization and/or Mitigation Measures

Since no impacts to wetlands or jurisdictional waters would occur as a result of the Build Alternative (Locally Preferred) or the No Build Alternative, no avoidance, minimization, and/or mitigation measures are proposed.

2.3.3 Plant Species

2.3.3.1 Regulatory Setting

The USFWS and CDFG share regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or

threatened under the FESA and/or the CESA. See Section 2.4.5, Threatened and Endangered Species, for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at USC 16, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

2.3.3.2 Affected Environment

A Natural Environment Study Report (NESR) was prepared for the proposed widening of Indian Canyon Drive (EDAW 2002c). Biological investigations on the proposed project site were guided by correspondence with the relevant resource agencies. Letters were transmitted to the USFWS and CDFG requesting agency input regarding sensitive species potentially occurring within the project corridor. Responses from these agencies provided guidance with respect to required directed surveys (EDAW 2002c). General biological surveys of the proposed project area were conducted by EDAW biological staff on May 20 and 21, 2002. A focused survey for the Coachella Valley milk-vetch was conducted on June 14, 2002. Threatened and Endangered Species are further addressed in Section 2.4.5.

Sensitive Species

Within the sand fields of the northern Coachella Valley, there are a number of sensitive species that have the potential to persist. Sensitive plant species known to potentially occur in this region are Coachella Valley milk-vetch, triple-ribbed milk-vetch (*Astragalus tricarinatus*), Arizona spurge (*Chamaesyce arizonica*), flat-seeded spurge (*Chamaesyce platysperma*), glandular ditaxis (*Ditaxis clariana*), and California ditaxis (*Ditaxis serrata* var. *californica*). The only sensitive plant species present on-site is Coachella Valley milk-vetch. A summary of the regulatory status, presence or absence of the species or its habitat, and a brief discussion of occurrence potential onsite is presented in Table 2-13.

Table 2-13
Listed and Proposed Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/ Absent within Study Area	Rationale
Astragalus lentiginosus var. *coachellae*	Coachella Valley Milk-vetch	FE, MSHCP, CNPS: 1B	Sonoran desert scrub communities, usually in sandy soils or sand flats, in washes and on	Present	A population of 18 individuals found within the BSA and AE, west of the existing Indian Canyon Drive.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/ Absent within Study Area	Rationale
			dunes.		
Astragalus tricarinatus	Triple-ribbed Milk-vetch	FE, MSHCP, CNPS: 1B	Sonoran scrub and Joshua tree woodland communities, on sandy soils.	Present	No present occurrences in BSA likely due to current drought conditions. Species has a low potential to occur due to habitat disturbance onsite.
Chamaesyce arizonica	Arizona Spurge	CNPS: 2	Sonoran desert scrub on sandy, gravelly soils.	Present	No present occurrences in BSA likely due to current drought conditions. Species has a low potential to occur due to habitat disturbance onsite.
Chamaesyce platysperma	Flat-seeded Spurge	CNPS: 1B	Active desert dunes and Sonoran desert scrub communities.	Present	No present occurrences in BSA likely due to current drought conditions. Species has a low to moderate potential to occur onsite due to its limited distribution.
Ditaxis clariana	Glandular Ditaxis	CNPS: 2	Sandy soils of Sonoran creosote bush scrub.	Present	No present occurrences in BSA likely due to current drought conditions. Species has a moderate to high potential to occur during years with adequate rainfall.
Ditaxis serrata var. *californica*	California Ditaxis	MSHCP, CNPS: 1B	Sandy washes, canyons, and alluvial fans in the Sonoran desert.	Present	No present occurrences in BSA likely due to current drought conditions. Species has a moderate to high potential to occur during years with adequate rainfall.
Linanthus maculatus	Little San Bernardino Mountains Linanthus	FSC, MSHCP, CNPS: 1B	Sandy soils of Mojavean and Sonoran desert scrub, Joshua tree woodland, and desert dunes.	Present	No present occurrences in BSA likely due to current drought conditions. Species has a low potential to occur due to habitat disturbance onsite.

Sensitivity Status Key:

FE	Federally endangered
FSC	Federal Species of Concern
MSHCP	Multiple Species Habitat Conservation Plan covered species
CNPS: 1B	California Native Plant Society List 1B species (considered rare, threatened, or endangered in California and elsewhere)
CNPS: 2	California Native Plant Society List 2 species (considered rare, threatened, or endangered in California, but more common elsewhere)

Seven sensitive plant species have the potential to occur within the region. No Critical Habitat for any of the above species is designated for the project site. One of these, the Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*), listed as Federally Endangered, was positively identified within the indrect effects area of the BSA during the general and focused surveys conducted by EDAW, Inc (EDAW) in 2002 and is treated separately in Section 2.4.5, Threatened and Endangered Species.

2.3.3.3 Environmental Consequences

Permanent

The Build Alternative would result in permanent impacts to habitat that could support special status plant species through the additional roadway that would be constructed. During construction, 33.44 acres (13.53 hectares) of permanent direct impacts will result from construction of the Build Alternative.

The No Build Alternative would not widen Indian Canyon Drive and Bridge and therefore no impacts to habitat that could support special status plant species would result from this alternative.

Temporary/Construction

The Build Alternative would result in temporary impacts to habitat that could support special status plant species through disturbance of 25-foot temporary construction easements adjacent to the roadway and a 180-foot indirect impact zone around the project. During construction, 2.91 acres (1.18 hectares) of temporary indirect impacts and 4.19 acres (1.69 hectares) of temporary direct impacts will result from construction of the Build Alternative.

The No Build Alternative would not require construction therefore no temporary impacts would occur to habitat that could support special status plant species.

2.3.3.4 Avoidance, Minimization and/or Mitigation Measures

Per the appended PBO dated June 22, 2006 (revised July 11, 2006), 101.51 hectares (250.84 acres) have been purchased by CVAG. In addition, the appended PBO, dated November 7, 2005, states that CVAG will purchase an additional 37.41 hectares (92.44 acres) within the CVMSHCP Whitewater Floodplain conservation area prior to the start of construction for the proposed project. These conservation efforts will also offset impacts to habitat that could support special status plant species associated with the Build Alternative.

Minimization measures outlined in the PBO shall be followed.

2.3.4 Animal Species

2.3.4.1 Regulatory Setting

Many state and federal laws regulated impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as

threatened or endangered are discussed in Section 2.4.5 below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

2.3.4.2 Affected Environment

A variety of animal species common to the California desert were observed on-site or on immediately adjacent land during the May 20 and 21, 2002 biological surveys for the proposed project (EDAW 2002c). Additional species were detected through scat or tracks. Most commonly observed were bird species. Raptors observed consisted of red-tailed hawks (*Buteo jamaicensis*), prairie falcon (*Falco mexicanus*), and burrowing owl (*Speotyto cunicularia*). Other bird species observed consisted of mourning dove (*Zenaida macroura*), roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles acutipennis*), ash-throated flycatcher (*Myiarchus cinerascens*), common raven (*Corvus corax*), Townsend's warbler (*Dendroica townsendi*), house finch (*Carpodacus mexicanus*), and house sparrow (*Passer domesticus*).

Lagomorphs observed consisted of desert cottontail (*Sylvilagus audubonii*) and black-tailed jackrabbit (*Lepus californicus*). Reptiles observed consisted of zebra-tailed lizard (*Callisaurus draconoides*), side-blotched lizard (*Uta stansburiana*), desert horned lizard (*Phrynosoma platyrhinos*), and western whiptail (*Cnemidophorus tigris*). The midden of a woodrat (*Neotoma* sp.) was observed.

Sensitive animal species known to potentially occur in the region are Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*), Coachella giant sand treader cricket (*Macrobaenetes valgum*), Coachella valley grasshopper (*Spaniacris deserticola*), the federally listed desert pupfish (*Cyprinodon macularius*), the state protected and state species of concern flat-tailed horned lizard (*Phrynosoma mcallii*), the state species of concern San Diego horned lizard (*P. coronatum blainvillei*), the federally listed Coachella Valley fringe-toed lizard, the federally listed desert tortoise (*Gopherus agassizi*), the state species of concern burrowing owl, the state species of concern prairie falcon, the state species of concern Bendire's thrasher (*Toxostoma bendirei*), the state species of concern LeConte's thrasher (*Toxostoma lecontei*), the state species of concern Palm Springs round-tailed ground squirrel (*Spermophilus tereticaudus*), and the state species of concern Palm Springs pocket mouse (*Perognathus.longimembris bangsi*). See Table 2-14 for details on each animal species, special status, and occurrence within the BSA.

Table 2-14
Listed and Proposed Animal Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/ Absent within Study Area	Rationale
Stenopelmatus cahuilaensis	Coachella Valley Jerusalem Cricket	SA, MSHCP	Sandy gravelly soils.	Absent	No present occurrences in BSA due to lack of appropriate habitat.
Macrobaenetes valgum	Coachella Valley Giant Sand Treader Cricket	FSC, MSHCP	Active sand dunes and hummocks of the Coachella Valley.	Absent	No present occurrences in BSA due to lack of appropriate habitat.
Spaniacris deserticola	Coachella Valley Grasshopper	MSHCP	Sandy washes and flats of the Coachella Valley.	Absent	No present occurrences in BSA due to lack of appropriate habitat and food source.
Cyprinodon macularius	Desert Pupfish	FE, SE	Desert springs, small streams, and marshes below 1524 meters (5,000 feet) AMSL.	Absent	No present occurrences in BSA due to lack of appropriate habitat.
Phrynosoma mcalli	Flat-tailed Horned Lizard	CSC, MSHCP	Fine, sandy, alkaline soils in desert washes and flats.	Present	No individuals found during initial assessment, and general wildlife surveys.
P. coronatum blainvillei	San Diego Horned Lizard	CSC	Sandy or friable soils with open sage scrub, chaparral, coniferous, and broadleaf woodlands.	Present	No individuals found during initial assessment, and general wildlife surveys.
Uma inornata	Coachella Valley Fringe-toed Lizard	FT, SE, MSHCP	Restricted to windblown sand deposits in the Coachella Valley.	Present	No individuals found during initial assessment.
Gopherus agassizi	Desert Tortoise	FT, ST, MSHCP	Soft sandy loams in creosote bush, Joshua tree woodland, and saltbush scrub vegetation communities.	Present	No individuals found during site assessment and focused surveys, and general wildlife surveys.
Speotyto cunicularia	Burrowing Owl	CSC, MSHCP	Open areas such as grasslands, pastures, coastal dunes, desert scrub, and the edges of agriculture fields.	Present	No individuals found within BSA during initial surveys. Detected offsite to the east. Focused pre-construction surveys recommended.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/ Absent within Study Area	Rationale
Falco mexicanus	Prairie Falcon	CSC	Open, arid regions in deserts and grasslands; nest sites on open outcrops and cliffs.	Absent	No present occurrences in BSA due to lack of appropriate habitat.
Toxostoma bendirei	Bendire's Thrasher	CSC	Flat areas of desert succulent shrub and Joshua tree woodland.	Absent	No present occurrences in BSA due to lack of appropriate habitat.
Toxostoma lecontei	LeConte's Thrasher	CSC, MSHCP	Sparse desert scrub, sand dunes, desert flats, and alluvial fans.	Absent	No present occurrences in BSA due to lack of appropriate habitat.
Spermophilus tereticaudus chlorus	Palm Springs Round-tailed Ground Squirrel	FC, CSC	Desert succulent shrub, desert wash, desert scrub, and alkali desert scrub.	Present	No individuals found during biological survey.
Perognathus longimembris bangsi	Palm Springs Pocket Mouse	CSC	Flat or gently sloping sandy habitat with sparse vegetation.	Present	No individuals found during biological survey.

Sensitivity Status Key:

FE	Federally endangered
FT	Federally threatened
FC	Federal candidate for listing as threatened or endangered
FSC	Federal Species of Concern
SE	State of California endangered
CSC	State of California Species of Concern
SA	State Special Animal Listing
MSHCP	Multiple Species Habitat Conservation Plan covered species

During the May 20 and 21, 2002 biological surveys, no special status animal species were observed (EDAW 2002c). The results of the surveys indicate that only four special status animal species have a moderate to high potential of occurrence in the BSA. These four animal species are Coachella Valley Fringe-toed Lizard, Flat-tailed Horned Lizard, Desert Tortoise, and Palm Springs Round-tailed Ground Squirrel. These four species are further discussed in Section 2.4.5, Threatened and Endangered Species.

Since Coachella Valley Fringe-toed Lizard, Desert Tortoise, and Palm Springs Round-tailed Ground Squirrel are protected under the federal Endangered Species Act, they are further discussed in Section # #, Threatened and Endangered. Impact to Coachella Valley Flat-tailed Horned Lizard, a State of California Species of Concern, is analyzed in the remainder of this section.

2.3.4.3 Environmental Consequences

Flat-tailed Horned Lizard
Population dynamics of the species are thought to be correlated with precipitation and plant production, and with the availability of a prey base. The USFWS has documented a decline in the flat-tailed horned lizard throughout its range. The proposed expansion of Indian Canyon Drive and Bridge would result in the permanent and temporary loss of up to 6.42 acres of potential flat-tailed horned lizard habitat within the AE.

Indirect effects to the species would occur through the disruption of the existing sand movement and deposition dynamics that play an important role in the biology of the flat-tailed horned lizard. Indirect impacts were calculated at approximately 26.34 acres. This acreage would be a subset of the 111.76 acres of indirect impact attributed to Indian Avenue/Indian Canyon Drive between I-10 and San Rafael in the Conservation Plan. The total projects impacts for the proposed project would therefore be the sum of direct and indirect impacts, or 33.44 acres.

Permanent
The Build Alternative would result in permanent impacts to habitat that could support special status animal species through the additional roadway that would be constructed. During construction, 33.44 acres (13.53 hectares) of permanent direct impacts will result from construction of the Build Alternative.

The No Build Alternative would not widen Indian Canyon Drive and Bridge and therefore no impacts to habitat that could support special status animal species would result from this alternative.

Temporary/Construction
The Build Alternative would result in temporary impacts to habitat that could support special status animal species through disturbance of 25-foot temporary construction easements adjacent to the roadway and a 180-foot indirect impact zone around the project. During construction, 2.91 acres (1.18 hectares) of temporary indirect impacts and 4.19 acres (1.69 hectares) of temporary direct impacts will result from construction of the Build Alternative.

The No Build Alternative would not require construction therefore no temporary impacts would occur to habitat that could support special status animal species.

2.3.4.4 Avoidance, Minimization and/or Mitigation Measures

Per the appended PBO (discussed in more detail in Section 2.3.5) dated June 22, 2006 (revised July 11, 2006), 101.51 hectares (250.84 acres) have been purchased by CVAG. In addition, the appended PBO dated November 7, 2005, states that CVAG will purchase an additional 37.41 hectares (92.44 acres) within the CVMSHCP Whitewater Floodplain conservaton area prior to the start of construction for the proposed project. These conservation efforts will also offset impacts to plant communities and habitats associated with the Build Alternative.

The mitigation and conservation measures of the Programmatic Biological Opinion (PBO) (USFWS 2005) are hereby incorporated by reference and are included in Appendix D of this report.

Flat-tailed Horned Lizard
The Conservation Plan will provide compensatory mitigation of habitat in which the flat-tailed horned lizard is found, for the direct and indirect effects of the project on the flat-tailed horned lizard. However, since the species has no federal status, mitigation is not required with respect to the FESA.

2.3.5 Threatened and Endangered Species

2.3.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game (CDFG) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.3.5.2 Affected Environment

The California Natural Diversity Data Base (CNDDB), CNPS electronic inventory, *California's Wildlife Volumes I – III*, and the CalFlora database were used to determine the sensitive species known from the region surrounding the project area. A letter was transmitted to the USFWS to confirm those federally listed species that may be present. A response from the USFWS is attached to Appendix E. A letter requesting information regarding species of concern to the CDFG was transmitted and is included in Appendix E. Technical tools such as CNDDB and the CalFlora database were used to search for regional sensitive species, confirm previous site locations, and describe habitat requirements.

Special status plant species known to potentially occur in the region surrounding the project area are Coachella Valley milk vetch, triple-ribbed milk vetch, Arizona spurge, flat-seeded spurge, glandular ditaxis, and California ditaxis. The only special status plant species present on-site is Coachella Valley milk vetch. A population of 18 individuals of this plant was found approximately 30.5 meters (100 feet) west of the existing Indian Canyon Drive and 3.05 meters (10 feet) south of Palm Springs Station Road. The population would not be directly impacted by project construction but is within the defined area of indirect effect as defined by the indirect impact calculation methodology in the Conservation Plan.

Special status animal species known to potentially occur in the region are Coachella Valley Jerusalem cricket, Coachella giant sand treader cricket, Coachella valley grasshopper, desert pupfish, flat-tailed horned lizard, San Diego horned lizard, Coachella Valley fringe-toed lizard, desert tortoise, burrowing owl, prairie falcon, Bendire's thrasher, LeConte's thrasher, Palm Springs round-tailed ground squirrel, and Palm Springs pocket mouse.

On-site observations and consultation with the USFWS confirm that the desert sand fields present in the project vicinity represent suitable habitat for the Coachella Valley fringe-toed lizard and the flat-tailed horned lizard. Based on initial habitat reconnaissance surveys of the site, as well as review of NESRs for the Ramon Road and Palm Drive/Gene Autry Trail interchange projects with I-10, it was determined that focused surveys were necessary for the following species:

- Coachella Valley milk-vetch
- Desert tortoise
- Palm Springs round-tailed ground squirrel

Surveys for the first two species were completed. Absence of burrows indicated that the Palm Springs round-tailed ground squirrel is not present. No modifications to standard survey methodologies and protocols were employed. Vegetation surveys were potentially hampered due to the lack of rain during the preceding wet season.

Consultation History

The USFWS authorizes take of listed species and the destruction of critical habitat through Section 7(a)(2) of the FESA (16 USC 1531-1544).

For purposes of endangered species impacts, the Indian Canyon Drive and Bridge Widening project was considered along with a series of interchange improvements along I-10 in the Coachella Valley. (Other interchange projects included Gene Autry Trail/Palm Drive, Date Palm Drive, Ramon/Bob Hope, and Jefferson.). The impact analysis and mitigation plan for these projects is specified in the Caltrans' Conservation Plan (2003), the PBO (USFWS, September 2004), and appended PBOs [USFWS November 7, 2005, and USFWS June 22, 2005 (Revised July 11, 2006)]. This Programmatic Biological Opinion considered the individual and cumulative effects the interchanges and associated arterial on endangered species and developed appropriate compensation and mitigation through the Conservation Plan.

On September 23, 2004, USFWS issued a Programmatic Biological Opinion (PBO) for the series of Interchanges. The PBO states, "This consultation is programmatic

because it is intended to cover interrelated projects by establishing conservation measures, including conservation banking protocol, based on avoidance and minimization measures developed to reduce both direct and indirect effects to threatened, endangered, and sensitive species in the action area for each project." Because the PBO is programmatic, a project-specific (or tiered) BO will be required for the Indian Canyon Drive Widening. The tiered BO will incorporate the conditions of the PBO.

On November 07, 2005, the USFWS issued an appended Biological Opinion. The appended PBO for Indian Avenue is written to include all of the direct and indirect mitigation for the Indian Avenue Interchange Project and indirect mitigation for the associated arterial improvements, which includes Indian Canyon Drive Widening Project.

To facilitate the completion of the Interchange and Arterial Projects, CVAG has already acquired most of the lands envisioned in the mitigation agreement for the Mitigation Bank.

CVAG has purchased 551.99 hectares (1,364 acres) of mitigation lands. The 551.99 hectares (1,364 acres) purchased to date include 101.51 hectares (250.84 acres) of land associated with offsetting direct and indirect effects to the Indian Avenue/I-10 Interchange project and associated arterials, which includes the indirect effects area of the proposed Indian Canyon Drive Widening Project. In addition, CVAG will purchase 37.41 hectares (92.44 acres) within the Draft CVMSHCP Whitewater Floodplain Conservation area prior to the start of construction for the proposed project.

Based on the PBO (September 2004) and Appended PBOs [November, 2005 and June 22, 2006 (revised July 2006)], implementation of the I-10 Conservation Plan will address project impacts to the Coachella Valley fringe-toed lizard and the Coachella Valley milkvetch.

The proposed project may have adverse effects to the state listed as endangered Coachella Valley fringe-toed lizard. CDFG has been involved in the development of the Conservation Plan with Caltrans and the USFWS and has recognized the acquisition of a portion of the Cathton property toward the mitigation of the project (see Appendix G). The CDFG authorizes take of endangered, threatened, or candidate species through the provisions of Section 2081 and 2080.1 of the Fish and Game Code.

2.3.5.3 Environmental Consequences

The area of direct and indirect effects has been defined by the Conservation Plan (Caltrans 2003) and outlines the conservation strategy developed for the PBO and the subsequent appended Biological Opinions. The strategy covered eleven listed and non-listed species covered by the proposed CVMSHCP.

The direct effects of each proposed project are estimated as the area composed from the new/revised toe of slope of one side to the new revised toe of slope of the other side, plus a width of 7.62 meters (25 feet) on each side for a temporary

construction area; developed areas are excluded from habitat calculations for direct effects. A mitigation ratio of 2:1 was used to estimate the conservation area required for direct effects.

During development of the Conservation Plan, FHWA, USFWS, and CDFG made a coordinated effort to determine the effect distance for indirect effects of the interchange projects and arterial street improvements. The home range of the flat-tailed horned lizard (FTHL) was used to calculate the effect distance, since it had both the best available science regarding home range an the widest known effect distance of the eleven species considered in the Plan. It was decided that the mortality rate of the FTHL would increase from approximately 50 percent to 100 percent when attempting to cross the road at the increased traffic intensity. This road-related mortality would substantially reduce population densities within 55.5 meters (180 feet) of each side of the road based on current and projected traffic volumes. Therefore, it was agreed to estimate the indirect effect area based on a 111-meter (360-foot) width (55.5 meters/180 feet each side) multiplied by the length of the interchange and the arterial improvements included in the interchange project and the additional arterial segments included in the indirect effects analysis. Developed areas were excluded from habitat calculations for indirect effects. A mitigation ratio of 1:1 was used to estimate the conservation area required for indirect effects.

Per the mitigation ratios identified in the Conservation Plan, the Indian Canyon Drive Widening Project will have 9.09 hectares (22.46 acres) of direct effects, including 2.47 hectares (6.10 acres) of permanent direct effects and 6.62 hectares (16.36 acres) of temporary direct effects, and 34.57 hectares (85.42) of indirect effects.

Temporary and Permanent Impacts

Coachella Valley milk-vetch

The population of Coachella Valley milk-vetch found within the BSA consists of 18 individual plants. Due to extremely dry environmental conditions, none of the 18 plants produced fruit or set seed in spring 2002. Although it is hard to predict how this particular population would thrive in the future due to the extremities, common population trends of the Coachella Valley milk-vetch are known to be greatly influenced by the availability of freshly deposited sand within their habitat. The proposed project is designed to have no direct impacts on the observed Coachella Valley milk-vetch population. Approximately 6.42 acres of potential habitat in the form of desert sand fields would, however, be temporarily or permanently displaced in the AE. An additional 0.68 acre of scrub habitat would be directly impacted, resulting in total direct impacts of 7.10 acres of suitable habitat for this species.

Indirect effects to the species would occur through the disruption of the existing sand movement and deposition dynamics that play an important role in the biology of the Coachella Valley milk-vetch. The indirect impacts to Coachella Valley milk-vetch habitat would total 26.34 acres. This acreage would be a subset of the 111.76 acres of indirect impact attributed to Indian Avenue/Indian Canyon Drive between I10 and San Rafael described in the Conservation Plan.

Coachella Valley Fringe-toed Lizard

The proposed expansion of Indian Canyon Drive would result in the loss of up to 3.01 acres of disturbed stabilized desert sand fields, 2.78 acres of disturbed stabilized desert sand fields/Sonoran creosote bush scrub, and 0.63 acre of stabilized desert sand fields/desert saltbush scrub. The proposed widening of Indian Canyon Drive would therefore result in the permanent and temporary loss of 6.42 acres of suitable Coachella Valley fringe-toed lizard habitat within the proposed AE.

Indirect effects to the species would occur through the disruption of the existing sand movement and deposition dynamics that play an important role in the biology of the Coachella Valley fringe-toed lizard. The indirect impacts to this species' habitat would total 26.34 acres. This acreage would be a subset of the 111.76 acres of indirect impact attributed to Indian Avenue/Indian Canyon Drive between I-10 and San Rafael described in the Conservation Plan. The total projects impacts for the proposed project would therefore be the sum of direct and indirect impacts, or 33.44 acres.

Desert Tortoise

The desert tortoise population is declining throughout its range. Along the I-10 corridor, recent studies have indicated a sharp population decline in recent years to the Chuckwalla Bench population east of Indio. However, recent 2002 data suggest that a small but stable population currently persists immediately north of the City of Palm Desert and the Coachella Valley Preserve. Since no desert tortoises were observed or detected during the focused protocol-level survey effort, it is concluded that no impacts would occur to this species.

Palm Springs Round-tailed Ground Squirrel

Population trends of the Palm Springs round-tailed ground squirrel are poorly understood. The proposed Coachella Valley MSHCP references data from the 1960s that document small populations averaging 10 to 15 animals per square mile. The proposed expansion of Indian Canyon Drive would result in the total direct permanent and temporary loss of 6.42 acres of potentially suitable Palm Springs round-tailed ground squirrel habitat within the proposed AE.

Indirect effects to the species would occur through the disruption of the existing sand movement and deposition dynamics that play an important role in the biology of the Palm Springs round-tailed ground squirrel. The indirect impacts to this species' habitat would total 26.34 acres. This acreage would be a subset of the 111.76 acres of indirect impact attributed to Indian Avenue/Indian Canyon Drive between I-10 and San Rafael described in the Conservation Plan. The total projects impacts for the proposed project would therefore be the sum of direct and indirect impacts, or 33.44 acres.

2.3.5.4 Avoidance, Minimization and/or Mitigation Measures

Coachella Valley Milkvetch

Minimization efforts for impacts to Coachella Valley milkvetch include the PBO's Conservation Measures 1 through 21 (see Section 2.3.3.4), which will be implemented by the proposed project. Specifically Conservation Measure 9 provides for seed collection and distribution of the Coachella Valley milkvetch from within the boundaries of permanent and temporary impacts from project construction.

Coachella Valley Fringe-toed Lizard

The PBO has identified conservation measures for the Coachella Valley fringe-toed lizard. To reduce impacts to a small but unknown number of Coachella Valley fringe-toed lizards, Conservation Measures 1 through 21 from the PBO (see Section 2.3.3.4) will be implemented to minimize the effects to the Coachella Valley fringe-toed lizard.

Desert Tortoise

Surveys following the current USFWS protocol were conducted for the BSA and adjacent offsite areas (i.e., the Zones of Influence, as defined in the protocol) on May 20 and 21, 2002. No desert tortoises were observed, and no sign were detected onsite or along the Zones of Influence transects. The disturbed nature of the site and presence of a sandy substrate are not conducive to occupation by the desert tortoise. These habitat factors and the negative results of the protocol-level focused desert tortoise surveys indicate that the species does not occur onsite or within the immediate vicinity of the project area. Therefore, the proposed Indian Canyon Drive Street and Bridge Widening Project would not impact the desert tortoise, and avoidance, minimization, and compensatory mitigation measures are not necessary for this species.

Palm Springs Ground Squirrel

Conservation Measures 1 through 21 from the PBO (see Section 2.3.3.4) will be implemented by the proposed project and will serve to minimize potential project effects to the ground squirrel.

Mitigation

The Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, and Palm Springs ground squirrel are covered species in the Conservation Plan and PBO and appended PBOs, dated November 7, 2005, and June 22, 2006 (revised July 11, 2006). The PBO includes a commitment by Caltrans and the USFWS to purchase 726.57 hectares (1,795.4 acres) for direct and indirect effects for the five interchange and associated arterial projects. Currently, CVAG has purchased 551.99 hectares (1,364 acres) of mitigation lands. The 551.99 hectares (1,364 acres) purchased to date includes 101.51 hectares (250.84 acres) of land associated with offsetting direct and indirect effects to the Indian Avenue/I-10 Interchange project and associated arterials, which include the indirect effects area of the proposed Indian Canyon Drive Widening Project. In addition, CVAG will purchase 37.41 hectares (92.44 acres) within the CVMSHCP Whitewater Floodplain Conservation area prior to the start of construction for the proposed project.

2.3.6 Invasive Species

2.3.6.1 Regulatory Setting

As part of the City of Palm Springs General Plan, Section RC7.2 of the Recreation, Open Space and Conservation Element states that the City shall "Develop a comprehensive education program that emphasized the importance of the preservation, management, and appreciation of the unique biological resources in and around Palm Springs. In cooperation with public, private, and nonprofit agencies, the program should...facilitate volunteer activities that protect or enhance

important biolocial resources, such as removal of invasive species, trash removal, and other retoration projects..."

In addition, the California Department of Fish and Game acts as a responsible agency for review and regulation of Invasive Species under CEQA. The Department of Fish and Game works to reduce the negative effects of non-native invasive species on the wildlands and waterways of California. Regulatory information for all current policies to this end can be found in the California Aquatic Invasive Species Management Plan.

2.3.6.2 Affected Environment

Mediterranean grass (*Schismus barbatus*) occurs on the project site. Exotic plant species may over time adversely affect milk-vetch and fringe-toed lizard populations within the proposed project area and surrounding vicinity.

2.3.6.3 Environmental Consequences

Build Alternative (Locally Preferred)

Permanent

Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities will be restricted. In compliance with Executive Order 13112, impacted areas will be revegetated with plant species native to desert habitat types and the Coachella Valley, and will avoid the use of species listed in Lists A & B of the California Exotic Pest Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999.

The seed of Coachella Valley milk-vetch will be collected off of plants from within the boundaries of permanent and temporary impacts from project construction. Seed collection will occur when the seed is past soft dough and prior to being naturally dispersed. The top four inches of soil surrounding the milk-vetch plants to be impacted will be collected and placed in plastic bags. This seed and soil will be distributed at an area consisting of aeolian habitat immediately following collection. The location where seed will be dispersed will be coordinated with the USFWS prior to collection.

Temporary/Construction

All construction equipment will be inspected and cleaned prior to use in the proposed project footprint to minimize the importation of nonnative plant material. All mulch, topsoil and seed mixes used during post construction landscaping activities and erosion control BMPs will be free of invasive plant species propagules. A weed abatement program will be implemented should invasive plant species colonize the area within the project footprint post-construction.

No Build Alternative

The No Build Alternative will not introduce or result in the spreading of invasive species.

2.3.6.4 Avoidance, Minimization and/or Mitigation Measures

Minimization measures for effects on invasive species would be implemented to comply with regulations under the California Department of Fish and Game.

- All construction equipment should be cleaned prior to movement to the construction site.
- Only weed-free mulches and erosion control mixes should be included in specification.
- Only appropriate native plants should be included in project landscaping.
- No topsoil should be imported.
- A weed eradication program should be implemented over the first year after construction.

2.3.7 Climate Change under the California Environmental Quality Act

2.3.7.1 Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by EPA in December 2007. See California v. Environmental Protection Agency, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that EPA will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. This standard is the same standard that was proposed by California, and so the California waiver request has been shelved.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the State's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHG as a pollutant under the Clean Air Act (Massachusetts vs. Environmental Protection Agency et al., 549 U.S. 497 (2007). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Compiling information in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

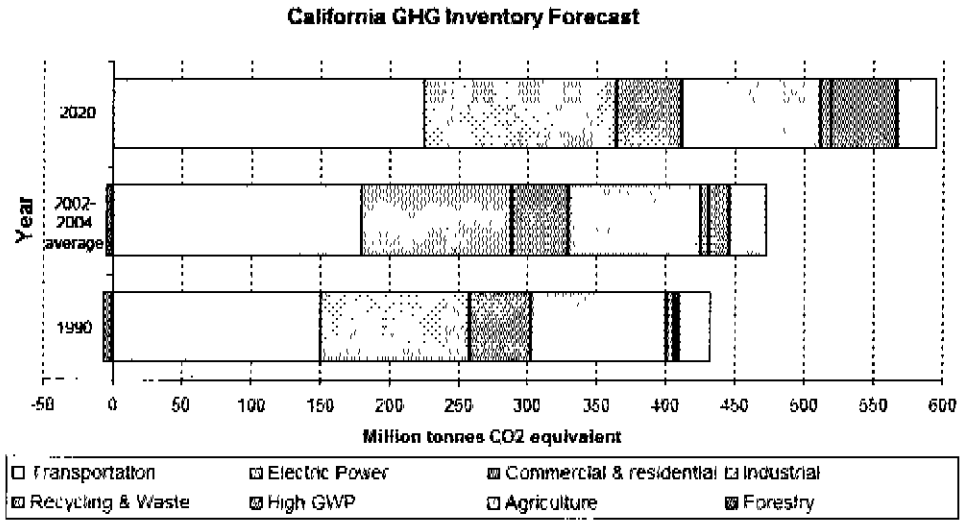


Figure 2-6 California Greenhouse Gas Inventory
Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

The Business, Transportation, and Housing Agency, has taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, a Climate Action Program has been created. The December 2006 document can be found at: http://www.dot.ca.gov/docs/ClimateReport.pdf

2.3.7.2 Project Analysis

One of the main strategies in the Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure below). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors, GHG emissions, particularly CO2, may be reduced.

The project alternatives under analysis are designed to reduce congestion. The build alternative improves the current and projected level of service for the roadway and would reduce emissions related to regular operations, while the no-build alternative would increase GHG potential by not improving a deficient facility. Introductory discussion of the purpose and need provides the supporting data for both the build alternative and the no-build alternative.

The proposed project to widen Indian Canyon Drive is designed to reduce congestion and vehicle time delays and is included in the Regional Transportation Improvement Program. This project will result in a reduction in overall vehicle hours traveled (VHT) and improved traffic flow for the region. Due to the reduction in VHT and improved traffic flow, carbon dioxide emissions should be reduced with no substantial change in vehicle miles traveled (VMT).

2.3.7.3 Construction Emmissions

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer lasting pavement, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. The following measures have been included in the project in order to address construction emissions:

- To the extent that equipment and technology is available and cost effective, the applicant shall encourage contractors to use alternate fuels, catalyst and filtration technologies, and retrofit existing engines in construction equipment.
- Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.

- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5% fewer emissions. Properly maintain equipment according to manufacturers' specifications.
- Use electric equipment when feasible.

2.3.7.4 AB 32 Compliance

The Governor's Climate Action Team and CARB are actively working to implement the Governor's Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies being used to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $238.6 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding through 2016.[2] As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

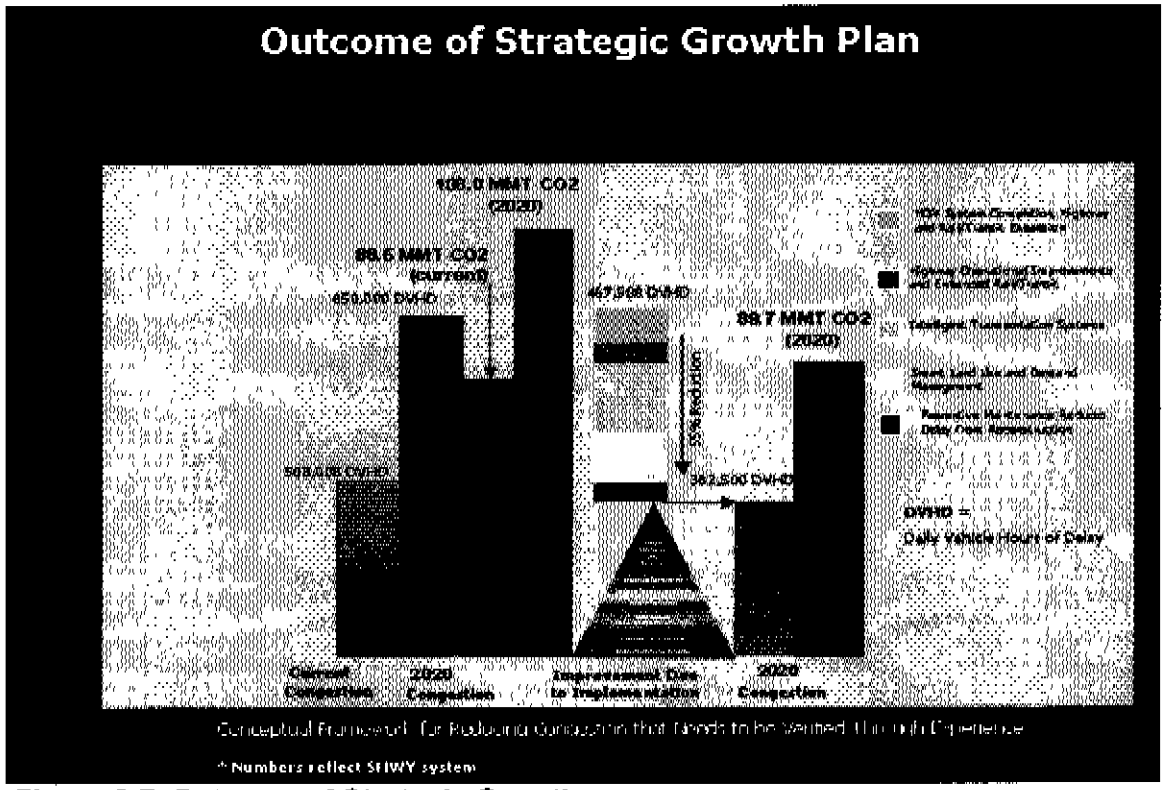


Figure 2-7 Outcome of Strategic Growth

[2] Governor's Strategic Growth Plan, Fig. 1 (http://gov.ca.gov/pdf/gov/CSGP.pdf)

As part of the Climate Action Program, reduction of vehicle miles traveled is encouraged by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. The State is working closely with local jurisdictions on planning activities; however, it does not have local land use planning authority. Efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks is being encouraged by supporting on-going research efforts at universities; by supporting legislative efforts to increase fuel economy; and by participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by EPA and CARB. Lastly, the use of alternative fuels is also being considered; the State is participating in funding for alternative fuel research at the UC Davis.

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- The project would incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs — or balls, in the stoplight vernacular — cost $60 to $70 apiece but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED balls themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the projects CO2 emissions.
- Portland cement will be used where possible and if feasible, fly ash will be added to Portland cement mixes. The use of lighter color surfaces such as Portland cement helps to reduce the albedo effect and cool the surface. Adding fly ash reduces the GHG emissions associated with cement production and it also can make the pavement stronger.

2.3.7.5 Adaptation Strategies

"Adaptation strategies" refer to how agencies can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change.

The California Resources Agency (now the Natural Resources Agency), through the interagency Climate Action Team, was directed to coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, the Natural Resources Agency was directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- a discussion of future research needs regarding sea level rise for California.

Furthermore, Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the state. The State continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding the next five years (through 2013), or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement.)

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Implementation of Governor's Schwarzenegger's Executive Order on Sea Level Rise is under way and is mobilizing to be able to respond to the National Academy of Science report on Sea

Level Rise Assessment which is due to be released by December 2010. The State is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, a determination of what changes, if any, may be made to design standards for transportation facilities. Once statewide planning scenarios become available, more in depth analysis regarding transportation project specific impacts to climate change and sea level rise can be made.

The Indian Canyon Drive Widening project is programmed for construction funding prior to 2013. For this reason, the project has not conducted additional analysis with regards to adaptation strategies to anticipated climate change.

Chapter 3 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. To determine the potential cumulative effects of the proposed project, it is necessary to summarize other transportation improvements and ongoing and reasonably foreseeable land uses and improvements in the project vicinity.

3.1 Planned/Projected Development

There is a considerable quantity of vacant land, and land that is currently occupied by low-intensity uses, in the project vicinity. Land in the vicinity that is available for development, however, is limited primarily to the area north of the railroad tracks and immediately south of the Indian Canyon Drive/I-10 interchange. Improvements to the interchange are currently under design. These improvements would result in a facility capable of accommodating horizon-year or "build-out" traffic volumes. Due to funding uncertainties, no schedule for interchange improvement is currently available. Similar improvements are planned for the other I-10 interchanges in the Coachella Valley and the Banning Pass.

Because of existing land use patterns, underlying ownership, and land use designations, future development in the project vicinity will likely be concentrated in the area immediately surrounding the Indian Canyon Drive/I-10 interchange. As was discussed in Section 3.1, land use in this area is designated primarily Regional Business Center (RBC). There are at this time only two planned new developments in the project vicinity. Both of these are located in areas covered by the RBC designation. A 12-hectare (30-acre), 11-lot industrial subdivision has been approved

by the City at the northeast corner of Indian Canyon Drive and Garnet Avenue. A 60-unit hotel fronting Garnet Avenue east of Indian Canyon Drive has also been approved.

Limited future land development opportunities exist along the project corridor. Future development, consistent with the City's RBC – Business/Industrial designation, could occur on either side of the roadway between the existing development fronting Garnet Avenue and the railroad right-of-way. To the south of the railroad right-of-way, the land is already developed, albeit with low-intensity uses. To the east of the road, the land is occupied by a construction operation. To the west of the road, the land is occupied by a commuter rail station and existing wind energy farms. Uses south of the project corridor are precluded by the Whitewater River floodplain.

3.2 Cumulative Impacts

Several projects planned in the vicinity of the Indian Canyon Drive and Bridge Widening project may contribute to temporary and permanent impacts of the proposed project. The potential cumulative impacts under each environmental topic addressed in Chapter 2 are evaluated below.

3.2.1 Land Use

The study area examined for this land use discussion includes the project study area, plus a buffer of approximately 0.14 kilometer (0.25 mile). This scope allows consideration of effects on the land uses immediately adjacent to the project footprint, as well as potential effects to the RBC-designated areas to the north of the railroad tracks. Project implementation, taken together with eventual improvement of the I-10/Indian Avenue Interchange, could accelerate the build-out of Highway Commercial land uses in the immediate vicinity of the interchange, as well as the land designated for Business/Industrial development between Garnet Avenue and the railroad right-of-way. Such development, however, is consistent with the planned land use for the area. In addition, the proposed widening of Indian Canyon Drive is consistent with the roadway designations identified by the City of Palm Springs and the County of Riverside. As such, no adverse cumulative land use impacts are anticipated.

3.2.2 Community Impacts

The proposed widening of Indian Canyon Drive and Bridge would not result in adverse social or economic effects. No businesses would be affected and no property would be taken. The proposed project is the improvement of an existing transportation corridor, in a sparsely populated area. No impacts to low-income or minority groups would occur. The project would not contribute to any cumulative effects resulting from other foreseeable projects in the vicinity.

3.2.3 Relocation

The proposed widening of Indian Canyon Drive and Bridge would not result in adverse relocation impacts. No businesses would be affected and no property, commercial or residential, would be taken. Thus the proposed project would not contribute to any such effects resulting from other foreseeable projects in the vicinity.

3.2.4 Utilities/Emergency Services

The proposed widening of Indian Canyon Drive and Bridge would not result in permanent impacts to public utilities and emergency response times would improve because of the improved traffic circulation and safer travel environment. No cumulative adverse effects on utilities or emergency services are anticipated.

3.2.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

The project would have no effect on pedestrian facilities. A beneficial effect upon bicycle facilities is anticipated, as the additional travel lanes and addition of a Class II bike lane would provide more room for automobiles while the paved shoulder would provide space for cyclists, as no bike lane currently exists. Together with future similar roadway improvements on connecting roadway segments, a beneficial effect on bicycle and pedestrian facilities and traffic would occur. No adverse cumulative impacts are anticipated.

3.2.6 Visual Impacts

The viewshed for the proposed project is very localized because of the low profile of the roadway and bridge, and because of the limited topographic diversity of the study area and surrounding land. The proposed project would not result in adverse visual impacts as there are no sensitive viewers along the project corridor that would be impacted by a widened bridge and roadway. Foreseeable future development along the project corridor would likewise not impact sensitive viewers along the roadway, and therefore no cumulative visual impacts are anticipated.

3.2.7 Hydrology and Floodplain

The proposed widening of Indian Canyon Drive and Bridge would not result in adverse effects to hydrology or floodplains. The southernmost portion of the project corridor is located within the Whitewater River floodplain. Improvements within the floodplain include roadway re-striping only and would not result in an increase in risk to life, property, or interruption of any transportation facility. Nor would the proposed improvements within the floodplain affect any natural floodplain resources.
The proposed project, as well as reasonably foreseeable development, will be required to comply with NPDES requirements limiting off-site discharges to predevelopment levels. As such, cumulative hydrologic effects will be avoided.

3.2.8 Water Quality and Storm Water Runoff

The proposed widening of Indian Canyon Drive and Bridge would not result in adverse effects to water quality. The proposed project, as well as reasonably foreseeable development along the project corridor, will be required to comply with NPDES requirements and to submit a SWPPP. Storm water runoff from the project site will follow the existing drainage system, generally flowing from the northwest to southeast. Erosion control methods, temporary and permanent BMPs, and improvement of drainage facilities along the roadway will minimize impacts from storm water runoff. As such, cumulative water quality effects will be avoided.

3.2.9 Geology

The proposed widening of Indian Canyon Drive and Bridge would not result in adverse effects to geology. Geological natural landmarks would not be affected and natural hazards would not be worsened because the proposed project is on a currently existing roadway. Cumulative geology effects are not anticipated.

3.2.10 Hazardous Waste Sites

The proposed widening of Indian Canyon Drive would not result in adverse effects to hazardous waste sites. The Initial Site Assessment prepared for the project (EDAW 2002c) indicated that there are no hazardous waste sites within the area to be affected by project implementation or in adjacent areas potentially affected by reasonably foreseeable development. Therefore, no cumulative effects upon hazardous waste sites are anticipated.

3.2.11 Air Quality

Cumulative air quality impacts were considered for the area within the SSAB. The SSAB is currently classified as a nonattainment area under federal and state standards for O_3 and PM_{10}. Development forecasted for the Coachella Valley will generate increased emissions from transportation and stationary sources resulting in a significant cumulative impact to air quality. Combined emissions from Palm Springs and other developed portions of the SSAB are expected to continue to exceed federal and state standards. Cumulative air quality impacts will be partially reduced by the implementation and achievement of emission levels identified in the SCAQMD AQMP, for O_3 precursors, and the CVSIP, for PM_{10}. To achieve these goals, the AQMP and CVSIP require implementation of control measures to reduce emissions.

The proposed project was analyzed for regional air quality impacts by the SCAG as part of the RTPs, which were found to conform to the AQMP and the SIP. The proposed project was analyzed for local air quality impacts in accordance with the Transportation Project-Level Carbon Monoxide Protocol and recent USEPA guidance for analysis of local PM_{10} impacts. The proposed project would not generate traffic, increase cold starts, or worsen congestion. The Circulation Element in the General Plan identifies Indian Canyon Road as a roadway that extends into adjacent jurisdictions, among those that are estimated to carry the highest volume of traffic because they are regional roadways that connect to the neighboring cities and I-10. Rather than generating traffic, this improvement would accommodate existing and future traffic volumes. The proposed project includes mitigation measures for the construction phase as required by the CVSIP and the City of Palm Springs. There would be no significant local impacts, nor contribution to the existing air quality violations. Growth in the Coachella Valley will, overall, result in significant cumulative air quality impacts. The proposed project, however, would not contribute to these cumulative air quality impacts. No mitigation measures are required in addition to those specified in Section 3.11.3.

3.2.12 Noise

The proposed widening of Indian Canyon Drive would not result in adverse noise effects, as there are no sensitive receptors along the project corridor that would be impacted by noise generated by future higher traffic volumes. Likewise, there would be no adverse

noise impacts as a result of construction activities. Foreseeable future development along the project corridor would likewise not result in sensitive noise receptors along the roadway; therefore, no cumulative noise effects are anticipated.

3.2.13 Natural Communities

The proposed widening of Indian Canyon Drive and Bridge would permanently impact 33.2 acres of blowsand habitat. This impact would be mitigated through the Conservation Plan discussed later in section 3.2.18. With implementation of the Conservation Plan, cumulative impacts to natural communities would be avoided.

3.2.14 Wetlands and Waters of the U.S.

The proposed widening of Indian Canyon Drive would not result in adverse effects to wetlands and "waters of the U.S.," as the site is not located within or adjacent to any wetlands or other jurisdictional waters. Therefore, no cumulative effects on wetlands and "waters of the U.S." would occur.

3.2.15 Plant Species

The proposed widening of Indian Canyon Drive and Bridge would permanently impact 33.2 acres of blowsand habitat. This impact would be mitigated through the Conservation Plan discussed later in section 3.2.18. With implementation of the Conservation Plan, cumulative impacts to plant species would be avoided.

3.2.16 Animal Species

The proposed widening of Indian Canyon Drive and Bridge would permanently impact 33.2 acres of blowsand habitat. This impact would be mitigated through the Conservation Plan discussed later in section 3.2.18. With implementation of the Conservation Plan, cumulative impacts to animal species would be avoided.

3.2.17 Threatened or Endangered Species

Cumulative impacts to wildlife and other biological resources were considered for the area within the Whitewater Floodplain Conservation Area. This area is identified as potential habitat for both the milk-vetch and the ring-toed lizard by the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). If conservation measures, as proposed in the CVMSHCP as well as in the 2007 Amended BO, are implemented, then cumulative impacts would not result from the implementation of the proposed project along with related roadway improvements. The CVMSHCP has taken into account the potential biological effects of the planned improvements to the I-10 interchanges in the Coachella Valley, as well as the area along the connecting arterials that will see increased traffic volumes as a result of interchange upgrades. The CVMSHCP provides a methodology for calculating the cumulative direct and indirect impacts upon desert lands potentially supporting the Coachella Valley milk vetch and other listed species.

Using the impact assessment methodology included in the CVMSHCP, and after subtracting out areas classified as developed, the cumulative impacts of the I-10 interchanges and connecting arterials would amount to approximately 606 hectares (1,497 acres). These impacts would be mitigated at a ratio of 2:1 for direct impacts

related to interchange improvements, and a ratio of 1:1 for other directly or indirectly impacted lands. Mitigation would be in the form of land purchased and conserved as part of a Conservation Bank under the auspices of the Draft CVMSHCP. With respect to the proposed project, the 13.4 impacted hectares (33.2 impacted acres) of blowsand habitat would be mitigated by the deduction of 26.9 hectares (66.4 acres) of equivalent habitat from an appropriate mitigation bank. With implementation of the Conservation Plan, cumulative impacts to wildlife and biological resources would be avoided.

3.2.18 Invasive Species

Invasive plant species will not be used for landscaping for the proposed project. No effects to invasive species would occur, and therefore, no cumulative effects are anticipated.

3.2.19 Climate Change

The proposed project to widen Indian Canyon Drive and bridge is designed to reduce congestion and vehicle time delays and is included in the Regional Transportation Improvement Program. This project will result in a reduction of vehicle hours traveled (VHT) and improved traffic flow for the region. Due to the reduction in VHT and improved traffic flow, carbon dioxide emissions should be reduced despite what may be an increase in vehicle miles traveled (VMT).

Caltrans recognizes the concern that carbon dioxide emissions raise for climate change. However, modeling and gauging the impacts associated with an increase in greenhouse gas emission levels, including carbon dioxide, at the project level is not currently possible. No federal, state, or regional regulatory agency has provided methodology or criteria for greenhouse gas emissions and climate change impact analysis. Therefore, Caltrans is unable to provide a scientific- or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

Chapter 4 Comments and Coordination

4.1 Introduction

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: project development team meetings, interagency coordination meetings, and public noticing. This chapter summarizes the results of the City's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

4.2 Scoping

The PES form was signed by Tay Dam of the Federal Highway Administration on August 8, 2002.

4.3 Public Agencies

Consultation with several agencies occurred in conjunction with the preparation of the project technical reports and the Environmental Assessment/Initial Study. These agencies are identified in the various technical reports and include:

California Department of Transportation
Scott Quinnell, Biological Studies
Alicia Colburn, Environmental Planning
Aaron Burton, Environmental Local Assistance
Nathaniel Pickett, Biological Studies/Permits
David Bricker, Environmental Support/Cultural Studies

Additional Coordination

The California Department of Transportation entered into the Conservation Plan agreement, with FHWA, CDFG, USFWS, Riverside County, CVAG, and local cities to mitigate potential direct and indirect adverse effects resulting from Interstate 10 (I-10) interchange projects upon several listed species proposed for coverage under the CVMSHCP. To implement the Conservation Plan, and to address its responsibilities under the federal Endangered Species Act, the FHWA initiated formal consultation with the USFWS, which issued a Programmatic Biological Opinion (PBO) addressing the five interchanges and associated arterials in September 2004. On September 23, 2004, USFWS issued a Programmatic Biological Opinion (PBO) for the series of five interchanges along I-10. On November 07, 2005, the USFWS issued an appended Biological Opinion for Indian Avenue Interchange and its associated arterials, including the currently proposed project to widen of Indian Canyon Drive. Consultation for a tiered BO for this project was initiated on June 11, 2007.

Stephen D. Mikesell, Acting State Historic Preservation Officer, concurred with Caltran's determination that properties at the project area were not eligible for inclusion on the NRHP on June 11, 2004.

4.4 Environmental Document

On July 13, 2009, a Notice of Availability identifying the proposed project was mailed to the State Clearing House, County Clerk, and local, State, and federal agencies having jurisdiction or discretionary approval over the project corridor. The environmental document was also made available for public comment for thirty days after this date at the address below:

- City of Palm Springs, 3200 E. Tahquitz Canyon Way, Palm Springs, CA 92262

- Palm Springs Library, 300 South Sunrise Way – Palm Springs, CA 92262

An Opportunity for Public Hearing was made during public circulation.

4.5 Comments

During the 30-day CEQA circulation and review period the City received comments on the Environmental Document from five (5) other agencies. These comments and the response provided by the City of Palm Springs are included below.

Comment Set A

STATE OF CALIFORNIA — ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

RECEIVED

August 11, 2009 — AUG 13 2009

Engineering Design

Marcus Fuller
City of Palm Springs
3200 East Tahquitz Canyon Way
Palm Springs, CA 92262-0119

Dear Mr. Fuller:

Re: SCH 2009071044; Indian Canyon Drive and Bridge Widening

The California Public Utilities Commission's (Commission) Rail Crossings Engineering Section (RCES) is in receipt of the *Notice of Completion & Environmental Document Transmittal-Mitigated Negative Declaration* from the State Clearinghouse for the City's proposed project that includes widening the existing Union Pacific Railroad Company (UP)/ Indian Canyon Drive grade separation.

The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings. Modifications to crossings including widening of an existing grade separation, are within the scope of Commission General Order (GO) 88-B: "Rules for Altering Public Highway-Rail Crossings." A request for authorization must be submitted to RCES. One of the primary prerequisites for a GO 88-B request is concurrence of all parties (railroad, local agency and Commission) to the proposed changes. Under Table 1-4 Permits and Approvals, the Commission should also be listed.

City should arrange a meeting with RCES and UP staff to discuss relevant safety issues and requirements of a GO88-B request for authority to modify the existing Indian Canyon Drive overpass (CPUC crossing number 01B-588.30-A, U.S. DOT number 760705M).

Thank you for your consideration of these comments and we look forward to working with the City on this project. If you have any questions in this matter, please contact Bill Lay, Utilities Engineer at 213-576-1399, bll@cpuc.ca.gov, or me at rxm@cpuc.ca.gov, 213-576-7078.

Sincerely,

Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

C: Dan Miller, UP

Response to Comment Set A

Thank you for your comments, they will be documented in the final environmental docmuents. The City understands the need to obtain authorization from the California Public Utilities Commission Rail Crossings Envineering Section and intends to arrange a meeting with in order to discuss relevent safety issues and requirements of a GO88-B request for authority to modify the exising Indian Canyon Drive Overpass. Authorization in the form of concurrance from all parties (railfoad, local agency, and the Commission) will be obtained prior to start of work on the project. This has been documented by updating table 1-4 Permits and Approvals.

Comment Set B

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Inland Deserts Region
78078 Country Club Dr., Ste. 109
Bermuda Dunes, CA 92203
(760) 200-9419
www.dfg.ca.gov

ARNOLD SCHWARZENEGGER, Governor
DONALD KOCH, Director

RECEIVED
AUG 17 2009
Engineering Division

August 10, 2009

Marcus Fuller
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Re: Indian Canyon Drive and Bridge Widening

Dear Mr. Fuller,

The California Department of Fish and Game (Department) appreciates the opportunity to comment on the Mitigated Negative Declaration for the Canyon Drive and Bridge Widening (SCH# 2009071044). The Department has reviewed the above-referenced project, relative to impacts to biological resources. The project proposes to widen Indian Canyon Drive for distance of about 1,219 meters (4,000 ft) south of its intersection with Garnet Avenue (south of I-10) in accordance with Caltrans and Federal Highway Administration (FHWA) regulations and standards. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would be widened. Indian Canyon Drive is currently a 2 lane road, expect for that portion within roughly 122 meters (400 ft) of Garnet Avenue, where it widens to 4 lanes roadway south of Garnet Avenue. Indian Canyon Drive would be widened from its current width of 18 meters (60 ft) to 26 meters (86 ft), which would expand the road from 2 traffic lanes to 6 traffic lanes between Garnet Avenue and 61 meters (200 ft) north of the existing Indian Canyon Drive Bridge. The road would widened to 5 travel lanes (3 northbound and 2 southbound) from roughly 61 meters (200 ft) north if bridge to roughly 46 meters (150 ft) south of the bridge. The bridge would be widened to accommodate the 3 new travel lanes. South of the bridge, the roadway would transition to 3 lanes for about 91 meters (300 ft). The southernmost portion of the improved roadway would be 2 lanes, with new north- and south-turn pockets on Palm Springs Station Road. To enable Department staff to adequately review and comment on the proposed project, we recommend the following information be included in any environmental document prepared for the proposed project:

The proposed project is also located in habitat for the State-endangered Coachella Valley Fringe-toed Lizard (*Uma inornata*). Section 6.6.1 of the Coachella Valley Multi-species Habitat Conservation Plan states that as a Local Permittee, the City of Palm Springs shall encourage the opportunity for the conservation of this species. The Department recommends that the Lead Agency consult with the wildlife agencies to develop a salvage and relocation plan for this sensitive species.

Conserving California's Wildlife Since 1870

The proposed project will have impacts to jurisdictional washes, specifically the Whitewater River, and several adjacent ephemeral washes. The Department opposes the elimination of watercourses and/or their channelization or conversion to subsurface drains. All wetlands and watercourses, whether intermittent or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations. The Department has direct authority under Fish and Game code §1600 et seq. in regard to any proposed activity which would divert, obstruct, or affect the natural flow or change the bed, channel, or bank of any river, stream, or lake. Any project-related activities occurring within this wash or any other jurisdictional washes on the site requires a 1600 Lake and Streambed Alteration Agreement issued by the Department.

Thank you for the opportunity to comment on this document. If you have any questions please contact Mr. Jim Sheridan, Environmental Scientist, at the above phone number.

Sincerely,

Craig J Weightman
Senior Environmental Scientist
Inland Deserts Region

Response to Comment Set B

Thank you for your comments, they will be documented in the final environmental documents.

Comment 1 - Fringe Toed Lizard

As part of the Section 7 consultation for this project, the City of Palm Springs has consulted and will continue to consult with the U.S. Fish and Wildlife Service and the California Department of Fish and Game. This consultation includes the requirements of the Coachella Valley Mulitpe Species Habitat Conservation Plan and the details of this consultation including the Programmatic Biological Opinion (PBO) are included in this environmental document. Summary of consultation has also been provided below.

For purposes of endangered species impacts, the Indian Canyon Drive and Bridge Widening project was considered along with a series of interchange improvements along I-10 in the Coachella Valley. (Other interchange projects included Gene Autry Trail/Palm Drive, Date Palm Drive, Ramon/Bob Hope, and Jefferson.). The impact analysis and mitigation plan for these projects is specified in the Caltrans' Conservation Plan (2003), the PBO (USFWS, September 2004), and appended PBOs [USFWS November 7, 2005, and USFWS June 22, 2005 (Revised July 11, 2006)]. This Programmatic Biological Opinion considered the individual and cumulative effects the interchanges and associated arterial on endangered species and developed appropriate compensation and mitigation through the Conservation Plan.

On September 23, 2004, USFWS issued a Programmatic Biological Opinion (PBO) for the series of Interchanges. The PBO states, "This consultation is programmatic because it is intended to cover interrelated projects by establishing conservation measures, including conservation banking protocol, based on avoidance and minimization measures developed to reduce both direct and indirect effects to threatened, endangered, and sensitive species in the action area for each project." Because the PBO is programmatic, a project-specific (or tiered) BO will be required for the Indian Canyon Drive Widening. The tiered BO will incorporate the conditions of the PBO.

On November 07, 2005, the USFWS issued an appended Biological Opinion. The appended PBO for Indian Avenue is written to include all of the direct and indirect mitigation for the Indian Avenue Interchange Project and indirect mitigation for the associated arterial improvements, which includes Indian Canyon Drive Widening Project.

To facilitate the completion of the Interchange and Arterial Projects, CVAG has already acquired most of the lands envisioned in the mitigation agreement for the Mitigation Bank.

CVAG has purchased 551.99 hectares (1,364 acres) of mitigation lands. The 551.99 hectares (1,364 acres) purchased to date include 101.51 hectares (250.84 acres) of land associated with offsetting direct and indirect effects to the Indian Avenue/I-10 Interchange project and associated arterials, which includes the indirect effects area

of the proposed Indian Canyon Drive Widening Project. In addition, CVAG will purchase 37.41 hectares (92.44 acres) within the Draft CVMSHCP Whitewater Floodplain Conservation area prior to the start of construction for the proposed project.

Based on the PBO (September 2004) and Appended PBOs [November, 2005 and June 22, 2006 (revised July 2006)], implementation of the I-10 Conservation Plan will address project impacts to the Coachella Valley fringe-toed lizard and the Coachella Valley milkvetch.

The proposed project may have adverse effects to the state listed as endangered Coachella Valley fringe-toed lizard. CDFG has been involved in the development of the Conservation Plan with Caltrans and the USFWS and has recognized the acquisition of a portion of the Cathton property toward the mitigation of the project (see Appendix G). The CDFG authorizes take of endangered, threatened, or candidate species through the provisions of Section 2081 and 2080.1 of the Fish and Game Code.

Comment 2 - Water Resources

As noted in the comment, any project-related activities occurring within the wash or any other jurisdictional resources on-site would require a 1600 Lake and Streambed Alteration Agreement issued by the department. As noted in Table 1-4 Permits and Agreements, a 1602 Streambed Alteration Agreement will be required and application for this agreement will be sent to the California Department of Fish and Game after the Notice of Determination has been recorded and the Fish and Game filing fee has been paid.

Comment Set C

Established in 1918 as a public agency

Coachella Valley Water District

RECEIVED

AUG 11 2009

Engineering Division

August 7, 2009

File: 1150.15

Marcus Fuller
City of Palm Springs Public Works Department
3200 East Tahquitz Canyon Way
Palm Springs, CA 92262

Dear Mr. Fuller:

Thank you for affording the Coachella Valley Water District (CVWD) the opportunity to review the Notice of Intent to Adopt a Mitigated Negative Declaration for the Indian Canyon Drive and Bridge Widening Project. CVWD provides domestic water, wastewater, recycled water, irrigation/drainage, regional stormwater protection and groundwater management services to a population of 265,000 throughout the Coachella Valley in Southern California.

At this time, CVWD submits the following comments regarding the proposed project:

1. This project requires right-of-way on CVWD lands that are part of CVWD's mitigation included in the Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan. CVWD requests consultation with City of Palm Springs staff to determine any effects this proposed project will have on CVWD's mitigation commitment.

2. A portion of the proposed project (south of the railroad) lies within the right-of-way of the Whitewater River Storm Water Channel. CVWD-approved plans are required prior to the developer/applicant obtaining a construction and permanent encroachment permit from CVWD for activity within this right-of-way.

If you have any questions, please contact Luke Stowe, Senior Environmental Specialist, at extension 2545.

Yours very truly,

Mark L. Johnson
Director of Engineering

LS:md\eng\env\[illegible]

P.O. Box 1058 Coachella, CA 92236
Phone (760) 398-2651 Fax (760) 398-3711
www.cvwd.org

Response to Comment Set C

Thank you for your comments, they are appreciated and will be documented in the final environmental documents.

Comment 1 - CVMSHCP Mitigation

The proposed project will have a temporary impact to some right-of-way on Coachella Valley Water District lands; however, these impacts will not be substantial or permanent, and they should not negatively impact the Coachella Valley Water District's mitigation commitments to the Coachella Valley Multiple Species Habitat Conservation Plan. This is corroborated in the Programmatic Biological Opinion which states that this project is consistent with the requirements of the Coachella Valley Multiple Species Habitat Conservation Plan. The Biological Opinion is included with this document in Appendix D.

Comment 2 - Encroachment

The project will encroach on the Whitewater River Storm Drainage Chennel. Prior to construction, the City of Palm Springs will obtain Coachella Valley Water District-approved plans and a permanent encroachment perit from the Coachella Valley Water District for activity within the channel.

Comment Set D

SunLine TRANSIT AGENCY 30 years of service
Serving the Desert Since 1977
A Public Agency

MEMBERS: Desert Hot Springs Palm Springs Cathedral City Rancho Mirage Palm Desert Indian Wells La Quinta Indio Coachella Riverside County

July 29, 2009

RECEIVED
JUL 3 0 2009
Engineering Division

Mr. Marcus Fuller, P.E., P.L.S.,
Assistant Director of Public Works
Department of Public Works and Engineering
City of Palm Springs
P. O. Box 2743
Palm Springs, CA 92262

RE: Indian Canyon Drive Widening, Riverside County, STPLN 5282(017); Public Circulation of Initial Study

Dear Mr. Fuller:

This letter responds to your request for comments regarding the proposed project located along North Indian Canyon Drive, between Tramview Road and Palm Springs Station Road, within the City of Palm Springs. The SunLine Transit Agency (SunLine) staff has reviewed the project and offers the following comments.

Based on further review, SunLine is not requesting inclusion of transit amenities, i.e., bus turnout and bus shelter as part of the proposed development. Currently, SunLine does not offer transit service to the proposed project site; however, the nearest service route is located south of the project along North Indian Canyon Drive at Rosa Parks Road, served by Line 24.

Should you have questions or concerns regarding this letter, please contact me at 760-343-3456, ext. 162.

Sincerely,

Alfonso Hernandez
Assistant Planner

cc: C. Mikel Oglesby, General Manager
Eunice Lovi, Director of Planning
David Barakian, Director of Public Works/ City Engineer
City of Palm Springs

32-505 Harry Oliver Trail, Thousand Palms, California 92276 Phone 760-343-3456 Fax 760-343-3845 www.sunline.org

Response to Comment Set D

Thank you for your comments, they will be documented in the final environmental documents. Based on the provided comments, no transit amenities or services are planned for inclusion with the proposed Project.

Comment Set E

WARREN D. WILLIAMS
General Manager-Chief Engineer

1995 MARKET STREET
RIVERSIDE, CA 92501
951.955.1200
FAX 951.788.9965
www.rcflood.org

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

August 4, 2009

RECEIVED

AUG 0 6 2009

Mr. Marcus Fuller
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Dear Mr. Fuller:

Re: Initial Study/Environmental Assessment
Indian Canyon Drive Widening
STPLN 5282(023)

This letter is written in response to the Initial Study (IS) and proposed Mitigated Negative Declaration (MND) for the Indian Canyon Drive Widening project. The proposed project is to widen the existing Indian Canyon Drive to two lanes of traffic in each direction between Tramview Road to the railroad bridge south of the 10 Freeway. The District owns and maintains two levees within the project area, Chino Creek Levee west of Indian Canyon Drive and the Whitewater River Levee east of Indian Canyon Drive.

The Riverside County Flood Control and Water Conservation District has the following comment/concern that should be addressed in the final IS/MND:

> Existing District facilities are located within the proposed project area and may be impacted. Any work that involves District right-of-way, easements or facilities will require an encroachment permit from the District. The construction of facilities within road right-of-way that may impact District storm drains should also be coordinated with us. To obtain further information on encroachment permits or existing facilities, contact Ed Lotz of the District's Encroachment Permit Section at 951.955.1266.

Thank you for the opportunity to review the Initial Study. Please forward any subsequent environmental documents regarding the project to my attention at this office. Any further questions concerning this letter may be referred to me at 951.955.8581.

Very truly yours,

KRIS FLANIGAN
Senior Civil Engineer

c: TLMA
Attn: Kathleen Browne
ec: Ed Lotz

KF:mcv
P8\126253

Response to Comment Set E

Thank you for your response, the City of Palm Springs has noted that the Riverside County Flood Control and Water Conservation District has reviewed this document and has no comments at this time.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

August 13, 2009

Marcus Fuller
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Subject: Indian Canyon Drive and Bridge Widening
SCH#: 2009071044

Dear Marcus Fuller:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on August 11, 2009, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

For Scott Morgan
Acting Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2009071044
Project Title Indian Canyon Drive and Bridge Widening
Lead Agency Palm Springs, City of

Type MND Mitigated Negative Declaration

Description The City of Palm Springs proposes to widen Indian Canyon Drive for distance of ~1,219 meters (4,000 ft) south of its intersection with Garnet Avenue (south of I-10) in accordance with Caltrans and FHWA regulations and standards. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would be widened.
Indian Canyon Drive is currently a 2 lane road, except for that portion within ~122 meters (400 ft) of Garnet Avenue, where it widens to 4 lanes roadway south of Garnet Avenue. Indian Canyon Drive would be widened from its current width of 18 meters (60 ft) to 26 meters (86 ft), which would expand the road from 2 traffic lanes to 6 traffic lanes between Garnet Avenue and 61 meters (200 ft) north of the existing Indian Canyon Drive Bridge. The road would widened to 5 travel lanes (3 northbound and 2 southbound) from ~61 meters (200 ft) north if bridge to ~46 meters (150 ft) south of the bridge. The bridge would widened to accommodate the 3 new travel lanes. South of the bridge, the roadway would transition to 3 lanes for about 91 meters (300 ft). The southermost portion of the improved roadway would be 2 lanes, with new north- and south-turn pockets of Palm Springs Station Road.

Lead Agency Contact

Name Marcus Fuller
Agency City of Palm Springs
Phone 760-323-8253 **Fax**
email
Address 3200 E. Tahquitz Canyon Way
City Palm Springs **State** CA **Zip** 92262

Project Location

County Riverside
City Palm Springs
Region
Lat / Long 33° 54' 7.4" N / 116° 32' 43.1" W
Cross Streets Garnet Avenue and Indian Canyon Drive
Parcel No.
Township 3S **Range** 4E **Section** 22,33 **Base**

Proximity to:

Highways I-10
Airports
Railways UPRR
Waterways Whitewater River
Schools
Land Use Public right-of-way

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Landuse; Noise; Population/Housing Balance; Toxic/Hazardous; Traffic/Circulation; Water Quality; Wetland/Riparian

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 6; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 8; Caltrans, Division of Transportation Planning; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 7; Native American Heritage Commission; CA Department of Public Health

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 07/13/2009 *Start of Review* 07/13/2009 *End of Review* 08/11/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

Chapter 5 List of Preparers

The following people were the principal contributors in the preparation of this environmental document.

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Aaron Burton, Environmental Local Assistance Chief
Chris Benz-Blumberg, NEPA Coordinator
Scott Quinnell, Biological Studies
Alicia Colburn, Environmental Planning
Aaron Burton, Environmental Local Assistance
Nathaniel Pickett, Biological Studies/Permits
David Bricker, Environmental Support/Cultural Studies

CITY OF PALM SPRINGS
Marcus Fuller, P.E., P.L.S., Assistant Director of Public Works/Assistant City Engineer

CONSULTANTS
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Danielle Tannourji, Environmental Analyst
Jackson Underwood, Cultural resources.
Christy Dolan, Historian
James Kurtz, Acoustic and Noise Engineer
Kara King, Environmental Analyst
Richard Eisenbart (subconsultant to EDAW)

Chapter 6 Distribution List

Approx Number:
30 IS
20 IS-CD
3 Hard Copy All Technical Studies
6 CD All Technical Studies

Distribution by City

Coachella Valley Water District: IS-CD
P.O. Box 1058
Coachella, CA 92236

Desert Water Agency: IS-CD
1200 South Gene Autry Trail
Palm Springs, CA 92264

The Gas Company: IS-CD
211 North Sunrise Way
Palm Springs, CA 92262

South Coast Air Quality Management Dist: IS-CD
21865 East Copley Drive
Diamond Bar, CA 91765-4182

Southern California Edison: IS-CD
Attn: Lin Juniper, Regional Manager
36100 Cathedral Canyon Drive
Cathedral City, CA 92234

Southern California Edison: IS-CD
Environmental Affairs P.O. Box 800
Rosemead, CA 91770

Sunline Transit Agency: IS-CD
32505 Harry Oliver Trail
1000 Palms, CA 92278

Time Warner Cable: IS-CD
Administrative Office
41725 Cook Street
Palm Desert, CA 92260

Verizon: IS-CD
Attn: Christopher R. Brown
295 North Sunrise Way
Palm Springs, CA 92262

Riverside County Flood Control and Water Conservation District/ Regulatory: IS-CD
1995 Market Street
Riverside, CA 92501

Riverside County Planning Dept: IS-CD
ATTN: Mr. Paul Clark
82675 Hwy 111, Room 209
Indio, CA 92201

Riverside County Planning Dept IS-CD
ATTN: Mr. Ron Goldman
4080 Lemon Street, 9th Floor
Riverside, CA 92501

Riverside County Transportation Dept: IS-CD
82675 Hwy 111, 2nd Floor, Rm. 209
Indio, CA 92201

County of Riverside, County Clerk: IS + IS-CD
Ms. Deborah Bjornberg, Dept. Clerk
PO Box 751
Riverside, CA 92502-0751

Coachella Valley Association of Governments: IS + IS/Tech-CD
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Palm Desert, CA 92260

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Cathedral City, CA 92234

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Desert Hot Springs, CA 92240

Southern California Association of Governments: IS + IS-CD
818 W. 7th Street, 12th Floor
Los Angeles, CA 90017-3435

Ague Caliente Cahuilla Indians: 3 IS + IS/Tech-CD
Mr. Tom Davis Tribal Planning Director
650 E. Tahquitz Canyon Way
Palm Springs, CA 92262
The Sierra Club: IS/Tech-CD
Attn: Ms. Joan Taylor
1800 South Sunrise Way
Palm Springs, CA 92264

Bureau of Indian Affairs: IS-CD
Mr. Kim Snyder, Director P.O. Box 2245
Palm Springs, CA 92263

Bureau of Indian Affairs: IS-CD
Regional Director
ATTN: Natural Resources 2800 Cottage Way
Sacramento, CA 95825

US Army Corps of Engineers: IS-CD
Los Angeles District P.O. Box 532711
Los Angeles, CA 90053-2325

US Fish & Wildlife Service: IS/Tech-CD
6010 Hidden Valley Road
Carlsbad, CA 92000-4219

State Clearinghouse: 15 IS and 1 CD of IS and all Technical Studies
1400 Tenth Street
Sacramento, CA 95814

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Chapter 7 References Cited

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EDAW 2002c	Initial Site Assessment for the Indian Canyon Drive Street and Bridge Widening Project.
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FHWA 2008b	Letter from Gene K. Fong, Division Administrator, FHWA, and Leslie T. Rogers, Regional Administrator, FTA, to Will Kempton, Caltrans, Re: FY 2006/07 to 2011/12 Federal Transportation Improvement Program; Amendment #15. May 6.
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Weaver 1992 — Donald Weaver. Initial Blowsand Study for the Coachella Valley Portion of the SSAB. October.

Appendix A CEQA Checklist

The following checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. The California Environmental Quality Act (CEQA) impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. Please refer to the following for detailed discussions regarding impacts:

CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulations, Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resource Code, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)

In many cases, background studies performed in connection with the project indicate no impacts. A "no impact" under either CEQA reflects this determination. Any needed discussion is included in the section following the checklist.

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AESTHETICS - Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	X

The City of Palm Springs General Plan indicates that Indian Canyon Drive is a "City-designated Scenic Corridor." The proposed project would result in widening Indian Canyon Drive and the Indian Canyon Drive and Bridge; therefore providing a relatively narrow, linear, horizontal element onto an existing roadway. This would not add any new features within the area and the overall visual character would remain the same. No trees, rock outcropping, or historic buildings would be affected by the proposed project. The proposed project would not provide additional lighting. Accordingly, the proposed project would not have a substantial adverse effect on scenic resources. No mitigation measures are proposed.

AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	X

There are currently no agricultural uses in the study area, nor has there been any agricultural activity in the past. Land use in the study area consists of commercial, industrial, transportation, and open space. The City of Palm Springs General Plan and zoning maps identify the project area as highway commercial, industrial, open space, and watercourse zone areas. There are no agricultural uses or Williamson Act contracts located within the project area. This site is not suitable for agricultural uses because of existing development, lack of irrigation water, and unsuitable soil types. The project area consists of Carsitas sands, which are not classified as California prime and statewide soils for farmland. The proposed widening of Indian Canyon Drive would not cause a change in the existing environment; therefore, no agriculture uses are expected in the future for these reasons. In conclusion, no impacts to agricultural resources would occur. No mitigation measures are proposed.

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

California is divided into 15 air basins for the purpose of managing the state's air resources on a regional level. Palm Springs and the project site are located in the Salton Sea Air Basin. This region continues to be a nonattainment area for ozone (O_3) and particulate matter less than 10 microns in size (PM_{10}). The proposed project is included in the current Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP). The 2008 RTP air quality analysis and conformity finding for the 2008 RTP was approved on June 6, 2008 (FHWA 2008a). Therefore, the proposed project conforms to the regional air quality plans. Potential air quality impacts associated with the project fall into two major categories: short-term construction impacts and long-term operational impacts.

Construction

The potential exists for emissions to exceed the daily emission thresholds for nitrogen oxides (NO_X) and PM_{10}. The principal source of PM_{10} emissions would be fugitive dust from earth-moving activities, storage piles, and vehicle travel on unpaved and paved surfaces. PM_{10} is the principal air pollution concern in the Coachella Valley. To minimize impact, the proposed project should incorporate into the project specifications the implementation of all feasible dust control measures contained in South Coast Air Quality Management District (SCAQMD) Rule 403 and 403A, current SCAQMD Coachella Valley PM_{10} dust control plans, and applicable City of Palm Springs ordinances. A list of construction measures, which would reduce impacts to less than significant under CEQA, are provided below:

Respirable Particulate Matter
No significant PM_{10} air quality impacts would result from the proposed project; however, the following measures will be incorporated into the project to further minimize construction emissions.

A Fugitive Dust (PM_{10}) Mitigation Plan shall be prepared in compliance with Ordinance 1439 of the City of Palm Springs Municipal Code and shall be included as part of the construction contract specifications prior to the issuance of a grading permit. The Fugitive Dust Mitigation Plan shall specify steps that will be taken to comply with the city's Fugitive Dust and Erosion Control Ordinance, which restricts fugitive dust emissions. Measures outlined in the conservation plan shall include but not be limited to daily watering of

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

graded areas, washing of equipment tires before leaving the construction site, and use of SCAQMD-approved chemical stabilizers or soil binders.

The proposed project shall incorporate into the project specifications the applicable provisions of the Final Coachella Valley PM_{10} SIP and SCAQMD Rule 403 and 403.1, as shown in the Air Quality Technical Report for the Indian Canyon Drive Street and Bridge Widening Project (EDAW 2002a).

The contractor shall discontinue construction activities during first- and second-stage smog alerts.

When feasible, the contractor shall utilize existing power sources (i.e., temporary power poles) to minimize the use of diesel generators.

Nitrogen Oxides
On average, daily emissions would not exceed the NO_X threshold; however, the project would potentially exceed the threshold for NO_X emissions during grading activities. The following measures would reduce NO_X emissions.

Grading activities for the bridge construction and the road widening shall occur sequentially, not simultaneously.

The construction contractor would be required, when feasible, to replace at least one piece of diesel-operated equipment with a gas-operated piece equipment.

Operation

The proposed project would not generate traffic, increase the number of vehicles operating in the cold state mode, or worsen congestion. Therefore, pollutant emissions would likely be the same or less than without the proposed project, and the SCAQMD thresholds would not be exceeded.

Other air quality issues, including impacts to sensitive receptors and creation of objectionable odors, would not occur. The proposed project is located within an industrial and highway commercial area; therefore, impacts to a substantial number of people would not occur. There are no residential or other sensitive land uses within the immediate project vicinity; therefore, exposure to sensitive receptors within the project site would not occur. Additionally, the project is not anticipated to cause any objectionable odors. In conclusion, impacts to air quality would not be adverse.

BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling,	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
hydrological interruption, or other means?				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The project would directly impact 2.87 hectares (7.1 acres) of desert land, the bulk of which is habitat for the Coachella Valley fringe-toed lizard and the flat-tailed horned lizard. Using the methodology presented in the *Conservation Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects - August 2003* (Conservation Plan), an additional 10.66 hectares (26.34 acres) of desert habitat would be indirectly impacted. Included in this area is a population of Coachella Valley milk-vetch consisting of 18 individuals found approximately 30.5 meters (100 feet) west of the existing Indian Canyon Drive and 3.05 meters (10 feet) south of Palm Springs Station Road. Using the mitigation procedures outlined in the Conservation Plan, impacts to the habitat of these listed species would be offset via the purchase and conservation of an equivalent amount of habitat in a Conservation Bank under the auspices of the Draft Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP). An intent of the Conservation Plan is to allow a finding that impacts to threatened and endangered species have been reduced below a level of significance pursuant to both CEQA and NEPA. Implementation of the mitigation outlined in the Conservation Plan would also allow project coverage under the Draft CVMSHCP pursuant to a permit issued under Section 10a of the Endangered Species Act.

The project as proposed would not impact any riparian habitat or a defined natural community. No wetlands would be impacted by project implementation. The project would not result in any new impediment to wildlife movement. No conflicts with local policies or ordinances designed to protect biological resources would result from project implementation. The project would not conflict with the provisions of the Draft Conservation Plan.

COMMUNITY RESOURCES - Would the project:

a) Cause disruption of orderly planned development?	☐	☐	☐	☒
b) Be inconsistent with a Coastal Zone Management Plan?	☐	☐	☐	☒
c) Affect life-styles, or neighborhood character or stability?	☐	☐	☐	☒
d) Physically divide an established community?	☐	☐	☐	☒
e) Affect employment, industry, or commerce, or require the displacement of businesses or farms?	☐	☐	☐	☒
f) Affect property values or the local tax base?	☐	☐	☐	☒
g) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines?	☐	☐	☐	☒

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
h) Result in alterations to waterborne, rail, or air traffic?	☐	☐	☐	☒
i) Support large commercial or residential development?	☐	☐	☐	☒
j) Affect wild or scenic rivers or natural landmarks?	☐	☐	☐	☒
k) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours and temporary access, etc.)?	☐	☐	☐	☒

The proposed project is located within Palm Springs in north-central Riverside County. The proposed project is not located within the coastal zone; therefore, the Coastal Zone Management Plan would not apply to the project. The proposed project site is in an area of minimal development except along major intersections, which contain highway commercial and industrial uses. The proposed project would widen an existing roadway from two to six lanes to accommodate future traffic volumes and ensure safe traveling conditions. The improvement of the existing road facility is consistent with the City of Palm Springs General Plan and would remain within the City's current right-of-way. Implementation of the proposed project would not have an impact on land uses in the study area or in adjacent areas. Therefore, no impacts to the neighborhood character, community facilities, commercial development, or specific interest groups would occur. The existing railroad currently runs under Indian Canyon Drive Bridge. The rail line would continue to run during the construction of the proposed project. There are no scenic rivers or natural landmarks with the project area that would be affected by the proposed project. No impacts to community resources would occur. No mitigation measures are proposed.

CULTURAL RESOURCES - Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

An archaeological survey was conducted within the Area of Potential Effects (APE). The archeological survey of the APE was negative. One bridge (Indian Canyon Drive Bridge), one building (a welding shop at 6545 North Indian Canyon Drive), and a railroad (the Union Pacific Railroad) within the APE were built prior to 1957. The bridge and welding shop were formerly evaluated in a Historic Resources Evaluation Report as not eligible for the National Register of Historic Places and not historical for the purposes of CEQA. The Union Pacific Railroad has been previously recorded and given a site number (CA-IMP-3424H). However, since the proposed project would not affect this resource, the portion of the railroad within the APE was not assessed.

A Historic Properties Survey Report was prepared for the proposed project. No historic properties eligible for the National Register of Historic Places were identified within the APE. Therefore, the project is not expected to cause impacts to cultural resources, and no mitigation measures are proposed.

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	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
GEOLOGY AND SOILS - Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

There are two faults located within the project vicinity; the Garnet Hill and Banning faults. Recent alluvial deposits underlie the Garnet Hill fault; therefore, its location is estimated to be located approximately 0.4 kilometer (0.25 mile) south of the proposed project. The Banning Fault is a branch of the San Andreas Fault and is located approximately 2.4 kilometers (1.5 miles) north of the project site. Other faults in the project vicinity include the Hot Springs Fault and the Santa Rosa Fault, located approximately 29 and 43 kilometers (18 and 27 miles) south of the project area. The Hot Springs and Santa Rosa faults are both branches of the San Jacinto Fault Zone. Due to the vicinity of the Garnet Hill and Banning faults, there is a potential for high levels of seismic ground shaking that could occur at the project site. Given that no new structures are planned for the project site, and that building code standards would be implemented to widen the existing bridge, impacts to people or structures as a result of strong ground movement and liquefaction would not be adverse.

The soil at the project site consists of fine to cobbly sand. Expansive soils consist of clays; therefore, the hazards from expansive soils would not occur. The project site is relatively flat and there are no substantial slopes within its vicinity; therefore, the potential for hazards from landslides is considered low. Erosion and siltation impacts are anticipated to be minimal with the implementation of Best Management Practices (BMPs) during construction. Typical BMPs include silt fences and a stabilized pad of aggregate underlined with a filter cloth located at points where traffic would be entering and leaving a construction site. The project site would be paved for operational purposes; therefore, no long-term impacts would occur. The proposed project would not entail the use of septic tanks or waste water disposal systems. No mitigation measures are proposed.

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

The widening of Indian Canyon Drive would not cause long-term impacts concerning hazards or hazardous materials. During the construction period, standard BMPs will be applied to ensure that all hazardous materials are stored properly and that no hazards occur during this phase of the project. The proposed project would not involve the routine transport, use, or disposal of hazardous materials. The proposed project is located more than 3.2 kilometers (2 miles) from the nearest airport. There are no existing educational facilities located within 0.4 kilometer (0.25 mile) of the project site. The City of Palm Springs General Plan designates future educational facilities to be located within residential, parks, and recreational use areas. Land uses in the project area consist of highway commercial and industrial. Therefore, no educational facilities are proposed to be located within the project area. In addition there are no wildlands within or adjacent to the project area.

An Initial Site Assessment (ISA) was conducted in July 2002 that identifies recorded hazardous material within the project area. The ISA indicated that no incidences of spillage or illegal dumping have been recorded within the project boundary. The governmental records search conducted for the proposed project identified two sites within 1.6 kilometers (1 mile) of the project site. The first site is located on Interstate 10 (I-10). The second site was registered as an underground storage tank. Both of the sites identified are

	CEQA		
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

located approximately 0.6 kilometer (0.4 mile) north of the northern boundary of the project site and are not anticipated to have an impact on the proposed project. No National Priorities List sites, which have the greatest potential for widespread regional contamination, were identified within 0.4 kilometer (0.25 mile) of the project area. Therefore, no governmental recorded hazardous materials have been recorded within the project boundary.

Temporary construction phase impacts could occur to emergency response plans if road closures were to occur due to the proposed project. To ensure that impacts would not occur, emergency response services would be provided with information concerning the closures and the applicable contract information to reach the on-site construction manager. This will allow prior notification to ensure that access through the construction area is possible upon arrival of an emergency vehicle.

HYDROLOGY AND WATER QUALITY - Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	X
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	X
f) Otherwise substantially degrade water quality?	☐	☐	☐	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	X	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X

A National Pollution Discharge Elimination System permit is not required for this project because the construction site is less than 0.4 hectare (1 acre) in size and would not cause a significant increase in flooding. Nor would the amount of runoff cause a significant change in the course or direction of water movements, or rate of surface runoff. In addition, it is anticipated that the proposed project would not deplete groundwater levels due to the minor decrease in pervious ground surface or decrease groundwater quality. Construction runoff may alter short-term surface water quality from increased sedimentation, fuel spills, or other construction related accidents. Erosion or sedimentation impacts are anticipated to be minimal with the implementation of BMPs during construction. Typical BMPs include silt fences and a stabilized pad of aggregate underlined with a filter cloth located at points where traffic will be entering and leaving a construction site. No long-term impacts would occur.

The proposed project is not located within a 100-year flood zone. The Whitewater River is located at the south end of the project limits. The river, also called a *wash* since it predominantly remains dry, traverses the valley from northwest to southeast, carries runoff generated from the surrounding hills, and ultimately discharges into the Salton Sea, approximately 80 kilometers (50 miles) from the project site. The majority of the contributory watershed areas fall outside the project limits. During the occasional flooding situation, the wash does not pose a threat to life or property; however, during a high-water stage the wash could cause the closure of the Union Pacific Railroad, State Route 111, and I-10. The proposed project would expand an existing street and bridge to alleviate traffic congestion along the Indian Canyon Drive. This would increase the existing and future road capacity and maximize transportation safety. Since the proposed project would alleviate the queued traffic at the intersection of Indian Canyon Drive and Garnet Avenue, impacts of the project being located in a high-water stage flood area would be less than significant. No mitigation measures are proposed.

LAND USE AND PLANNING - Would the project:

a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X
b) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X

The proposed project is located within Palm Springs in north-central Riverside County. The proposed project would widen an existing roadway from two to six lanes to accommodate existing traffic congestion and ensure safe traveling conditions. The improvement of the existing road facility is consistent with the City of Palm Springs General Plan and would remain within the City's current right-of-way. The project would not conflict with the provisions of the Draft CVMSHCP. No mitigation measures are proposed.

MINERAL RESOURCES - Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

The widening of an existing road would not result in a loss of a known mineral resource. The City of Palm Springs General Plan discourages the mining for mineral resources in projected land uses such as natural ecosystems, viewshed conservation, and in areas where such use will contribute to an increase in the occurrence of natural hazards such as blowsand. The General Plan also states that evidence of mining, particularly in surface mining in desert areas such as the San Gorgonio and Whitewater river drainages, can remain for centuries if not properly reclaimed through extensive importing of fill, grading, and replanting. The proposed project would pave over a minimal amount of sand along an existing roadway within the San Gorgonio and Whitewater river areas. The widening of the existing road is planned for in the City's General Plan. Impacts to mineral resources would not occur. No mitigation measures are proposed.

NOISE - Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

The proposed project involves the widening of an existing street and bridge along Indian Canyon Drive south of I-10. There are no sensitive noise receivers adjacent to or near the proposed project area. Existing land uses within the vicinity of the project include fast-food restaurants, gas stations, some industrial uses in the northern portion of the project area, a train station in the southwestern portion of the project area, and wind turbines to the west. The construction phase of the proposed project would create short-term noise impacts in an industrial area. No permanent increases in noise levels are anticipated to occur due to the widening of the street and bridge. There are no airports located within 3.2 kilometers (2 miles) of the site, nor is the site located within a private airstrip; therefore, no impacts regarding airport-related noise would result. Accordingly, impacts to noise would not be adverse. No mitigation measures are proposed.

	CEQA			
	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

The proposed project is located in a relatively undeveloped part of northern Palm Springs. There are no residential units within the immediate vicinity of the project area. The closest residential community is located approximately 1.6 kilometers (1 mile) north of the I-10/Indian Avenue intersection; therefore, the proposed project would not displace any existing housing. The widening of Indian Canyon Drive and the bridge would alleviate existing traffic congestion along Indian Canon Drive and would not induce substantial growth in the area. No mitigation measures are proposed.

PUBLIC SERVICES -				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X
Other public facilities?	☐	☐	☐	X

The nearest fire and police stations are located approximately 1.4 kilometers (1.5 miles) north of the project site within unincorporated Riverside County. Palm Springs has two police stations and five fire stations. The closest police and fire stations within Palm Springs are located approximately 8.3 and 4.3 kilometers (5.2 and 2.7 miles), respectively, south of the project site. The proposed project would widen Indian Canyon Drive and the bridge. This would alleviate the existing traffic congestion along the roadway and allow better access for public emergency services and improve their response times. The demand for fire or police protection services in the area is not expected to increase due to the proposed project. Temporary construction phase impacts may occur if road closures take place due to the proposed project. To ensure that impacts would not occur, emergency response services would be provided with information concerning the closures and the applicable contract information to reach the on-site construction manager. This will allow prior notification to ensure that access through the construction area is possible upon arrival of an emergency vehicle. The proposed project would not generate any demand for additional school or park

	CEQA		
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

facilities. Therefore, impacts to public services would not be adverse. No mitigation measures are proposed.

RECREATION -

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	X

There are no existing parks or recreation areas in the vicinity of the proposed project. The widening of Indian Canyon Drive and the bridge would not increase the use of existing neighborhood and regional parks or other recreation facilities. The City's General Plan does not propose any recreational facilities within the project area. Therefore, impacts to recreational facilities would not occur. No mitigation measures are proposed.

TRANSPORTATION/TRAFFIC - Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	X	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X

The widening of Indian Canyon Drive and the bridge would alleviate current traffic congestion in the project area. The Indian Canyon Drive/Garnet Avenue intersection is currently congested during peak periods, resulting in queues. In addition, the operation is made more difficult due to high truck traffic. The purpose of the proposed project is to increase existing and future capacity and operations. The project proposes to widen Indian Canyon Drive from its current width to 26 meters (86 feet) to provide three traffic lanes in each

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

direction. The City of Palm Springs General Plan has designated Indian Canyon Drive as a 34-meter-wide (110-foot-wide) major thoroughfare.

The project would generate construction-related traffic on the local roadway networks during the construction phase of the project. This includes personal vehicles for construction workers and truck trips related to hauling fill and asphalt materials. A relatively small number of personal vehicles would be required given that the construction crew would be less than 20 people. The addition of these vehicles to the local streets would have a negligible effect on the existing traffic load and capacity of the street system. Additional temporary construction phase impacts may occur to emergency response plans if road closures were to occur due to the proposed project. To ensure that impacts would not occur, emergency response services would be provided with information concerning the closures and the applicable contract information to reach the on-site construction manager. Prior notification would ensure that access through the construction area is possible upon arrival of an emergency vehicle. No parking currently exists along Indian Canyon Drive. The proposed project would not produce the need for increased parking facilities within the project area. Construction staging areas are located to the west of the proposed project area both north and south of the Union Pacific Railroad.

The project would not conflict with any adopted policies, plans, or programs supporting alternative transportation. Access to the railroad station via Palm Springs Station Road would remain open during the construction phase. The configuration of Indian Canyon Drive would remain in a relatively straight line; no curves would be introduced to the configuration of the roadway. In addition, the project would have no effect on air traffic patterns. Impacts to traffic would not be adverse. No mitigation measures are proposed.

UTILITIES AND SERVICE SYSTEMS - Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

CEQA			
Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact

The proposed project involves the expansion of Indian Canyon Drive and the bridge. No structures involving the use of water are involved for the proposed project. Accordingly, the proposed project would not require or result in the construction of new water or wastewater treatment facilities or the expansion of existing water facilities. During the construction phase of the project some construction material waste is anticipated to occur. Minimal long-term solid waste would be generated by the proposed project since roadways and bridges are not considered large solid waste generators. Impacts to utilities and service systems would not be adverse. No mitigation measures are proposed.

MANDATORY FINDINGS OF SIGNIFICANCE -

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	X	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	X	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	X	☐

The analysis in this Initial Study concludes that the proposed project will not have a significant effect on the local environment with the incorporation of mitigation measures. No intrusion on cultural resources is anticipated to occur.

The proposed project would not result in substantial adverse effects on human beings, either directly or indirectly. Mitigation measures are provided to reduce the project's temporary effects on construction air quality below the level of significance. No additional mitigation measures would be required.

	Yes	No
SECTION 4(F) RESOURCES – Does the project:		
a) Result in the use of any publicly owned land from a park, recreation area, or wildlife and waterfowl refuge, as defined by section 4(f) (23 CFR 771.135)?	☐	X
b) Affect a significant archaeological or historic site, structure, object, or building, as defined by section 4(f) (23 CFR 771.135)?	☐	X
c) Involve "constructive use," as defined by section 4(f) (23 CFR 771.135)?	☐	X

The project will not affect or use any lands or properties covered by Section 4(f) (23 CFR 771.135). It will not involve "constructive use" as defined by Section 4(f) (23 CFR 771.135).

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Appendix B Mitigation Monitoring Program

Indian Canyon Drive Street and Bridge Widening
Mitigation Monitoring Program Checklist

Mitigation Measure No.	Avoidance, Minimization, and/or Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party Initials	Completed Date	Comments
			Pre-construction	During Construction	Post-construction			
	AIR QUALITY							
1	The following measures would mitigate air quality-related impacts: Grading activities for the bridge construction and the road widening shall occur sequentially, not simultaneously. Minimize land disturbance during construction. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes. Cover trucks when hauling dirt. Stabilize the surface of dirt piles if not removed immediately. Limit vehicular paths on unpaved surfaces and stabilize any temporary roads. Minimize unnecessary vehicular and machinery activities. Sweep paved streets at least once per day where there is evidence of dirt that has been carried onto the roadway. Revegetate disturbed land, including vehicular paths created during construction, to avoid future off-road vehicular activities. Remove unused material. Discontinue construction activities during first- and second-stage smog alerts. Incorporate into the project specifications the applicable provisions of the Final Coachella Valley PM_{10} SIP and South Coast Air Quality Management District Rule 403 and 403.1, as shown in	Place as notes on the project plans	X	X	X	City of Palms Springs, Construction Contractor		Develop air quality measures prior to construction and implement during construction. Monitor during construction.

Mitigation Measure No.	Avoidance, Minimization, and/or Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party Initials	Completed Date	Comments
			Pre-construction	During Construction	Post-construction			
	the air quality technical report. A Fugitive Dust (PM_{10}) Mitigation Plan shall be prepared in compliance with Ordinance 1439 of the City of Palm Springs Municipal Code and shall be included as part of the construction contract specifications prior to the issuance of a grading permit.							
2	The following measure would minimize exposure to diesel particulate emissions: When feasible, replace at least one piece of diesel-operated equipment with a gas-operated piece equipment. When feasible, utilize existing power sources (i.e., temporary power poles) to minimize the use of diesel generators. Locate construction equipment and truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density.	Place as notes on the project plans	X	X	X	National City, Construction Contractor		Inform construction contractor prior to grading and monitor during construction.
	HYDROLOGY, WATER QUALITY, AND STORM WATER RUNOFF							
3	The following measures shall be implemented to minimize storm water and hydrology-related impacts: A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared to address erosion control and sedimentation issues related to the grading aspect of the project. The SWPPP shall specify and describe the implementation process of all best management practices that will address equipment operation and materials management, prevention of erosion, and prevention of sedimentation. The City Engineer of the City of Palms Springs shall ensure that the SWPPP is properly implemented.	Completed plan	X	X		City Engineer, City of Palms Springs, Construction Contractor		Prepare plan prior to construction. Implement during construction.
	WILDLIFE							
4	The following measure shall be implemented to reduce wildlife impacts: Implementation of the required mitigation measures outlined in the *Conservation Plan Addressing the Direct, Indirect, and Cumulative*	Approval by the resource agencies	X	X		City of Palms Springs, Construction Contractor		Prepare plan prior to construction. Implement during construction.

Mitigation Measure No.	Avoidance, Minimization, and/or Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party Initials	Completed Date	Comments
			Pre-construction	During Construction	Post-construction			
	Effects of Interstate 10 Coachella Valley Interchange Projects (Caltrans 2003) regarding impacts to wildlife habitat. These measures include the purchase and conservation of comparable habitat in an established Conservation Bank under the auspices of the Draft Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP).							
	THREATENED AND ENDANGERED SPECIES							
5	The following measures shall be implemented to reduce threatened and endangered species impacts: Implementation of the required mitigation measures outlined in the Conservation Plan (Caltrans 2003) regarding threatened and endangered species. Required mitigation shall be met through the replacement of desert sand fields habitat, on a 2:1 basis in the case of direct impacts, and a 1:1 basis in the case of indirect impacts, in an established Conservation Bank under the auspices of the CVMSHCP. All areas outside of the project footprint will be delineated as Environmentally Sensitive Areas with protective fencing. An education program will be developed to advise construction staff of potential impacts to listed species. Biological monitoring will be provided to oversee compliance with protective measures for listed species. Seed of the Coachella Valley milk-vetch will be collected from plants that are within the Area of Effect prior to construction. All equipment will be inspected and cleaned prior to use in the project area to minimize exotic species introductions. To the extent feasible, no sand removal activities will take place from November 1 – March 30 to avoid winter dormancy periods for lizards or if ambient air temperatures exceed 102 degrees Fahrenheit (the temperature at which lizard activity tends to be	Approval by the resource agencies	X	X		City of Palms Springs, Construction Contractor		Prepare plan prior to construction. Implement during construction.

Mitigation Measure No.	Avoidance, Minimization, and/or Mitigation Measure	Method of Verification	Timing of Verification			Responsible Party Initials	Completed Date	Comments
			Pre-construction	During Construction	Post-construction			
	reduced.							
	CLIMATE CHANGE							
6	To the extent that equipment and technology is available and cost effective, the applicant shall encourage contractors to use alternate fuels, catalyst and filtration technologies, and retrofit existing engines in construction equipment. Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5% fewer emissions. Properly maintain equipment according to manufacturers' specifications. Use electric equipment when feasible. The project would incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs — or balls, in the stoplight vernacular — cost $60 to $70 apiece but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED balls themselves consume 10 percent of the electricity of traditional lights, which will also help reduce the projects CO2 emissions. Portland cement will be used where possible and if feasible, fly ash will be added to Portland cement mixes. The use of lighter color surfaces such as Portland cement helps to reduce the albedo effect and cool the surface. Adding fly ash reduces the GHG emissions associated with cement production and it also can make the pavement stronger.	Place as notes on the project plans	X	X		City of Palms Springs, Construction Contractor		Before and during construction – Note shall be written on all construction documents for implementation during construction.

Appendix C Caltrans Traffic Memoranda

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: ANNE MAYER
DISTRICT DIRECTOR

Date: February 2, 2005

File: 08-Riv-10-KP 52.6/54.1
(PM 32.7/33.6)
Modify IC @ Indian Ave/I-10 IC
In Riverside County
08-235-455700

From: PATTY ROMO
Deputy District Director
Design, MS 12-67

Subject: Design Period

In accordance with Chapter 100, Topic 103.2 "Design Period" of the Highway Design Manual, a design period of less than 20 years is recommended for the above referenced project based on the attached justification;

- Operations-Surveillance B Memorandum, dated January 24, 2005
- Dokken Engineering Memorandum, dated October 29, 2004

Concurred by: _____ 2/2/05
LUIS BETANCOURT Date
HQ Design Coordinator

Approved by: _____ 2
ANNE E.MAYER Date
District Director

Attachments

c: CGarcia, Project Management, MS 12-29; RRoberts, Design G, MS 9-71; File

Faustino Abella, Jr./ ym

State of California

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient

To: **CRESENCIO GARCIA**
Program/Project Management, MS 1229

Date: January 24, 2005

File: 08-RIV-10-KP 52.4/54.1
EA: 455700
Indian Avenue Interchange

From: **DEPARTMENT OF TRANSPORTATION**
HAISSAM YAHYA
Operations-Surveillance B, MS 715

Subject: Synchro Analysis

A traffic analysis has been completed utilizing the 2030 traffic volumes and Trafficware's Synchro Software. The Synchro outputs were compared to the Traffix outputs and it has been concluded that the intersections should operate reasonably as noted by the Consultants. A comparison matrix of the results are shown below.

Year 2030 Intersection Level of Service Comparison, Alternative 3

A.M. Peak Hour

	LSA Associates (Traffix)			Caltrans (Synchro)		
Intersection	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS
Indian Avenue/Garnet Avenue	30.6	0.78	C	42.9	1.00	D
Indian Avenue/20th Avenue	29.4	0.83	C	32.7	0.84	C
I-10 EB Hook Ramps/Garnet Ave	24.6	0.69	B	4.7	0.72	A
I-10 WB Hook Ramps/20th Ave	15.9	0.44	B	19.6	0.45	B

P.M. Peak Hour

	LSA Associates (Traffix)			Caltrans (Synchro)		
Intersection	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS
Indian Avenue/Garnet Avenue	29.5	0.82	C	47.7	1.00	D
Indian Avenue/20th Avenue	32.1	0.81	C	49.9	0.94	D
I-10 EB Hook Ramps/Garnet Ave	19.4	0.55	B	4.0	0.58	A
I-10 WB Hook Ramps/20th Ave	18.0	0.70	B	24.3	0.65	C

If there are any questions please call me at 383-4065.

cc: Syed Raza, Deputy District Director, Traffic Operations
Paul Engstrom, Acting Deputy District Director, Program/Project Management

DOKKEN
ENGINEERING
www.dokkenengineering.com

October 29, 2004

MEMORANDUM

Cresencio Garcia, PE
Project Manager
California Department of Transportation
District 8
464 W. 4th Street
San Bernardino, CA 92401

RE: Request to Approve Design Horizon Year 2025 Traffic Analysis
Interstate 10/Indian Avenue Interchange Project

Dear Mr. Garcia,

Project History

Dokken Engineering originally completed traffic studies based on a 2005 construction completion date and a 2025 design horizon year. However, the construction completion date has been delayed to 2008. Because of the delay in completing the project, FHWA has expressed concern that the 2025 Traffic Study creates a 17-year design horizon rather than a 20-year horizon.

The Highway Design Manual (HDM) Topic 103.2, states that: "Geometric design of new facilities should normally be based on estimated traffic 20 years after completion of construction. With justification, design periods other than 20 years may be approved by the District director with concurrence by the Headquarters Project Development Coordinator."

Justification

The 2025 Traffic Study (forecast volumes are at 98% build out) show that future Levels of Service (LOS) are acceptable for all the alternatives studied. Dokken Engineering has prepared a 2030 traffic analysis (forecast volumes are at 100% build out) for Alternative 3 (locally preferred alternative) to verify that the LOS would not appreciably change from 2025 to 2030.

Traffix 7.7 software is now considered the accepted standard for intersection LOS calculations. However, in 2002, Passer II-90 software was used for the 2025 Traffic Studies using a "signal coordination" method. Because of the emphasis on signal coordination, Passer II-90 creates longer delays for turning movements which increases overall intersection delay. Traffix 7.7 software, used for the 2030 Traffic Study, uses an "intersection isolation" method. Because of the differences in software, some of the intersection LOS appear to improve from 2025 to 2030. At other intersections, the LOS remains the same; in no case does the LOS get worse. Therefore, the analysis verifies that the operational characteristics of the interchange do not appreciably change from 2025 to 2030. A copy of the Traffic Analysis is included as Attachment A. The table below summarizes the results of the analysis.

DOKKEN
ENGINEERING
www.dokkenengineering.com

Intersection LOS Comparison between 2025 and 2030 (PM Peak Hr)

Indian Ave/Garnet Avenue	Garnet Ave/I-10 WB Hook Ramps (1/27/05)
2025 LOS = D	2025 LOS = C
2030 LOS = C	2030 LOS = B

Indian Ave/20th Avenue	20th Ave/I-10 EB Hook Ramps (1/27/05)
2025 LOS = C	2025 LOS = B
2030 LOS = C	2030 LOS = B

Conclusion and Request

We request that Caltrans, District 8, concur that the Traffic Studies previously completed for the I-10/Indian Avenue Interchange project are acceptable, and that interchange operational characteristics will not significantly change from 2025 to 2030.

If you have any questions, please do not hesitate to contact me at (858) 514-8377.

Sincerely,
Dokken Engineering

Chris Johnson, PE
Project Engineer

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: Sean Yeung
DLAE Local Assistance

Date: August 21, 2007

File: Riv-10-PM 33.101
Final Traffic Study Indian
Canyon Drive Widening
Project# 5282

From: RICHARD DENNIS
Office Chief
Office of Forecasting, MS 726

Subject: Indian Canyon Drive Widening- Local Assistance

Based on previous review, forecasting concurs with the methodology used in development of this project (2025, 98% build out).

Level of Service data should be confirmed by the appropriate operations surveillance unit.

If you have any questions regarding the information above, please contact me at extension 5921 or you may reach James Camarillo at extension 4149.

File Riv-10-PM 33.101

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: JAMES SHANKEL
ENVIRONMENTAL PLANNING

Date: June 5, 2007

File: City of Palm Springs
Indian Canyon Drive
Local Assistance Project

EA: 965100

From: R B BALANZA
PLANNING - Forecasting

Subject: Indian Canyon Drive – Street and Bridge Widening Project Traffic Study.

We reviewed the study and the City's prepared response to comments. The city indicated that, although the study is based on a forecast year of 2025, the analysis is adequate to address horizon year issues. The recommendation was based on Operations previous comparative analysis in January 2005 at I-10 at Indian Avenue. Operations also agreed with the recommendation for this project as well.

Based on the Operations concurrence, the traffic study is acceptable, as is the traffic discussion in the Draft Environmental Document.

If you have any questions or I can be of further assistance please contact me.

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Appendix D USFWS Approved September 2004 Programmatic Agreement Biological Opinion, Appended October 11, 2007

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92009

In Reply Refer To:
FWS-ERIV 3282.4

Mr. Gene K. Fong
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, California 95814

SEP 2 3 2004

Re: Programmatic Biological Opinion for Five Interchanges and Associated Arterial Improvement Projects along Interstate 10 and the Tiered Biological Opinion for the Palm Drive/Gene Autry Trail - Interstate 10 Interchange Improvement Project in Eastern Riverside County, California (1-6-04-F-3282.4; EA: 08-455800)

Dear Mr. Fong:

This document transmits the Fish and Wildlife Service's (Service) Programmatic Biological Opinion (Programmatic) for Five Interchanges and Associated Arterial Improvement Projects along Interstate 10 (I-10) and the Tiered Biological Opinion (Opinion) for the Palm Drive/Gene Autry Trail I-10 Interchange Improvement Project located in the Coachella Valley, eastern Riverside County, California, and the effects on the federally threatened Coachella Valley fringe-toed lizard (*Uma inornata*; fringe-toed lizard) and the federally endangered Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*; milk-vetch) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Your February 23, 2004, request for formal consultation was received at our office on February 26, 2004.

This Opinion is based on information provided in the January 2004, *Biological Assessment Palm Drive/Gene Autry Trail Interchange Improvements* (Caltrans: BA); the August 2003, *Conservation Bank Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects* (Caltrans 2003a); a site visit on July 2, 2002; and discussions during numerous meetings to develop the Plan and the programmatic conservation strategy.

TAKE PRIDE IN AMERICA

CONSULTATION HISTORY

During 2002, the Federal Highway Administration (FHWA), California Department of Transportation (Caltrans), California Department of Fish and Game (CDFG) and the Service met numerous times to develop an approach for avoiding, minimizing, and offsetting direct and indirect effects to listed species from improvements to interchanges and their associated arterial streets along I-10 in the Coachella Valley. In addition, Caltrans agreed to include 32.9 acres to the total acreage of the Conservation Bank to offset previous impacts to 30.0 acres for a Palm Drive widening project and 2.9 acres for a Ramon Road improvement project. Accompanying their December 22, 2003, letter, Caltrans issued the final version of the *Conservation Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects* (Plan). The Plan outlines the conservation strategy developed for the Programmatic and subsequent Tiered biological opinions, including a commitment by Caltrans and FHWA to purchase 1795.4 acres of land to augment and build on existing wildlife preserves to ensure the long-term viability of sand dune habitat in the Coachella Valley.

Caltrans requested a species list for the five interchange projects discussed in the Plan in a letter dated November 20, 2003. The Service provided this species list in our December 2, 2003, letter.

In a letter dated February 23, 2004, and received by the Service on February 26, 2004, the Federal Highway Administration (FHWA) requested formal consultation on the fringe-toed lizard and milk-vetch from the direct and indirect effects of the proposed project. In a letter dated March 30, 2004, the Service responded that all information required to initiate formal consultation had been received by the Service.

During Spring 2004, the Service coordinated with CVAG to discuss purchasing the 8,881 acre Cathton Investments, Inc. property. In our letter dated June 4, 2004, we recognized using a portion of the 8,881 acre Cathton Investments, Inc. property for offsetting impacts from four of the five projects addressed by this Opinion including Palm Drive/Gene Autry Trail, Date Palm Drive, Ramon Road/Bob Hope Drive, and Jefferson Avenue interchange improvement projects. Up to 1,100.0 acres could be used for off-setting impacts of the four interchange projects and up to 362.8 acres could be used for offsetting impacts from direct effects of the associated arterial streets.

DESCRIPTION OF THE PROPOSED ACTION

The primary purpose of the proposed action is to improve traffic flow at interchanges along I-10 through the Coachella Valley (Figure 1). This consultation is programmatic because it is intended to cover interrelated projects by establishing conservation measures, including conservation banking protocol, based on avoidance and minimization measures developed to reduce both direct and indirect effects to threatened, endangered, and sensitive species in the action area for each project. At the Programmatic level, this Opinion develops the protocol for covering improvements to five I-10 interchanges and their associated arterial streets up to the

next logical termini. At the project level, this Opinion addresses the I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project.

Programmatic

Caltrans, in cooperation with FHWA, proposes to improve five interchanges and their associated arterial streets along I-10 in eastern Riverside County, California. The five interchange projects include Indian Avenue, Palm Drive/Gene Autry Trail, Date Palm Drive, Ramon Road/Bob Hope Drive, and Jefferson Avenue (Figure 1). The arterial street improvements included at the Programmatic Level of this Opinion begin at the outer limits of each proposed interchange project and extend along each arterial street to the next logical termini (Table 1). For each interchange improvement project and each arterial street improvement project, a tiered biological opinion will be written to describe the project, discuss effects of the project, and provide incidental take.

The Programmatic and Tiered action areas include those areas directly and indirectly affected by the proposed project footprint, and the road effect zone along both sides of interchange improvements and adjacent arterial streets from the freeway interchange to the next logical termini (Table 1). The road effect zone for all projects covered by this Opinion is 360 feet on each side of the roadway. The existing effect distance within the road effect zone is 50% (180 feet) of the width of the road effect zone. The induced traffic increases due to interchange and arterial improvements will increase the effect distance by 50% (an additional 180 feet) resulting in reaching the threshold of the road effect zone. The development of offsetting conservation measures for the road effect zone considered species covered by the proposed Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) including the federally threatened Coachella Valley fringe-toed lizard; federally endangered Coachella Valley milk-vetch and triple-ribbed milk-vetch (*Astragalus tricarinatus*); the Federal candidate Palm Springs round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*); and the sensitive flat tailed horned lizard (*Phrynosoma mcallii*), Palm Springs pocket mouse (*Perognathus longimembris bangsi*), burrowing owl (*Speotyto cunicularia*), LeConte's thrasher (*Toxostoma lecontei*), Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum*), Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*), and little San Bernardino Mountains linanthus (*Gilia maculata*).

Specific activities for the Programmatic action include geotechnical and archaeological surveys. These two activities may occur prior to consultation on a specific interchange project to provide information necessary for project design.

Geotechnical surveys typically entail drilling a test hole to analyze the subsurface geology and temporarily placing fill material adjacent to the boring activity. Immediately following the geotechnical study at a test pit, the borehole will be covered with the excavated material. Cross-country travel may be required for these activities.

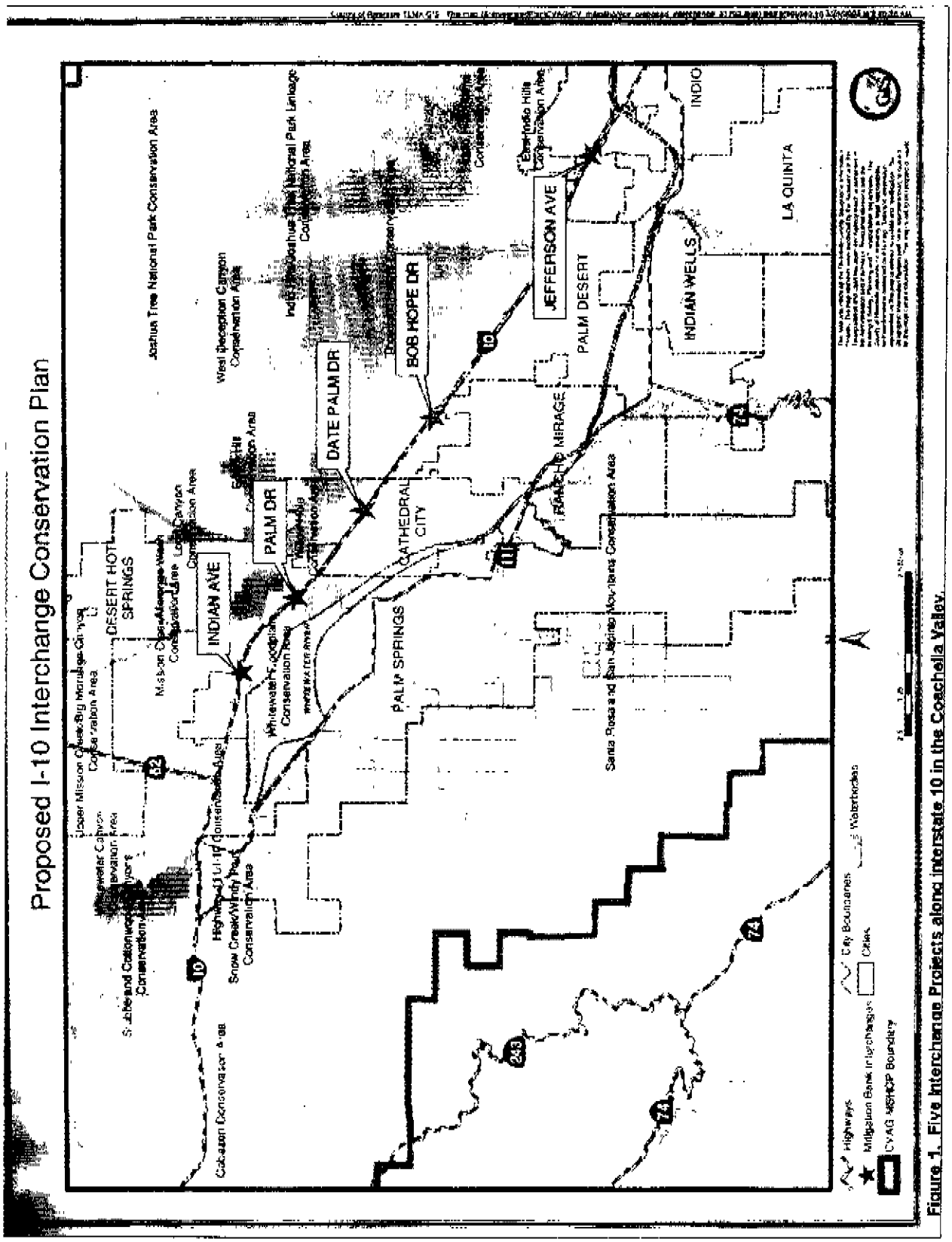

Figure 1. Five Interchange Projects along Interstate 10 in the Coachella Valley.

Archaeological surveys will occur for the Jefferson Interchange Project and will likely entail manual excavation of 30x30 cm shovel probes, 1x1 m and 1.2 m test units, and perhaps some 5x5 m shovel scrapes down to 10-20 cm. Archaeological surveys may also entail mechanically excavating 3-4 trenches (24 inches wide) as deep as possible before they cave in. These surveys will include site mapping, photographs and surface collections.

I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project

The project area (Figure 1) is located in the Coachella Valley, eastern Riverside County, California in the City of Palm Springs. The purpose of the proposed project is to relieve traffic congestion at the intersection of the I-10 on-and off-ramps with Palm Drive/Gene Autry Trail; accommodate planned future growth in and around the City of Palm Springs; improve access to developing residential, commercial, and industrial areas in eastern Riverside County; and improve the operational characteristics of the interchange.

Existing Average Daily Traffic (1999 ADT) volumes for this segment of I-10 in the vicinity of the Palm Drive/Gene Autry Trail interchange range between 26,152 and 32,942 vehicles in each direction. The existing peak hourly volumes range from 1,359 vehicles per hour (vph) to 2,175 vph. Projected ADT and peak hourly volumes on I-10 are expected to increase up to 78,120 and 5,430 respectively by the year 2025. Without traffic improvements, the severe congestion at the Palm Drive/Gene Autry Trail interchange will be in excess of roadway capacity, an event referred to as breakdown conditions.

The existing interchange is a diamond configuration constructed in 1968. Existing traffic controls consist of two four-way stop signs posted at the intersection of the on- and off-ramps and Palm Drive/Gene Autry Trail. Riverside County recently improved the two four-way stop signs to signalized intersections. Through the project area, I-10 is eight lanes wide, four in each direction, with no high-occupancy vehicle (HOV) lanes.

The proposed project will reconstruct the interchange at Palm Drive/Gene Autry Trail (Figure 2). The existing overcrossing will be removed and a new overcrossing (bridge) will be constructed to accommodate six lanes. A retaining wall will be required under the bridge. The six lanes will taper to connect with the existing roadway prior to reaching the existing Union Pacific Railroad overhead to the south.

The proposed project will include the following specific improvements:

- realignment of eastbound direct ramps in southeast (on-ramp) and southwest (off-ramp) quadrants,
- realignment of westbound direct ramps in northeast (off-ramp) and northwest (on-ramp) quadrants,
- addition of single-lane eastbound/westbound loop on-ramps in the northeast/southwest quadrants (with grading to accommodate a second future on-ramp lane for HOV access in the northeast/southwest quadrants),

Table 1. Interchange projects and associated arterial streets covered under the Programmatic biological opinion 1-6-03-F-3282.4. Included are approximate acreage impacted from both direct and indirect effects.

Interchange	Arterial	Logical Termini	Direct Effects (acres)	Indirect Effects (acres)
Indian Avenue			29.9	43.8
	Indian Avenue	I-10 to Dillon Road	11.27	35.48
	Indian Avenue	I-10 to San Rafael	29.56	111.76
Palm Drive/Gene Autry Trail			33.2	33.3
	Palm Drive	I-10 to 20th Avenue	7.84	62.23
	Gene Autry Trail	I-10 to Vista Chino	19.81	75.42
	Varner Road	Palm Drive to Mountain View Road	18.02	66.88
Date Palm Drive			27.4	24.2
	Date Palm Drive	I-10 to Varner Road	10.28	39.38
	Date Palm Drive	I-10 to Ramon Road	10.43	55.81
	Varner Road	Mountain View Road to Vista Chino	45.19	167.73
Ramon Road/Bob Hope Drive			71.9	97.2
	Bob Hope	Ramon Road to Dinah Shore Drive	14.35	14.6
	Ramon Road	Los Alamos to Bob Hope	9.92	14.13
	Ramon Road	I-10 to Varner	2.56	0.0
	Ramon Road	Varner to Monterey	1.29	7.89
	Varner Road	Vista Chino to ½ mile before Rio Del Sol	20.85	75.06
	Varner Road	I-10 to midpoint	2.25	3.72
Jefferson Avenue			39.3	14.7
	Jefferson Avenue	I-10 t 40th Avenue	2.2	4.21
Ramon Road *			2.9	
Palm Drive*			30.0	
Total Acreages			**440.42**	**947.5**

* Previous impacts from Caltrans projects along these arterial streets

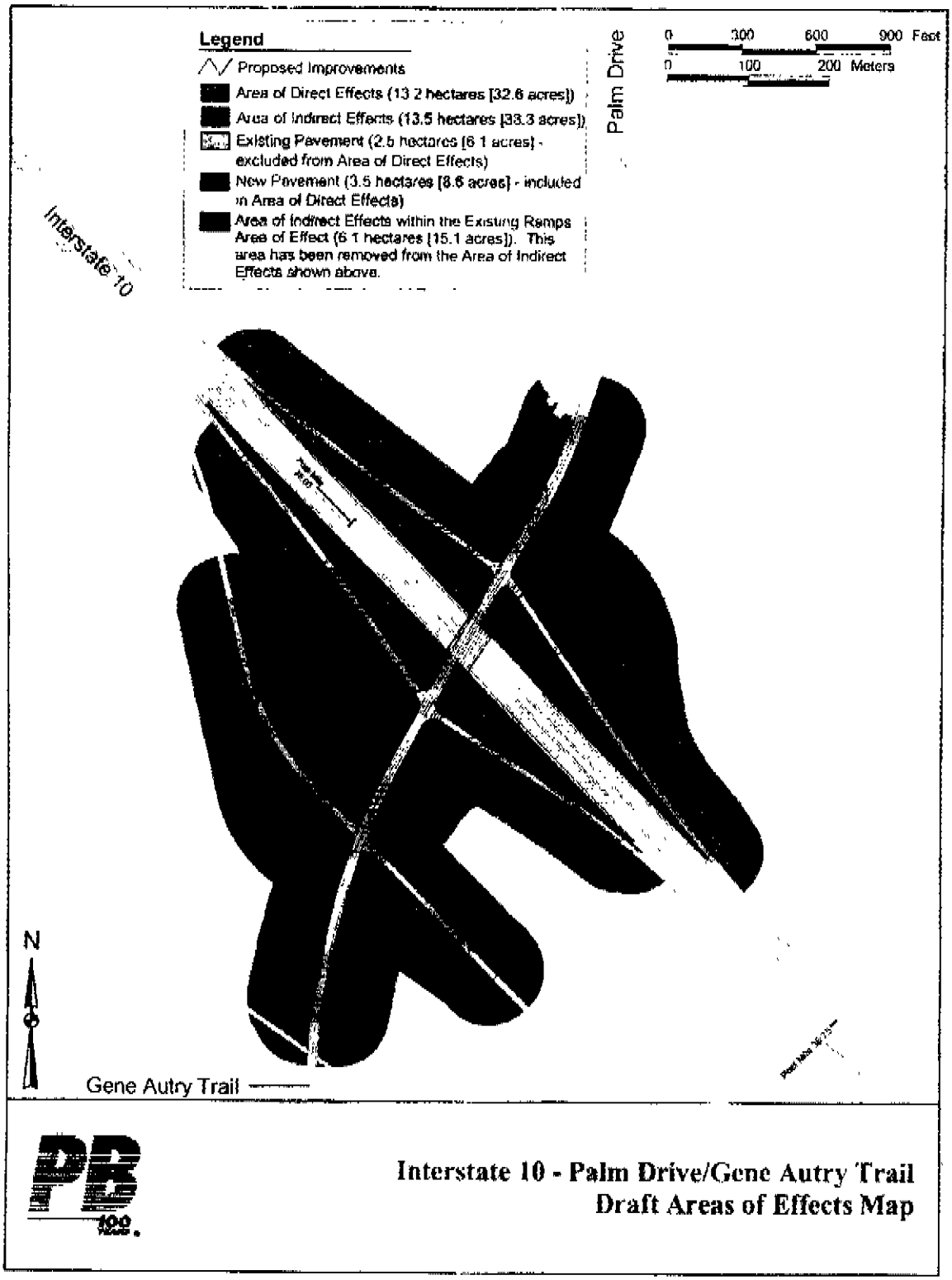

Figure 2. Tiered project within Programmatic.

- addition of pedestrian walkways and a Class II bikeway (striped, no barrier) on both sides of the bridge,
- signalized crosswalks on the eastbound and westbound on- and off-ramps, and
- realignment of the existing Micro Place/Salvia Road so that the intersection with Gene Autry Trail will be farther south.

Additional right-of-way (ROW) will need to be acquired for the improvements in all four quadrants of the interchange, totaling approximately 4.24 acres. The design of the overpass will be constructed with enough horizontal clearance to accommodate the planned widening of I-10 from eight to ten lanes.

The proposed project will directly impact 33.2 acres of desert habitat and indirectly impact 237.83 acres of desert habitat. The proposed project is scheduled for construction in fiscal year 2008 and is anticipated to take approximately 14 months.

Conservation Measures

Programmatic

The following measures will be implemented as part of all interchange and arterial street improvements covered under this Opinion:

1. All areas outside of the project footprint will be delineated as Environmentally Sensitive Areas (ESAs). All parties in conjunction with this operation will strictly avoid these areas. No construction activities, materials, or equipment will be permitted in the ESAs. These areas must be placed on the design plans and included in the construction contract.

   ESAs will be designated by erecting protective fencing delineating the project impact boundary and sensitive habitats. This barrier fencing will be constructed in such a way as to restrict the movement of reptiles into impacted areas. Fencing material can vary; however, it should consist of a cloth-like material that can withstand high winds, sun and heat. This fence should be buried 24-inches below the surface, to prevent terrestrial species from burrowing underneath, and extend above ground at least 24-inches.

2. An employee education program will be developed. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program within two weeks of working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area environs. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the

contractor and resident engineer's office, where they will remain throughout the duration of the project. The contractor, Resident Engineer, and Service-approved biological monitor will be responsible for ensuring that employees are aware of the listed species.

3. The project proponent will designate a Service-approved qualified biologist who will be responsible for overseeing compliance with protective measures for the listed species. The biologist will have the authority to halt all associated project activities that may be in violation of this biological opinion. In such an event, the biologist will contact the Service within 24 hours.

4. Construction work areas will be delineated and marked clearly in the field prior to habitat removal, and the marked boundaries maintained and clearly visible to personnel on foot and by heavy equipment operators. Employees will strictly limit their activities and vehicles to the proposed project areas, staging areas, and routes of travel. The project proponent and/or the biological monitor will contact the Service to verify that the limits of construction have been properly staked and are readily identifiable.

5. A biologist will monitor construction to ensure that vegetation removal, Best Management Practices (BMPs), ESA fencing, and all avoidance and minimization measures are properly constructed and followed.

6. All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities, will occur in designated upland areas. The designated upland areas will be located in such a manner as to prevent any runoff from entering waters of the United States, including wetlands.

7. Typical erosion control measures, BMPs, in the vicinity of streams will be employed in accordance with the conditions in the 401 Water Quality Certification requirements of the Regional Water Quality Control Board.

8. Use of invasive exotic plant species in landscaped areas adjacent to or near sensitive vegetation communities will be restricted. In compliance with Executive Order 13112, impacted areas will be revegetated with plant species native to desert habitat types and the Coachella Valley, and will avoid the use of species listed in Lists A & B of the California Exotic Pest Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999.

9. The seed of Coachella Valley milk-vetch will be collected off of plants from within the boundaries of permanent and temporary impacts from project construction. Seed collection will occur when the seed is past soft dough and prior to being naturally dispersed. The top four inches of soil surrounding the milk-vetch plants to be impacted will be collected and placed in plastic bags. This seed and soil will be distributed at an area consisting of acolian habitat immediately following collection. The location where seed will be dispersed will be coordinated with the Service prior to collection.

10. All construction equipment will be inspected and cleaned prior to use in the proposed project footprint to minimize the importation of non-native plant material. All mulch, topsoil and seed mixes used during post construction landscaping activities and erosion control BMPs will be free of invasive plant species propagules. A weed abatement program will be implemented should invasive plant species colonize the area within the project footprint post-construction.

11. No off-road vehicle activity from construction personnel or other persons affiliated with the project will occur outside of the project footprint.

12. To reduce attraction of ravens and crows, which may eat fringe-toed lizards, all trash will be placed in raven-proof containers and promptly removed from the site.

13. No pets or firearms will be permitted inside the project's construction boundaries or other associated work areas.

14. All sand removal and storage activities will be restricted to the project footprint. No maintenance activities will be authorized that extend beyond the boundaries of the project footprint.

15. To the extent possible, no sand removal activities will take place from 1 November - 30 March (to avoid winter dormancy periods for the lizards) or if ambient air temperature exceeds 102 degrees Fahrenheit (the temperature at which lizard activity tends to be reduced).

16. Vehicle speeds on unpaved access roads will be restricted to a maximum of 25 MPH.

17. All culverts, bridges, and associated water passage structures will be maintained such that water and sediment may pass between upstream and downstream locations and so as not to block the passage of wildlife.

18. Impacts resulting from this project will be offset by implementing the agreements established in the *Conservation Bank Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects* (Plan). The Plan assesses potential effects and offsetting measures for the proposed projects. The Plan establishes mitigation ratios at 2:1 for direct impacts of the interchange and associated arterial improvements covered under this Opinion and 1:1 for indirect impacts. Required offsetting measures will be provided through the acquisition of land and the final conservation bank agreement. Caltrans and/or Coachella Valley Association of Governments (CVAG) will set up an endowment fund for the purpose of managing the proposed conservation bank in perpetuity.

19. Prior to beginning construction, CVAG, Caltrans, and FHWA will purchase and establish a conservation bank (Bank), as per the Plan; finalize a conservation bank agreement with the Service and CDFG, and set up the endowment fund for managing the property in

perpetuity. Sufficient land will be purchased for the bank prior to start of construction for any given project. CVAG, Caltrans, and FHWA will coordinate with the Service and CDFG to locate and acquire Bank lands. All Bank lands will be approved by the Service and CDFG prior to purchase to ensure that these conservation lands benefit the fringe-toed lizard and milk-vetch. In addition, CVAG or its designee will be the manager of all Bank lands.

20. Geotechnical borings in areas with aeolian sand deposits will include the following measures:

    a. No cross country-travel and geotechnical borings will take place from 1 November - 30 March (to avoid winter dormancy periods for the lizards) or if ambient air temperature exceeds 102 degrees Fahrenheit (the temperature at which lizard activity tends to be reduced).

    b. When traveling cross-country, a route will be established and followed that avoids, to the maximum extent practicable, all sand hummocks and dunes.

    c. The surface area will be returned to the pre-disturbance state. If sand dunes or hummocks were impacted, then the surface sand will be placed in a separate pile and replaced as a dune or hummock.

21. Archaeological surveys in areas with aeolian sand deposits will include the following measures:

    a. The outer perimeter of all survey areas will be delineated and the area within this perimeter will be calculated and deducted from the Conservation Bank.

    b. All work including staging, depositing excavated materials, storing equipment, etc, will be conducted within the perimeter of the survey area.

I-10 Palm Drive/Gene Autry Trail Interchange Project

The proposed action contains the following measures that will be implemented as part of the proposed I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project:

22. The Project proponent will ensure that conservation measures one through twenty listed above are followed.

23. Direct impacts to 33.2 acres of partially consolidated and unconsolidated blowsand habitats will be offset through the debit of 66.4 acres (a 2:1 replacement ratio) from the Bank. Indirect effects to 237.83 acres of partially consolidated and unconsolidated blowsand habitats will be offset through the debit of 237.83 acres (a 1:1 replacement

ratio) from the Bank. The 304.23 acres will be preserved in perpetuity by the Conservation Bank Manager as established in the conservation bank agreement.

24. The 304.23 acres of aeolian sand habitat will be debited from the Bank prior to the commencement of construction activities associated with the project.

STATUS OF THE SPECIES

Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*)

Listing Status

The Service listed the Coachella Valley milk-vetch as endangered on October 6, 1998 (63 FR 53596-53615). Critical habitat for the taxon has not been designated. A recovery plan has not been developed for this species.

Species Description

Astragalus lentiginosus was first described by Sir William Jackson Hooker (1831) based on a specimen collected by David Douglas in the Blue Mountains of Oregon (Kuntz 1891). Rupert C. Barneby (1964) described the Coachella Valley milk-vetch based on a specimen collected in 1913 by Alice Eastwood in Palm Springs, California. The Coachella Valley milk-vetch, a member of the pea family (Fabaceae), is an erect winter annual or short-lived perennial with ascending stems 4-12 inches tall. Short, appressed, white hairs densely cover the leaves, stems, and fruits. The plant has pink-purple flowers arranged in 13 to 25-flowered racemes and strongly inflated two-chambered fruits (Hickman 1996). The Coachella Valley milk-vetch is one of 19 varieties of *A. lentiginosus* found in California (Spellenberg 1993), none of which occur in the same region or habitat types. However, *A. aridus* and *A. crotalariae* may be found within the geographical and ecological range of *A. lentiginosus* var. *coachellae*. Both taxa, in contrast to the Coachella Valley milk-vetch, have fruits with a single chamber.

Distribution

Historical abundance of the taxon in the Coachella Valley is unknown. The California Natural Diversity Data Base (CNDDB) contains records of twenty to twenty-five occurrences within the past decade. Ninety percent of these occurrences were found within 3 miles of I-10 (Barrows 1987) from north of Indio to Cabazon. The Coachella Valley Preserve System protects approximately 20 to 25 percent of the documented plant locations. Approximately 75 to 80 percent of the known Coachella Valley milk-vetch locations are found on unprotected lands. Of these, approximately 7 percent exist on Southern California Edison lands, 7 percent occurs on lands within the Agua Caliente Indian Reservation, and the remainder is situated on other private parcels.

There are six known occurrences of this species in the Desert Center area along Highway 177 (Cornett 1994). Two of these occurrences are on the Bureau of Land Management Desert Lily Preserve, three are on private land, and one within Joshua Tree National Park. Although a recent 1998 California Department of Fish and Game survey confirmed the presence of two significant populations along the southwest border of the Desert Lily Preserve approximately 7 miles from Desert Center, most recorded Coachella Valley milk-vetch populations occur between Cabazon and Indio.

Life History

Coachella Valley milk-vetch is an annual to short lived perennial plant. As an annual, an individual plant grows from seed, blooms, produces new seed (after a flower is pollinated), and then dies all in one year's time (and typically only during the spring–summer growing season). As a short-lived perennial, an individual may bloom and produce seed for a few consecutive seasons and then die. Depending on a given year's conditions, perennial and annual plants can vary in size. Variation in growing conditions can also influence the size and extent of a population of individual standing plants.

The true population of a species of annual or short lived perennial plant generally consists of its seed bank (a reserve of dormant seeds, generally found in the soil). The entire seed bank typically does not germinate in any given year. During any given year, the visible population of standing plants rarely reflects the spatial or numerical extent of the seed bank. The number and location of standing plants in a population can vary annually due to a number of factors, including the amount and timing of rainfall, temperature, and soil conditions. Indeed, there may be no visible evidence of a population for a year or even a span of several years only to return again when local conditions are suitable for seed germination. Additionally, a seed bank may remain viable for years without input of new seeds. For example, seemingly unoccupied habitat for *Holocarpha macradenia* (Santa Cruz tarplant), was found to contain a viable seed bank where standing plants had not been seen in more than 7 years (Bainbridge, *in litt.* 1999).

Habitat Affinities

The Coachella Valley milk-vetch is found on loose wind-blown or alluvial sands on dunes/flats largely within the Coachella Valley of Riverside County, California. Holland (1986) characterized the habitat type as stabilized and partially-stabilized desert sand fields. Species often found in association with the Coachella Valley milk-vetch include, *Larrea tridentata* (creosote bush), *Ambrosia dumosa* (burro-weed), *Psorothamnus emoryi* (indigo bush), *Atriplex canescens* (fourwing saltbush), *Abronia villosa* (sand verbena), *Dicoria canescens* (dicoria), *Achnatherum hymenoides* (Indian ricegrass), *Croton californicus* (croton), *Chamaesyce polycarpa* (sandmat), *Petalonyx thurberi* (sandpaper plant), *Astragalus aridus* (annual desert rattleweed), *A. crotalariae* (Salton milk-vetch), and *Oenothera deltoides* (devil's lantern). Barneby (1964) initially described this taxon as apparently confined to the Coachella Valley.

However, he later identified specimens collected in 1973, from the valley floor near Desert Center [approximately 50 miles to the east], as *A. lentiginosus* var. *coachellae*.

Population Trend

Population sizes of the Coachella Valley milk-vetch vary widely from year to year, depending on environmental conditions, making assessments of total individual numbers difficult. At locations where botanists monitored the Coachella Valley milk-vetch in 1995, densities varied from 1 plant per acre to 24 plants per acre (Sanders and Thomas Olsen Associates 1995). One of the largest known remaining sites for this taxon occurs in the north, near Snow Creek Road. In 1995, this area supported about 24 plants per acre, the greatest densities of Coachella Valley milk-vetch found during the 1995 surveys (Barrows 1987, Sanders and Thomas Olsen Associates 1995).

Threats

The primary threat to the Coachella Valley milk-vetch is habitat destruction due to extensive development within the Coachella Valley. The elimination of habitat began with the introduction of agriculture over a century ago, but urbanization has accelerated greatly in the past 40 years. Significant dune habitats that once occurred along the southwestern edge of the Coachella Valley, along the base of the Santa Rosa Mountains, now support five cities (Barrows 1987). Increased urbanization has reduced available habitat through direct conversion of land and alterations in the sand transport system responsible for the creation/maintenance of sandy habitats (Barrows 1987). As habitat becomes increasingly fragmented by urban development, remaining populations become more vulnerable to adverse effects of vehicular activities, roadside maintenance, or subsequent paving/landscaping and accompanying weed invasions. Fragmentation increases the potential for stochastic events that detrimentally affect long-term survival probability. Similarly, fragmentation decreases the species' resilience to rebound from such events.

Coachella Valley fringe-toed lizard (*Uma inornata*)

Listing Status

In 1980, the State and Federal (45 FR 63812-63820) governments listed the Coachella Valley fringe-toed lizard as an endangered and threatened species, respectively; critical habitat also was designated (*ibid.*). The species was listed due to the destruction/degradation of suitable habitat converted for agricultural and developmental purposes (The Nature Conservancy (TNC) 1985). In 1980, the Federal government designated critical habitat for the fringe-toed lizard as part of the final rule listing the fringe-toed lizard. In 1984, the Service published a recovery plan (Service 1984) for the fringe-toed lizard. In 1986, the Service approved a Habitat Conservation Plan (HCP) for the fringe toed lizard that was signed by the County of Riverside, the nine cities of the Coachella Valley and the Service.

Species Description

The Coachella Valley fringe-toed lizard is a medium sized lizard that averages approximately 5.9 inches to 9.4 inches in total length. Adult males range from approximately 2.8 inches to 4.8 inches in snout-vent length and adult females range from about 2.6 inches to 3.9 inches. Tails comprise between 49 and 64 percent of total length of adult lizards. Dorsal color of the fringe-toed lizard is whitish to pale gray with a pattern of ocelli (eyelike markings) formed by dark markings on the pale background. The ocelli form a pattern of longitudinal stripes over the shoulders. The ventral surface is white. One or several black dots may be present on each side of the abdomen and dusky lines are present on the throat. The fringe-toed lizard has three internasal scales and less than 29 femoral pores (Norris 1958, Stebbins 1954, Mayhew 1965, and Pough 1973).

The numerous morphological adaptations that protect the lizard's body from abrasion, exclude sand particles from body openings, and allow the lizard to move about in an unstable environment include (Stebbins 1943, 1944, and Norris 1958): (1) nostrils that exclude sand; (2) U-shaped nasal passages that trap sand particles; (3) a wedge-shaped snout that allows passage through the sand; (4) an elongated upper jaw that overlaps the lower jaw, allowing the lizard to dive into sand without filling its mouth; (5) fringed eyelids with a double seal to exclude sand; (6) flaps of skin that cover the ears when under sand; (7) smooth scales to reduce friction; and (8) elongated, fringed toes that increase foot surface area and traction for running over and swimming through sand.

The fringe-toed lizard has the ability to run across the sand at relatively high speeds and literally dive into it. Fringe-toed lizards may move short distances after burial, engaging in what has been called "sand-swimming" until the lizard is completely buried (Stebbins 1944, Norris 1958).

Distribution

A.S. England (1983) calculated that the fringe-toed lizard occupied approximately 200 square miles of aeolian habitat in the Coachella Valley prior to significant agricultural development at the beginning of this century. At the time of England's analysis, nearly all natural habitat in the southern quarter of the valley had been converted to agricultural and associated urban uses. Based on England's analysis, the historical distribution of the fringe-toed lizard included approximately 144 square miles of suitable habitat west of the Coachella Canal and 56 square miles east of the canal. Suitable habitat in both areas is rapidly declining. By August 1979, only 10 square miles of undeveloped and fragmented habitat remained east of the canal. Because of the small size, isolation, and high development potential, these fragmented habitat patches are not considered adequate for the long-term survival of fringe-toed lizard populations (Service 1984).

Undeveloped fringe-toed lizard habitat west of the Coachella Canal also has declined sharply. The original 144 square miles of habitat were reduced to 122 square miles by 1955, to 101 square

miles by August 1978, and to 94.8 miles by December 1982 (England 1983). Portions of the remaining fringe-toed lizard habitat may only support very limited populations. The 1984 estimate of occupiable habitat throughout the range of the fringe-toed lizard is 127 square miles (Coachella Valley Fringe-toed Lizard Conservation Land Steering Committee 1984).

Since listing, the major local jurisdictions in the Coachella Valley, in coordination with the Service, Bureau of Land Management, and California Department of Fish and Game, have developed and implemented the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (HCP), which established a reserve system for conservation of this species. The HCP, approved by the Service in April 1986 under section 10(a)(1)(B) of the Act, established conditions under which local jurisdictions could approve development in aeolian sand habitats outside the boundaries of the reserve system (TNC 1985). Upon payment of a mitigation fee, the HCP permitted private development. The HCP established the mitigation fee to fund acquisition and management of the reserve system.

The reserve system created by the HCP established three separate preserves that collectively protect 26 square miles (mi^2) of land containing 12.25 mi^2 of occupiable blowsand habitat. The three reserves are the Whitewater River Preserve (1.9 mi^2), Willow Hole Preserve (2.2 mi^2), and the Thousand Palms Preserve (8.1 mi^2). Some researchers believed that the Whitewater River Preserve has a sustainable aeolian sand source as long as there are periodic flood flows within the Whitewater River (Meek and Wasklewicz 1993). Griffiths *et al.* (2002) were more tentative. They believed the hydrologic effects of the percolation ponds upstream could adversely affect the sediment deposition from the Whitewater and San Gorgonio Rivers. Regardless, the biological value of this reserve requires protecting the integrity of the Whitewater River hydrologic and sediment delivery system.

The Willow Hole Preserve appears to receive sand from the Morongo and Mission Creek washes west of the Indio Hills (Weaver 1981, Meek and Wasklewicz 1993). There is no substantial evidence of recent aeolian activity northwest of the Willow Hole Preserve, and this suggests these deposits may have slowly accumulated over thousands of years (Meek and Wasklewicz 1993). The present immobility of sands, anchoring of sand by mesquite, and protection of deposits from wind within valleys suggest sands in this area could remain indefinitely (Meek and Wasklewicz 1993). Strong winds transport fluvial sediment from the Mission-Morongo depositional plain to Willow Hole and Edom Hill (Griffiths *et al. 2002)*. In addition, intense summer thunderstorms recycle these aeolian deposits on Edom Hill into Willow Hole. However, lowering the groundwater table through pumping could result in the dieback of mesquite that anchor the dunes on the Preserve, which would render dunes vulnerable to erosion (Meek and Wasklewicz 1993).

The Thousand Palms Preserve is located north of I-10 and Bermuda Dunes. The Thousand Palms Preserve's primary sand source is considered to be a series of relatively small canyons in the Indio Hills west of Thousand Palms Canyon (Simons, Li and Associates 1997). The Thousand Palms Canyon Watershed was identified as a secondary sand source for the Preserve. The

Thousand Palms' dunes are moving towards the southeast and consist of largely unvegetated active dunes surrounded by a creosote bush and saltbush dune hummocks area where aeolian activity varies from year to year. This site is the driest and hottest of the three preserves and has the lowest perennial plant species richness and abundance (Center for Natural Lands Management (CLNM) 2000).

Habitat Affinities

The Coachella Valley fringe-toed lizard is endemic to fine, wind-blown sand habitat in the Coachella Valley and is restricted to sandy plains, mesquite dunes, and sand hummocks (45 FR 63818). According to Norris (1958), sandy plains are a featureless, nearly level plain covered with a variable thickness of mixed silt and sand. Deposits on sand plains typically result from the winnowing of fine sand from adjacent sand accumulation. Norris (1958) describes a variety of dune systems throughout the range of *Uma* species. The few remaining mesquite dunes in the Coachella Valley are found along and above the San Andreas Fault. The San Andreas Fault acts as a spring that channels ground water up towards the surface.

Sand hummocks or accretion dunes are an accumulation of sand in piles within and around bushes (Norris 1958). Sand hummocks typically form in the periphery to large deposits of sand. In the Coachella Valley, where the wind direction is constant, the accumulated sand deposits are oriented with regard to the wind source. The windward slope is composed of coarse sand and is usually truncated close to the base of the bush, while the leeward side, favored for basking by fringe-toed lizards, possesses a long stringer of fine sand. The greatest height of such an accumulation is usually within the bush. When sand accumulates around large bushes such as mesquites and desert willows, accretion dunes may reach heights of 30 feet or more. Sand hummocks are the most common type of blow-sand deposits in the Coachella Valley comprising about 80 percent of fringe-toed lizard habitat (England and Nelson 1976).

Critical Habitat

Critical habitat for fringe-toed lizards includes approximated 12,000 acres (18.5 square miles) of Federal, State, local, and private lands in eastern Riverside County the majority of which is in private ownership (45 FR 63812-63820). Primary constituent elements for fringe-toed lizards are those habitat components that are essential for the primary biological needs of foraging, nesting, rearing of young, intra-specific interactions, dispersal, genetic exchange, or sheltering. Primary constituent elements are provided in undeveloped areas where sandy plains, sand hummocks and mesquite dunes exist.

The approximate 12,000 acres designated as critical habitat include both the areas of highest lizard concentration and a source of blow sand (45 FR 63812-63820). Designated critical habitat encompasses suitable habitat on the Coachella Valley Preserve and unsuitable lands that are the sand source in the Thousand Palms Canyon watershed and canyons/alluvial fans along the southern flank of the western Indio Hills. These unsuitable areas generate source material blow-

sand habitats downstream and downwind. Absent an adequate sand supply, the strong, unidirectional winds erode and deplete sand accumulations. Researchers originally thought Thousand Palms Canyon and western Indio Hills contribute equally to accretion of wind-blown sand on the preserve; however, further investigation (Lancaster *et al.* 1993, Meek and Wasklewicz 1993, and Simons, Li and Assoc. 1997) found that the western Indio Hills contributed most of the sand. These studies concluded Thousand Palms Canyon was only a minor contributor of blow-sands to the Preserve.

Life History

The fringe-toed lizard is primarily insectivorous, but will take plant material (Stebbins 1944, Smith 1946, Mayhew 1965). Captive fringe-toed lizards have been observed eating insects, juveniles of their own and other lizard species, leaves, and flower parts (Carpenter 1963)

Reproductive activity starts in the spring (typically late April), shortly after adults emerge from winter dormancy, and extends through mid-August (Mayhew 1965). Location and timing of egg-laying has not been observed in the wild, but multiple clutches may be laid in one year (Mayhew 1965). Hatchling fringe-toed lizards have been observed from late August through the fall (Stebbins 1954, Mayhew 1965). A few precocial fringe-toed lizards may breed the summer after the year they hatch, but most do not reach sexual maturity until the second summer (Mayhew 1965).

The fringe-toed lizard hibernates below ground, between November and February/March, when the daytime temperatures are predominantly below its activity range of body temperature (TNC 1985). Turner *et al.* (1981) found fringe-toed lizards to be active when ambient temperatures were 22-39° C, and ground surface temperatures were 37-58°C. During the hottest times of the year, when the surface temperatures may reach or exceed the lethal limit for the species, fringe-toed lizards become increasingly crepuscular. Periods of inactivity are spent below the surface where cooler temperatures prevail.

Population Trend

The fringe-toed lizard was considered common throughout the Coachella Valley prior to major land conversions in the 1920's. Since then, the population of fringe-toed lizards has declined due loss of habitat, habitat fragmentation, lizard collecting, and many other human activities. The Coachella Valley continues to grow at rapid rate, further destroying and fragmenting the remaining areas of suitable habitat. Since 1999, drought conditions have reduced available forage for fringe-toed lizards which has affected reproductive success and population densities.

Researchers currently know little about fringe-toed lizard populations outside the reserve system described above, other than blow-sand habitats continue to decline in association with conversion to agricultural and developed lands. Early population studies suggested that population densities of fringe-toed lizards can vary widely. Important habitat features, such as sand compaction and

patch size, likely influence densities (Turner *et al.* 1981, 1984; Barrows 1997). Turner *et al.* (1981) estimated the density of fringe-toed lizards in seven study plots to range from 1.8 to 18.2 lizards per acre. Monitoring efforts have documented fluctuations in population numbers that appear related to availability of resources, such as food and loose sand (Barrows 1996).

Threats

The loss, fragmentation, and adverse modification of aeolian sand systems are the principal reasons for the fringe-toed lizard's federally threatened status (45 FR 63812-63820). In addition, numerous natural and human activities continue to threaten the lizard including (CNLM 2000): (1) the lack of protection of sand sources and sand transport corridors to any of the three preserves; (2) sand loss, due to natural down wind movement combined with the prolonged period of time between large storm events that replenish sand sources; (3) exotic plant species such as wild mustard (*Brassica tournefortii*) and Mediterranean grass (*Schizmus barbatus*) that colonize and stabilize active dune systems; (4) off road vehicle trespass on dunes; (5) tamarisk in riparian ecosystems and along windrows; and (6) increased automobile traffic along roads that are adjacent to or fragment blow-sand habitat.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation, and the impacts of State and private actions which are contemporaneous with the consultation in progress.

Programmatic

The interchange and arterial street improvement projects discussed in the project description above span the range of the species listed in the Plan. All interchanges occur within the range of the milk-vetch and the fringe-toed lizard.

Approval of the Coachella Valley fringe-toed lizard HCP by the Service anticipated incidental take of fringe-toed lizards in association with development outside the reserve system boundaries in accordance with the general plan and zoning designations of local jurisdictions. Though past and future habitat losses consistent with the HCP are appropriately considered as part of the environmental baseline for the fringe-toed lizard, they are not for the Coachella Valley milk-vetch, whose conservation needs were not addressed in the HCP. Additionally, the Coachella Valley milk-vetch occurs outside the Coachella Valley, on the Desert Lily Preserve. The designation of this Bureau of Land Management parcel as an Area of Critical Environmental Concern offers protection to this population.

Modeled habitat for the milk-vetch and fringe-toed lizard occurs throughout the aeolian sand habitat from west of the Indian Avenue Interchange through the Coachella Valley to east of the Jefferson Road Interchange. Within the modeled habitat are historic occurrences of both species. Many of the historic occurrences have been permanently displaced and/or lost to habitat destruction from the construction of windmills, aquifer recharge facilities, railroad projects, infrastructure improvements, and residential and commercial development. Some of these developments have permanently impacted the sand source areas for sand hummocks currently occupied by the milk-vetch and fringe-toed lizard. The disconnection with sand source areas could eventually lead to degradation of sand hummocks further impacting suitable occupied habitat.

The current distribution of fringe-toed lizards along the I-10 corridor through the Coachella Valley is unknown at this time. The development of a multi-species HCP for the jurisdictions comprising the CVAG and the Agua Caliente Indian Tribe includes a preserve design to protect the fringe-toed lizard. This Programmatic Opinion is part of a coordinated effort with CVAG to develop a long-term conservation strategy for the fringe-toed lizard. The aeolian sand habitat along the five interchanges and their associated arterial streets is in various states of habitat suitability, including high quality active sand dunes south of the Bob Hope Drive/Ramon Road Interchange, stabilized desert scrub, and creosote hummock communities partially stabilized by exotic plants or the lack of recent sand transport. The use of the stabilizing creosote hummock communities by fringe-toed lizards is largely unknown. The population of lizards on the stabilizing creosote hummock communities is likely to be lower than in active blowsand areas. Due to fragmentation, drought, and degradation of habitat, portions of the remaining fringe-toed lizard habitat may only support very limited populations.

At the Palm Drive/Gene Autry Trail Project, no fringe-toed lizards were detected and a few individual milk-vetch plants were found in various locations within the proposed project footprint (Caltrans 2004). During focused surveys for the Date Palm Drive Project, the Chambers Group detected small groups of milk-vetch distributed throughout the project footprint with suitable habitat existing on all unpaved areas of the proposed project site (Parsons Brinckerhoff, Quade & Douglas 2002). During the same survey season, the Chambers Group detected no fringe-toed lizards within the project area. Focused surveys at the Ramon Road/Bob Hope project detected both fringe-toed lizards and milk-vetch within and adjacent to the project area (Caltrans 2003b, Michael Brandman Associates 2001). The aeolian sand system on the north and south sides of the I-10 and west of the interchange are high quality habitat for fringe-toed lizards and milk-vetch. A small number of fringe-toed lizards likely occupy and move through the proposed project footprint. Numerous milkvetch occur within and adjacent to the proposed project footprint. Focused surveys at the Indian Avenue project did not detect milk-vetch (LSA Associates 2001). No fringe-toed lizard surveys were conducted at Indian Avenue. Fringe-toed lizards and milk-vetch are known to occur along Indian Canyon Drive, south of the interchange, and within the Whitewater River Preserve. Though no focused surveys were conducted for the fringe-toed lizard or milk-vetch at the Jefferson Avenue Project, this area may

support low numbers of few fringe-toed lizards and milk-vetch based on the presence of suitable soils with degraded habitat conditions.

Urbanization and agricultural development in the Coachella Valley have significantly impacted the blowsand ecosystem. Development has occurred directly on sand fields and in the wind corridor, thereby partially blocking the aeolian transport of sand to the area south of the I-10 corridor. Development has also led to a reduction in groundwater, which in turn has reduced the vegetative communities, such as mesquite, that causes the blowsand to settle in specific regions. As the Coachella Valley continues to urbanize, an increasing concern as to whether or not the blowsand system is adequately protected has contributed to the impetus to complete a multi-species Habitat Conservation Plan for the Valley.

Recent Caltrans projects have impacted desert scrub habitat at Ramon Road and Palm Drive. The Ramon Road project impacted 2.9 acres of aeolian sand fields and the Palm Drive project impacted 30.0 acres of desert scrub.

I-10 Palm Drive/Gene Autry Trail Interchange Project

The action area for the proposed project is dominated by Sonoran Creosote Bush Scrub and active/partially stabilized aeolian sand habitat. The action area of the proposed project includes historical and currently occupied habitat of the Coachella Valley milk vetch. Surveys conducted during 2000, and 2001, detected Coachella Valley milk-vetch within the ROW for I-10 and Palm Drive. Specific locations include the area within the westbound onramp and the westbound freeway, along I-10 immediately east of the existing westbound offramp, in a planter in the Arco parking area along the western boundary of Palm Drive in the northernmost part of the project site, and along the western boundary of Palm Drive south of the Arco station.

The action area of the proposed project includes historically occupied habitat for the Coachella Valley fringe-toed lizard. Although Coachella Valley fringe-toed lizards were only detected during focused surveys near the Ramon Road/Bob Hope interchange in 2000 and 2001, it is likely that fringe-toed lizards utilize some of the habitat within the action area for the remaining projects. The action area for the proposed project includes partially fragmented blocks of poor to high quality habitat surrounded by roads, the railroad, and urban development. The high mobility of the fringe-toed lizard combined with low to high quality habitat suggest that the fringe-toed lizard inhabits sand hummock habitat in the action area. A small number of milk-vetch were detected within the project footprint. Drought conditions over the last five years has likely reduced the gemination rate and establishment of this species. The distribution in the seed bank in unknown.

EFFECTS OF THE ACTION

Programmatic

At the Programmatic Level, the effects of the action include the construction of road improvements at the five interchange projects and the associated arterial streets to their logical termini. These projects are all designed to reduce congestion and improve traffic flow along the I-10 corridor from the City of Palm Springs to the City of Indio. Each of these interchange and adjacent arterial street projects were grouped together during the development of the Plan. These interchange and arterial street improvement projects are to be constructed in the next three to twelve years depending on the availability of funding.

Direct Effects

Direct effects from the interchange and arterial street improvement projects include both temporary and permanent impacts (Table 1). Temporary and permanent impacts include clearing and grading sand hummocks, and constructing the road bed and overlying street surfaces. Direct effects encompass 407.52 acres of area associated with project footprints. Once graded, permanent impacts would result from the construction of the roadway. Temporary impacts will occur in a 25-foot wide area adjacent and parallel to the toe of slope of the newly constructed road-bed. The 407.52 acres of habitat varies in quality for supporting the fringe-toed lizard. The highest quality habitat encompasses a portion of the total area to be impacted. The majority of habitat to be impacted by all projects addressed by this Opinion consists of creosote hummock communities with *Schizmus* ssp. and other exotic plants partially stabilizing the sand hummocks. In the majority of the areas to be impacted, the habitat for fringe-toed lizards is sub-optimal, therefore, the expected distribution of fringe-toed lizards is likely lower than 1.8 to 18 lizards per acre predicted for high quality habitat (Turner *et al.* 1981) and probably varies from less than one to up to five lizards per acre. Based on the degraded nature of the habitat in areas to be impacted by the five interchange projects and the associated arterial streets, there is the potential that ten to one-hundred milk-vetch and between 50 and 2,400 fringe-toed lizards could be adversely affected by construction activities. Due to drought conditions and the lack of detection of fringe-toed lizards at each of the proposed project locations (except Ramon Road/Bob Hope Interchange), a small, but unknown number of fringe toed lizards could be adversely affected by project construction. To reduce impacts to less than one-hundred individual milk-vetch plants and the associated seed bank, and a small but unknown number of fringe-toed lizards, conservation measures 1 through 21 of this Opinion would be implemented. Direct effects from fugitive dust, offroad vehicle activity, and human caused disturbances to adjacent occupied habitat would be avoided by implementing conservation measures 1-21 of this Opinion.

Indirect Effects

The road effect zone (Forman *et al.* 1997, 2000) is the area from the road edge to the outer limit within which road traffic has significant ecological effects on wildlife. The width of the effect distance of the road effect zone is based on traffic intensity, whether the road is a two lane or greater roadway, the species present along the roadway, and a variety of ecological variables. Changes in traffic intensity can alter the effect distance along roads within the road effect zone. For each species, there is a threshold where the effect distance and the road effect zone are the same.

During the development of the Plan, the working group (FHWA, Caltrans, CDFG, the Service) established a threshold width for the road effect zone of 360 feet on each side of the roadway where habitat exists. The 360-foot distance is based on a home range of 418,284 square feet (Brodie *et al.* 1999) for the flat-tailed horned lizard (*Phrynosoma mcallii*). The diameter of a circular home range for the flat-tailed horned lizard is 360 feet. Since there are insufficient data on home ranges for the fringe-toed lizard and the fringe-toed is faster and has a more active habits than the flat-tailed horned lizard, the working group determined that the home range for the fringe-toed lizard would be at least as large as the home range for the flat-tailed horned lizard. Using a circular home range with a diameter of 360 feet, the working group agreed that under existing conditions, 50 percent of lizards with a home range that overlaps the adjacent roadway would be directly killed by automotive traffic. For threshold traffic intensity, the working group assumed that all lizards having a home range that overlaps the adjacent roadway will be directly killed by automotive traffic.

Since existing traffic intensity is leading to direct mortality of 50 percent of lizards inhabiting the habitat adjacent to the roadway, the effect distance for current conditions is 180 feet from the road edge. Traffic intensity resulting from construction of the five interchanges and their associated arterial streets would increase this distance to 360 feet for a change of 180 feet. This 180-foot change in the effect distance is considered the width of indirect effects to fringe-toed lizards and the other fauna listed in the Plan. Multiplying this width by the length of the road improvement projects results in indirect effects to 947.5 acres. Since habitat to be impacted varies between high quality aeolian sand habitat and stabilizing creosote hummocks, the expected distribution of fringe-toed lizards is likely lower than 1.8 to 18 lizards per acre predicted for high quality habitat (Turner *et al.* 1981) and could vary from less than one to up to five lizards per acre. Due to drought conditions and the lack of detection of fringe-toed lizards at each of the proposed project locations, a small, but unknown number of fringe toed lizards could be adversely affected by project construction. To reduce impacts to a small but unknown number of fringe-toed lizards, conservation measures 8, 10, 11, 12, and 18 through 21 of this Opinion would be implemented.

Habitat fragmentation would also occur due to the implementation of the proposed improvement projects. Constructing new roads and widening existing road corridors without installing undercrossings for sand transport and species dispersal would result in the loss of connectivity

between large expanses of habitat including sand source areas. In particular, widening of arterial streets at Indian Avenue, Gene Autry Trail, Palm Drive, and Varner Road between Palm Drive and Date Palm Drive should have underpass systems installed to allow for species dispersal between the fringe-toed lizard HCP reserves, and the proposed CVMSHCP reserve design. Accordingly, CVAG's proposed MSHCP is designed to provide wildlife movement underpasses across all of these arterial streets.

I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project

Direct Effects

Direct effects to 33.2 acres of stabilizing Sonoran Creosote Bush Scrub and aeolian sand habitat occupied by the milk-vetch and fringe-toed lizard would occur from the construction of the proposed project, including temporary and permanent impacts. The loss of 33.2 acres of occupied Sonoran Creosote Bush Scrub and aeolian sand habitat would harm those fringe-toed lizards occupying the area of temporary and permanent impacts and result in the loss of all milk-vetch individuals and the associated milk-vetch seedbank. Based on the drought conditions and the lack of detection of fringe-toed lizards at the project site, the project has the potential to directly affect a small but unknown number of-toed lizards. Direct effects to milk-vetch can range from a few individuals to several hundred individuals depending on the seed bank expression during the rainy season. Direct effects to milk-vetch would be minimized by collecting seed and the underlying soil from those plants found within the project footprint and distributing this seed within preserved aeolian sand habitat. Direct effects to fringe-toed lizards and milk-vetch would be offset by implementing conservation measures 1 through 20 and 22 through 24 listed above and preserving lands necessary for maintaining aeolian sand systems, as proposed by the Plan.

Indirect Effects

Indirect effects to 237.8 acres of stabilizing Sonoran Creosote Bush Scrub and aeolian sand habitat occupied by a small but unknown number of fringe-toed lizards would occur due to habitat fragmentation and the effect of road mortality caused by increased traffic intensity from the improved interchange at I-10 and Palm Drive/Gene Autry Trail. For the proposed project, the effect distance would be 180 feet for existing roads. Indirect effects to 33.3 acres would occur within the road effect zone of the interchange project. Indirect effects would occur in the remaining 180 feet of the road effect zone along the adjacent arterial streets as follows: (1) 62.2 acres on Palm Drive from I-10 to 20th Avenue; (2) 75.4 acres on Gene Autry Trail from I-10 to Vista Chino; and (3) 66.9 acres on Varner Road from Palm Drive to Mountain View Road. Indirect effects to fringe-toed lizards and milk-vetch would be offset by implementing conservation measures 8, 10, 11, 12, 18 through 20, and 22 through 24 listed above and preserving lands necessary for maintaining aeolian sand systems, as proposed by the Plan.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Future development on private land is likely to continue along the I-10 corridor throughout the Coachella Valley. This development will result in further fragmentation and obstruction or alteration of sand transport. Furthermore, based on projections for an increasing population in the Coachella Valley, development within the sand sources and corridors in the nearby designated critical habitat and proposed CVMSHCP preserves will increase and suitable habitat will decrease. Proposed land acquisition in the Plan to offset habitat loss from the proposed projects would further efforts to protect designated critical habitat and preserves.

Cities in the Coachella Valley are working together under the guidance of the CVAG to develop the CVMSHCP. The Agua Caliente Band of Cahuilla Indians also is developing an HCP for the area around the project. Within both HCPs are conservation strategies designed to protect the milk-vetch and fringe-toed lizard.

CONCLUSION

After reviewing the current status of the Coachella Valley milk-vetch and the Coachella Valley fringe-toed lizard, environmental baseline for the action area, effects of the proposed project, and cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the Coachella Valley milk-vetch and the Coachella Valley fringe-toed lizard. Though critical habitat has been designated for the fringe-toed lizard, critical habitat has not been designated within the action area, therefore, none would be adversely affected by the proposed project.

Programmatic

This conclusion is based on the following reasons:

1. The loss of 407.5 acres of suitable habitat for hundreds of milk-vetch, a small but unknown number of fringe-toed lizards, and the other species covered by the Plan from direct effects would be offset by acquiring 815.0 acres of land in an area deemed essential for the long term sustainability of the designed preserve system in the Coachella Valley.

2. The loss of a small but unknown number of fringe-toed lizards and numerous organisms of the species covered by the Plan that occupy 947.5 acres of suitable habitat adjacent to the project footprint and associated arterial streets from indirect effects would be offset by

acquiring 947.5 acres of land in an area deemed essential for the long term sustainability of the designed preserve system in the Coachella Valley.

3. All lands acquired to offset direct and indirect effects to the milk-vetch, fringe-toed lizard, and other species covered by the Plan would be preserved in perpetuity and managed for the recovery of the milk-vetch, fringe-toed lizard and other species covered by the Plan.

I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project

This conclusion is based on the following reasons:

1. The loss of a few to tens of milk-vetch and a small but unknown number of fringe-toed lizards that occupy 33.2 acres of sand hummocks would be offset by acquiring 66.4 acres of land in an area deemed essential for the long term sustainability of the designed preserve system in the Coachella Valley.

2. The loss of a small but unknown number of fringe-toed lizards occupying 237.8 acres of sand hummocks adjacent to the project footprint and associated arterial streets would be offset by acquiring 237.8 acres of land in an area deemed essential for the long term sustainability of the designed preserve system in the Coachella Valley.

3. All lands acquired to offset direct and indirect effects to the milk-vetch and fringe-toed lizard would be preserved in perpetuity and managed for the recovery of the milk-vetch and fringe-toed lizard.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The following incidental take authorization pertains to the I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project only. The measures described below are non-discretionary and must be implemented by FHWA, the project proponents, and the contractors so that they become binding conditions of any grant, contract, or permit issued to the applicant, as appropriate, for the exemption of section 7(o)(2) to apply. The FHWA has a continuing duty to regulate the activity that is covered by this incidental take statement. If FHWA (1) fails to require the project proponent to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

The Service anticipates the following levels of take for the Coachella Valley fringe-toed lizard could occur as a result of constructing and operating the proposed I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project:

1. A small but unknown number of fringe-toed lizards that utilize the 33.2 acres of stabilizing Sonoran Creosote Bush Scrub and acolian habitat that would be temporarily and permanently impacted by the interchange project.

2. A small but unknown number of fringe-toed lizards that utilize the 360-foot road effect zone along the interchange and adjacent arterial streets to the next logical termini as described in Table 1.

Reasonable and Prudent Measures

The Service believes the following Reasonable and Prudent Measure is necessary and appropriate to minimize take of Coachella Valley fringe-toed lizards:

Caltrans and FHWA shall ensure that construction activities, and anthropogenic disturbances to listed species and their habitats are avoided and/or minimized.

Terms and Conditions

To be exempt from the prohibitions of section 9 of the Act, FHWA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary and shall be incorporated as binding requirements into all applicable funding agreements, contracts, and permits.

Caltrans shall implement the above reasonable and prudent measure through the following terms and conditions:

1 Caltrans shall ensure that all construction activities occur within the designated project footprint and that all adjacent native habitat is left undisturbed by construction activities.

2 A biological monitor shall be present at all pre-construction and pre-grading meetings and be present onsite during all vegetation removal. The biological monitor shall be authorized to halt all associated project activities that may be in violation of any permits issued.

3 During construction, soils to be impacted shall be watered down to prevent fugitive dust from drifting into adjacent habitat.

4 Caltrans and FHWA shall acquire all lands (at least 337.1 acres) and have an approved conservation bank agreement in place prior to beginning any and all construction activities. The 337.1 acres includes the 304.2 acres to offset impacts from the I-10 Palm Drive/Gene Autry Trail Interchange Project, the 2.9 acres from impacts at Ramon Road, and 30.0 acres from impacts at Palm Drive.

The Service retains the right to access and inspect the project site for compliance with the proposed project description and with the terms and conditions of this biological opinion. Any habitat destroyed that is not in the identified project footprint should be disclosed immediately to the Service for possible reinitiation of consultation.

Reporting Requirements

To demonstrate compliance with the foregoing terms and conditions, FHWA, or its designated contact, shall submit an annual report to the Service that describes and summarizes the implementation of the proposed project and its associated conservation measures.

Disposition of Sick, Injured, or Dead Specimens

The Service's Division of Law Enforcement, San Diego, California (619) 557-5063 is to be notified within three working days should any fringe-toed lizard(s) be found sick, injured, or dead in the project area. The Service's Carlsbad Fish and Wildlife Office should be notified concurrently at (760) 431-9440. Written notification to both offices must be made within five calendar days and include the collection date and time, location of the lizard(s), and any other pertinent information. Care must be taken in handling sick or injured lizard(s) to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The remains of intact fringe-toed lizard(s) shall be placed with educational or research institutions holding appropriate State and Federal permits.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans or to develop information.

1. Currently, there are planning and implementation efforts to develop a preserve system to offset the impacts of development through the CVMSHCP. Caltrans and FHWA should assist in the planning of these efforts to ensure that all future road designs avoid adversely affecting future preserves. Caltrans and FHWA should assist in the implementation of acquisition and restoration efforts to enhance the long term viability of the preserves and their sand source areas.

2. Caltrans and FHWA should control and remove all exotic plant species along the I-10 corridor and all other State roads in the Coachella Valley. Caltrans and FHWA should follow Executive Order 13112 and only replant with native flora to reduce the need for irrigation and to prevent invasive exotic plant species from stabilizing active sand transport areas.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the I-10 Palm Drive/Gene Autry Trail Interchange Improvement Project outlined in the initiation request. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions or concerns about this biological opinion, please contact John DiGregoria of my staff at (760) 431-9440.

Sincerely,

Therese O'Rourke
Assistant Field Supervisor

cc: Scott Quinnell, Biologist, Caltrans District 8 Office

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To
FWS-LRIV-81430-2008-F-0010

OCT 11 2007

Mr. Aaron Burton
Acting Environmental Local Assistance Chief
California Department of Transportation
1120 North Street
Sacramento, California 94273-0001

Subject: Request to append Programmatic Biological Opinion for Five Interchange Improvements on Interstate 10 and Associated Arterial Improvements for the Tiered Indian Canyon Drive Street and Bridge Widening Project, Eastern Riverside County, California (1-6-05-F-3282, FA 965100 & 3282.13)

Dear Mr. Burton:

This letter acknowledges the U.S. Fish and Wildlife Service's (Service) receipt on June 11, 2007, of your letter dated June 8, 2007, requesting initiation of formal consultation to append the programmatic biological opinion (PBO) for the Five Interchange Improvements on Interstate 10 (I-10) and Associated Arterial Improvements under section 7 of the Endangered Species Act of 1973, as amended (Act) on the proposed tiered Indian Canyon Drive Street and Bridge Widening Project (Project) located in eastern Riverside County, California. The California Department of Transportation (Caltrans) has determined that the proposed Project would likely adversely affect the threatened Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*, milk-vetch) and endangered Coachella Valley fringe-toed lizard (*Uma inornata*, fringe-toed lizard).

This appended biological opinion (Opinion) includes, a project description, surrounding site characteristic information, effects analysis, and incidental take for the proposed action. The programmatic sections and all other provisions of the PBO (1-6-04-F-3282.4) are included by reference.

This Opinion is based on information provided in the *Biological Assessment Indian Canyon Drive Street and Bridge Widening Project*, dated August 2006 (BA), site visits, discussions and e-mails between the Service and Caltrans staff, and information in the Service's files.

CONSULTATION HISTORY

On September 23, 2004, the Service issued the umbrella PBO 1-6-04-F-3282.4 establishing the umbrella for five interchange projects and their associated arterial streets out to the next logical termini. The PBO also included a biological opinion of the tiered Palm Drive Interchange Project. Since then, there have been discussions between Federal Highways Administration (FHWA), Caltrans, Riverside County, the City of Palm Springs (City), and the Service regarding implementing individual projects addressed in the PBO. On November 7, 2005, the Service completed an Opinion on the second of the five projects under the PBO, the Tiered Date Palm Drive Interchange Project, which also included the Date Palm Drive Arterial Streets Project, and the Palm Drive/Gene Autry Trail Arterial Streets Project in Eastern Riverside County, California (1-6-05-F-3282.6) (Figure 1). On March 3, 2006, FHWA sent a letter requesting initiation to append the PBO for the Five Interchange Improvements on I-10 and Associated Arterial Improvements to include the Ramon Road/Bob Hope Drive Interchange and associated arterial streets projects. The Service subsequently appended the PBO on March 30, 2006, to include the Ramon Road/Bob Hope Drive Interchange and associated arterial street projects. On January 25, 2006, FHWA sent a letter requesting initiation to append the PBO to include the Indian Avenue Interchange project. On May 2, 2007, the Service amended the Tiered Date Palm Drive Interchange Project, the Date Palm Drive Arterial Streets Project, and the Palm Drive/Gene Autry Trail Arterial Streets Project to better protect fringe-toed lizards along Gene Autry Trail and construct sand fences. On June 11, 2007, FWHA requested to append the PBO for the proposed Tiered Indian Canyon Drive Street and Bridge Widening Project. Communications regarding the proposed Project occurred between Caltrans and Service staff between July 17, 2007, and September 1, 2007. The proposed action represents the fifth tiered Opinion contemplated under the PBO. These communications are on file in the Carlsbad Fish and Wildlife Service Office.

DESCRIPTION OF THE PROPOSED ACTION

The following project description and conservation measures are appended to the PBO. All provisions of the PBO remain in effect along with those proposed in the following project description.

The project area is located in the Coachella Valley, Riverside County, California (Figure 2) in North Palm Springs. Caltrans/City proposes to widen Indian Canyon Drive for a distance of approximately 1,219 meters (4,000 feet) south of its intersection with Garnet Avenue (south of Interstate 10) in accordance with FHWA regulations and standards. The Indian Canyon Drive Bridge, which crosses over the Union Pacific Railroad tracks, would also be widened. The Project begins south of Garnet Avenue, extends over the Union Pacific railroad tracks towards the Whitewater River and terminates just south of Palm Springs Station Road (Figure 2).

The proposed road widening would keep the east edge of the existing pavement mostly in place. The roadway would be expanded primarily along the west side. In addition to the road construction, the existing bridge structure would be widened on the west side. Project implementation would require slope and construction easements but no permanent right-of-way (ROW) acquisition.

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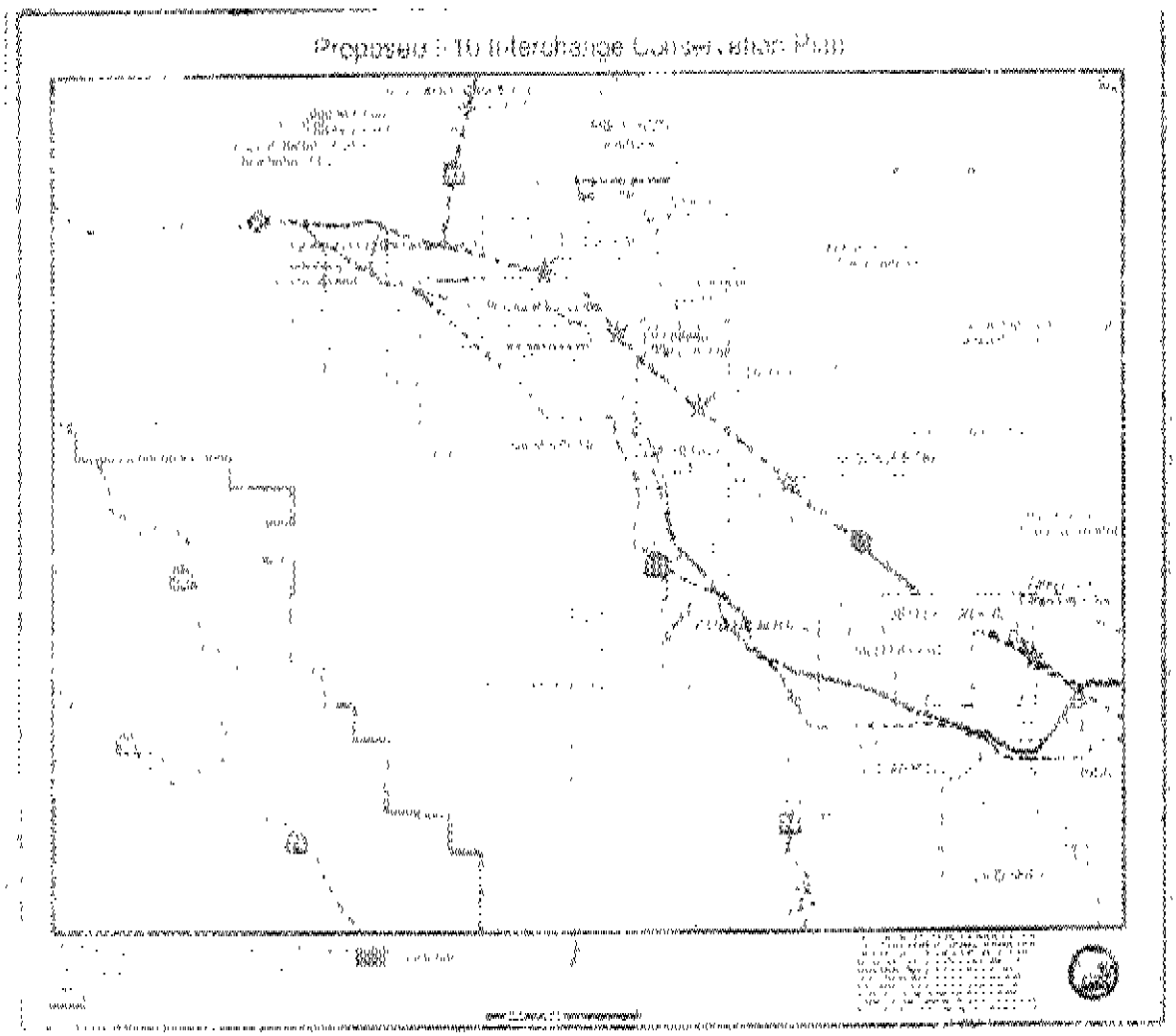

Figure 1. Map showing the Interchanges described as the action area for this Project including, Indian Avenue, Palm Drive, Date Palm Drive, Bob Hope Drive, and Jefferson Avenue (Reference: Appendix C, Page 4 from the Biological Assessment/Caltrans, August 2006).

bridge station of the Project would result in six 12-foot-wide lanes, three in each direction for a total of 86 feet in width (Figures 2 and 3a and 3b). The roadway/bridge would include a 5-foot wide paved shoulder/bikeway on each side of the road, and a 5-foot-wide decomposed granite walkway along the westerly side of the roadway. The Project would ultimately result in a 6-lane (86 feet wide) configuration to Palm Springs Station Road.

A 22 foot-high retaining wall would be required to support the bridge. The wall would be located to the south of the bridge, between Palm Springs Station Road and Indian Canyon Drive. The retaining wall is required to widen the roadway due to the tight space between the train station access road and Indian Canyon Drive. A fill slope is not feasible in this tight space, thus the need for the retaining wall.

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Project construction would allow traffic to flow along the existing lanes while the expansion is constructed to the west. Traffic would then be routed to the newly constructed west side of the roadway while work is completed on the east lanes. No detour or temporary traffic lanes are therefore needed.

The new road grade would not be elevated above the existing road grade along any section of Indian Canyon Drive. No curbs, ditches, or cement gutters would be constructed along any portion of the road south of the intersection with the Palm Springs Station Road and Indian Canyon Avenue.

Construction Staging and Maintenance

Due to fringe-toed lizard presence and habitat located just to the west of the Indian Canyon Drive Bridge, staging areas for construction materials, equipment, storage, and delivery would only be located in areas approved by the authorized biologist. Once the project is completed, proposed maintenance would include routine street sweeping, periodic re-striping and pavement conditioning and/or road composition overlay. During flooding events, where sand and sediment flow over the road, sand material would be removed by the City and deposited with permission under the Interagency Agreement between the Coachella Valley Water District (CVWD) and the City onto the three reserves in the Coachella Valley Preserve System. Deposition of sand materials on the road would occur after notification of the Service and coordination with the Fringe-toed Lizard Management Committee.

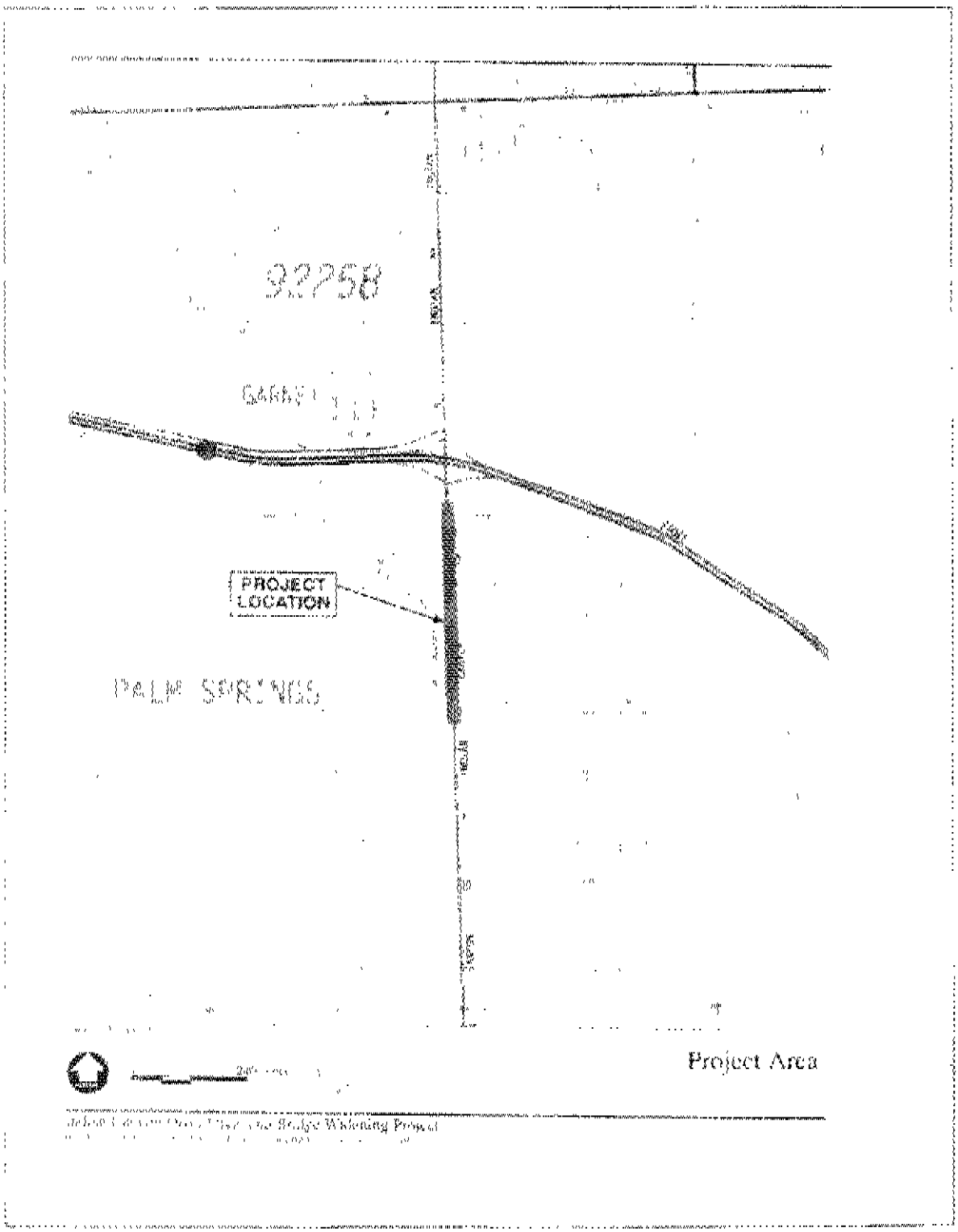


Figure 2: Project Location (Reference: Page 3, Figure 1-2 from the Biological Assessment, Caltrans, August, 2006)

Figure 3a. Indian Canyon Drive Street and Bridge Widening Project - north half of project area (Reference: Figure 1-3 from the Biological Assessment, Page 5, Caltrans, August, 2006).

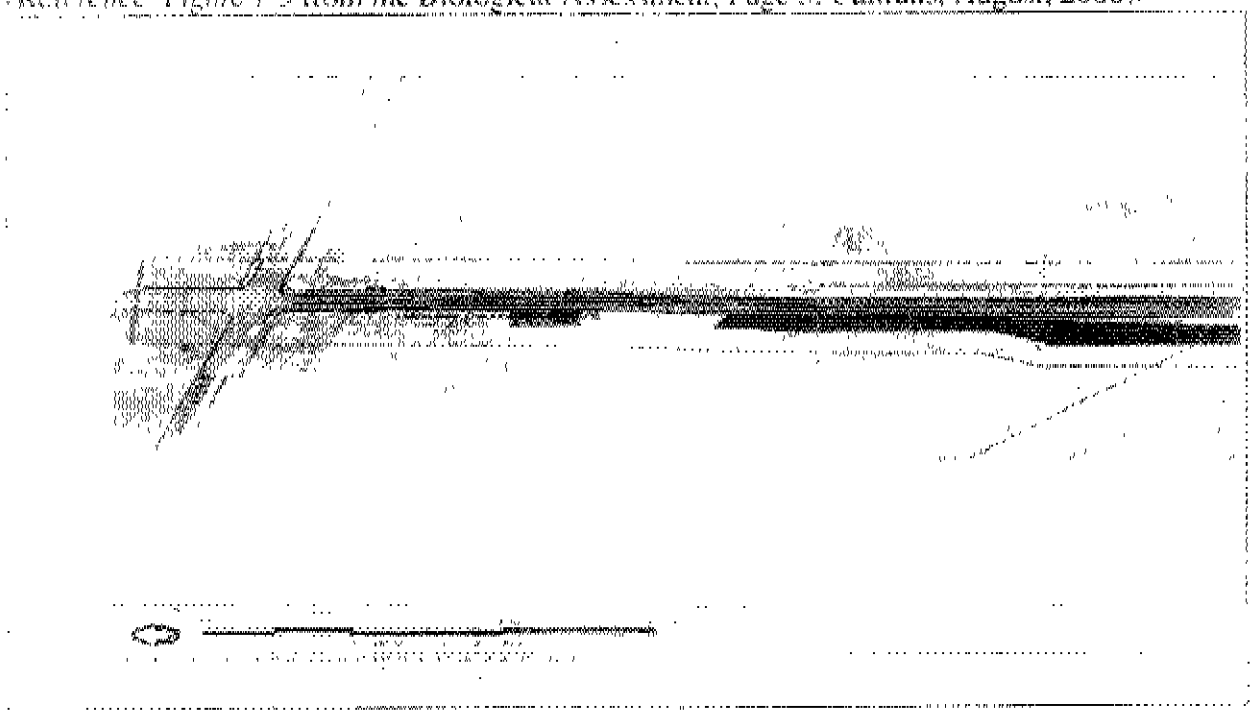
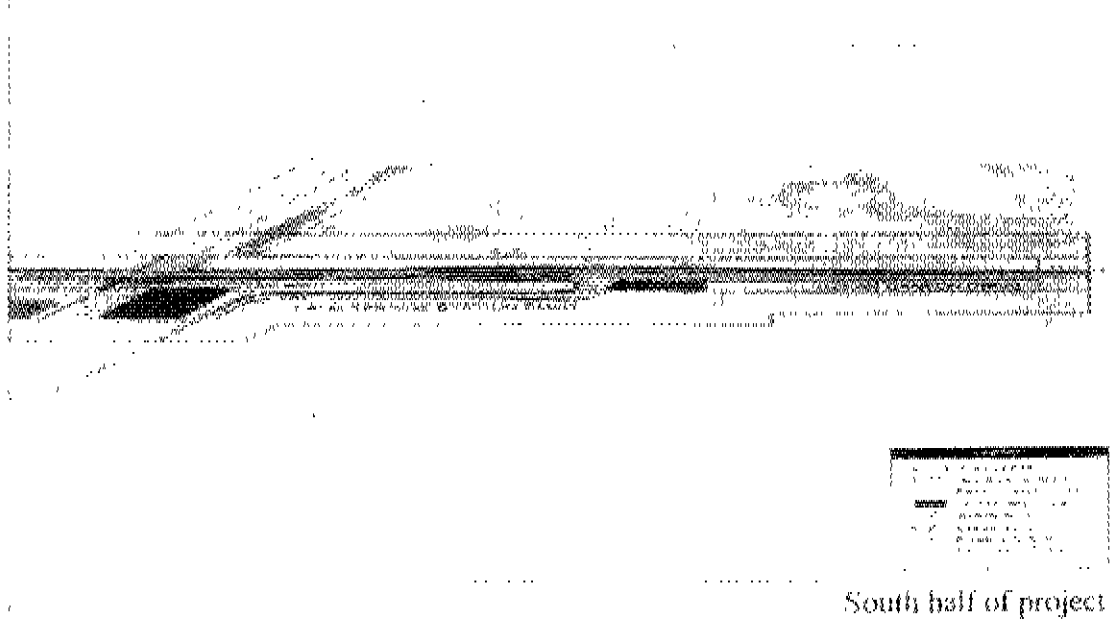


Figure 3b. Indian Canyon Drive Street and Bridge Widening Project - south half of project area (Reference: Figure 1-3 from the Biological Assessment, Page 5, Caltrans, August, 2006).



Estimated Off-set(s) for the Proposed Project

Direct impacts include temporary and permanent impacts to the fringe-toed lizard and milk-vetch and their habitats. Indirect impacts would occur through the potential for increased road kill and disruption of the existing sand movement and deposition dynamics that play an important role in the biology of the fringe-toed lizard and milk-vetch habitats. As a result of this Project, the acres of habitat loss (direct) and acres of habitat degradation and road mortality (indirect) are summarized in Table 1. Compensatory acres for the vegetation community loss are identified in Conservation Measures #2 and #3.

Conservation measures for impacts resulting from the proposed Project would be implemented according to the agreements established in the *Conservation Plan Addressing the Direct, Indirect, and Cumulative Effects of Interstate 10 Coachella Valley Interchange Projects* (Agreement). The Agreement assessed potential impacts and mitigations for the proposed project. The Agreement established mitigation ratios at 2:1 for direct impacts of the interchange projects and 1:1 for indirect impacts. Required conservation measures would be provided through the acquisition of land and the implementation of a cooperative agreement.

Implementation of the Project would permanently impact 7.1 acres of habitat described as disturbed and undisturbed stabilized desert sand fields and Sonoran creosote and indirectly impact 26.34 acres of habitat described as disturbed and undisturbed stabilized desert sand fields, Sonoran creosote, desert saltbush scrub, tamarisk scrub and Sonoran wash scrub (Table 1).

Table 1. Estimated Direct and Indirect Impacts for the Proposed Project as per PBO (1-6-04-F-328.2-4)/Conservation Plan/Appended Opinion for Indian Avenue Interchange Project.

	Indirect Impacts Acres	Direct Impacts Acres	Indirect Impacts Acres	Compensation Ratio	Total Compensation Acres
Indian Avenue and Bridge Widening Project		7.1		2:1	14.2
	26.34[2]*		26.34	1:1	26.34
Total Acres					40.54

[1] Increased from the toe slope on one side to the toe slope on the opposite side, plus a 25 foot buffer on each side designated as a temporary construction area.

[2] Applied to lots between and 180 feet from the edge of roadway improvements. The resulting acreage calculations are defined by use of a large-scale "developed" areas, which are portions of road most appreciable disturbed through development.

* These indirect impacts/effects were previously consulted on by the USFWS, as stated in the June 22, 2005 Appended BO for the Indian Avenue Interchange Project (1-6-05-F-328.2).

Conservation Measures

Caltrans and the City proposed the following measures as part of the proposed action to avoid and minimize adverse effects for listed species.

1. Conservation measures 1 through 20 of the PBO shall be implemented by the Caltrans/County for the appended Project with the possible exception of PBO #4. If loose sand is to be removed from the Project site and deposited on the Preserve in accordance

with the existing agreement between CVWD and the City, then PBO conservation measure #14 would be null

2. Approximately 14.2 acres (7.1 acres at a 2:1 ratio or 14.2 acres) of suitable habitats for the Coachella Valley milk vetch and Coachella Valley fringe-toed lizards shall be preserved in an established conservation area near the action area as agreed to on Page 5 of the Appended BO for the Tiered Date Palm Drive Interchange Project (1-6-05-F-3282, LA 455900). Prior to construction, the Coachella Valley Association of Governments (CVAG), acting on behalf of Caltrans, has committed to the purchase and establishment of a conservation area, the finalization of a conservation agreement, and the establishment of an endowment fund for the management of the conservation area in perpetuity. The 26.54 acres (Table 1) of conservation habitat, required to offset the indirect impacts for this proposed Project, was previously purchased and accounted for as identified in the Appended BO for the Tiered Indian Avenue Interchange Project (1-6-05-F-3282).

3. The 14.2 acres (Table 1) of sandy habitat suitable for the fringe-toed lizard and milk-vetch shall be purchased prior to the commencement of construction activities (including brush clearing and grading) associated with the Project.

4. Sand removed from the project footprint shall be deposited in accordance with an agreement between the City and CVWD. The Service shall approve the removal of sand and the deposition area prior to pickup, transportation and deposition of sand. If the quality of loose sand to be removed from the Project site and deposited on the Preserve is not suitable (consisting of rocks, fine sediment, and gravel), then conservation measure #4 would be null and the sand would not be removed to the Preserve.

5. During construction, soils to be impacted shall be watered down to prevent fugitive dust from drifting into adjacent habitat.

6. All construction equipment shall be cleaned prior to initial movement to the construction site.

7. Caltrans/City shall ensure that the Contractor avoids entering or damaging habitat located outside of the project footprint. The Contractor's operations shall be limited to the immediate project footprint and other designated work areas shown on the plans, except as authorized in writing by the authorized biologist. The Contractor shall avoid killing or injuring any wildlife within the habitat and shall avoid killing or injuring any wildlife that crosses into the work area, except as required for the immediate safety of project personnel. The Contractor shall notify the authorized biologist of any wildlife killed or injured by construction activities or the contractor's employees in the course of work. Native plants located inside the habitat, that are not shown on the plans to be removed, and that are injured or damaged by reason of the Contractor's operations, shall be replaced by the Contractor in accordance with Section 7-1.11 "Preservation of Property" of the Standard Specifications.

s . The Contractor shall retain, and have available, the services of an authorized biologist who will perform the duties of the biological monitor. The monitor is required to provide a pre-construction survey of the project site and any associated staging areas, provide employee training, monitor the temporary silt/wildlife fence installation, perform construction monitoring, and conduct endangered species relocation.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation and the impacts of State and private actions, which are contemporaneous with the consultation in progress.

Project Site Characteristics and Surrounding Land Use

For the purposes of this Opinion, the Project area is the action area. Ecological attributes in the surrounding area that influence the Project area include fluvial dynamics in the Whitewater River watershed, eolian sand transport, and recent urbanization.

The Project area lies within the San Gorgonio/Whitewater River sand transport corridor/blow-sand zone and fluvial process system of the Coachella Valley (Griffiths *et al.* 2002). Sands are transported through eolian and fluvial processes in a generally east and southeast direction across the Project area and through the valley (Griffiths *et al.* 2002). Griffiths *et al.* (2002) reported that sediment delivery to the Coachella Valley is highly episodic, and that long periods of no delivery must be anticipated during drought conditions (Griffiths *et al.* 2002). Periods of deficit fluvial sediment supply would likely result in degraded milk-vetch and fringe-toed lizard habitat[1] in the action area.

The project site and nearby surrounding area consist of vegetation communities described as stabilized sand fields/Sonoran creosote bush scrub (disturbed), stabilized desert sand fields/desert saltbush scrub; stabilized desert sand fields; stabilized desert sand fields (disturbed); tamarisk scrub, and Sonoran wash scrub (Holland 1986) (Table 2).

Consistent with Sonoran creosote scrub, the soils include gravelly-loamy sand, which is considered a well-drained secondary soil of slopes, fans and valleys (Holland 1986). The status

[1] Fringe-toed lizard habitat consists of active or minimally stabilized dunes of the late Holocene age or active eolian surfaces on dunes of greater antiquity (Griffiths et al. 2002). The lizards may use active, relatively large barchanoid (crescent shape) dunes, or their habitat may consist of relatively large coppice mounds (small outcropping of sand stabilized by desert shrubs such as mesquite trees, creosote bush). The range of the diameter of sand must fall between 0.1 and 1mm with a mean of about 0.2 and 0.4 mm (Bowler et al. 1984), or Barrows (1997) 0.180-0.355mm. The fringe-toed lizard generally prefers the leeward side of dunes and hummocks and seldom uses the windward (or more stabilized) side.

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of the habitat within the action area includes various states of suitability including an active sand sheet, stabilized desert scrub, and creosote shrub-coppice mound communities partially stabilized by exotic plants.

Table 2. Vegetation within the biological study area, Permanent and Temporary Impacts.

Vegetation Community	Acres of Vegetation Communities Within the Affected Project Site and Nearby Surrounding Area
Stabilized desert sand fields/Creosote bush scrub (undisturbed*)	7.27
Stabilized Desert sand fields/desert saltbush scrub*	0.76
Stabilized desert sand fields*	8.45
Stabilized desert sand fields (disturbed*)	16.97
Tamarisk shrub	0.30
Semarid wash scrub*	2.73
TOTAL	36.48

*Vegetation communities in the project area considered suitable for milk-vetch and fringe-toed lizard as described in the Biological Assessment, 2008.

It is important to discuss a small area (about 1 acre) of the proposed Project located to the west of the railroad overpass and Garnet Mine berm. The deposit of sand to this small area is slightly faster than the transport of sand from this area, generally because of sand ramping processes. This results in an accumulation of loose sand within this small acre of land. The retention of loose sand in this small area is heavily influenced by the surrounding topography and existing developments (railroad tracks and Garnet Mine berm). This area appears to change in size over a short period of time. Fringe-toed lizards were observed in this small area in August 2007, by Service staff.

The Whitewater River is the largest contributor of fluvial sand and sediments to the Project area. Other north-south tributaries such as Garnet Creek historically deposited sand and sediments in the Project area from the north. But, the surrounding developments and the construction of the railroad tracks have effectively cut-off the fluvial deposition and thereby reduced the amount of sand deposited in the Project area and reduced the sand sheet coverage.

The Indian Avenue Preserve (Preserve) (1,230 acres), also known as the Whitewater Floodplain Reserve, was established in 1986 through the approval of the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (HCP) and is situated east of the most southern portion of the Project area. Aeolian and fluvial sand moves across the Project area and around the Garnet Mine to the Preserve. The proposed Project would not alter the transport of sands to the Preserve and beyond, with the exception of one Project barrier, the 22-foot bridge retaining wall.

Along with the historical changes described above that have impeded fluvial processes and decreased the amount of sand in the Coachella Valley sand transport system, numerous man-

made structures were built directly on the sand fields and in the transport corridor, thereby partially blocking the fluvial and eolian transport of sand. These structures have altered the surrounding area by influencing the settling and flow of sand and sediments in the Coachella Valley. Sharp and Sanders (1978) reported that 90 percent of the Coachella Valley sand is generally transported through the system, depending upon the wind conditions about 27 inches above the ground.

Status of the Species and their Habitats in the Action Area

Coachella Valley Fringe-toed Lizard and Coachella Valley Milk-vetch

The Project area is in and adjacent to currently occupied fringe toed lizard habitat primarily situated along the west side of the Palm Springs Station Road. General biological surveys were conducted within the Project area but no focused survey protocol was preformed (BA, pp. 31 and 44). General surveys were conducted on May 20, 2007, and June 14, 2002, with no observations of fringe-toed lizards. Caltrans has made an "Inferred Presence Determination" for this species and off set potential fringe-toed lizard occupancy through the regional strategy in the PBO. A Service staff employee observed two fringe-toed lizards near the proposed construction site on August 1, 2007.

Because the fringe-toed population size in the action area is unknown, estimates within the action area will be drawn from other studies. Important habitat features, such as sand compaction and patch size, likely influence densities (Turner *et al.* 1981, Barrows 1997). Monitoring efforts have documented fluctuations in population numbers that appear related to availability of resources, such as food and loose sand (Barrows 1996). A long-term demographic study by Muth and Fisher (unpublished data, 1985-2003; pers. comm.) revealed density variations among years from 1 to 60 per acre on the nearby Preserve. However, Mark Fisher (pers. comm. 2005) noted a very low density of approximately 1 lizard per acre within approximately 6 acres (2.3 hectare) of occupied habitat in a portion of the Preserve area at the end of a prolonged drought, low rates of sand transport, and depleted sand conditions that proceeded the winter of 2004/2005. In summary, studies indicate that the number of fringe-toed lizards per acre on the Project site could range between a low of 1/acre and a high of 60/acre depending upon the presence of suitable habitat and other environmental factors (e.g., droughts that lead to a lower sediment input to the Coachella Valley sand transport system).

Using the numbers generated on the nearby Preserve discussed above and based on the quality of habitat on the entire Project site (33.44 acres) in August 2007 (except for one acre of suitable habitat, typically consists of compacted sand, low quality habitat (Table 2), and habitat adjacent to the existing roadway, and observations made by the Service staff on August 1, 2007), the actual number of individuals that may be present under these conditions is likely to be about 46 fringe-toed lizard individuals. This estimate is based on the following: one acre of suitable habitat is loose sand without shrubs and therefore it may not support the highest number of fringe-toed lizards as an acre of high quality habitat with shrubs (60 individuals/acre). However, we would expect that there could be up to 30 individuals on that one acre of suitable habitat. Of

the remaining 32.44 acres of low quality or unsuitable habitat found within the Project site, potentially about ½ of that acreage could support the lowest estimated number of individuals or about 16 fringe-toed lizards

Milk-vetch surveys were conducted in the Project area on May 20, 2002, and June 14, 2002. Eighteen individuals were found within the action area along the west side of the road in the southern portion of the Project area. The patch of milk-vetch was located in an area that receives more road drainage than the surrounding area (BA, Figure 4-1).

Population sizes of milk-vetch vary widely from year to year, primarily depending on precipitation conditions, making assessments of total individual numbers difficult. At locations near where botanists monitored the milk-vetch in 1995, densities varied from 1 to 24 plants per acre (Barrows 1987, Sanders and Thomas Olsen Associates 1995). Of the total amount of habitat found within this Project site (33.44 acres), one acre of habitat is suitable, which could be populated by up to 24 milk-vetch plants. A total of 32.44 acres consist of typically low quality and patchy habitat as well as habitat adjacent to the road. We expect that this area could be populated by about ½ of the individuals typically found in low quality habitat or about 16 individuals. Based on future environmental conditions, the total number of milk-vetch plants on this site could approximate 40 individuals.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action that would be added to the environmental baseline. Direct effects are the immediate effects of the project on the species or its habitat. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the Project.

Direct Effects

Direct effects to 7.1 acres of fringe-toed lizard and milk-vetch habitat would occur from the construction of the proposed Project, including temporary and permanent impacts (Table 1). These effects are off-set at a ratio of 2:1 (equaling 14.2 acres of habitat) based on the proposed action and PBO conservation measures #18 and #19. The factors that directly impact the fringe-toed lizard and milk-vetch within the 7.1 acres of habitat are discussed in the following sub-sections.

The direct effects of vegetation removal on fringe-toed lizards include the loss of food supply and shelter. Perennial plants are often at low densities in fringe-toed lizard habitat, but are important for thermoregulation, food, and cover. Under most summer daytime conditions, fringe-toed lizards are hyperthermic (body absorbs more heat than it can dissipate), therefore both shade and burrow refugia are important for this species. Fringe-toed lizards also depend upon prey items such as arthropods and insects that use vegetation for shelter and food. Conservation measure #7 above and PBO conservation measures #4 and #5 would decrease the impacts of plant loss to fringe-toed lizard habitat.

The proposed project would construct one sand transport barrier, but because little if any fringe-toed lizard and milk-vetch habitat occur directly down wind, the effect would be inconsequential. This barrier is a 22-foot retaining wall for the bridge support. The current bridge support impedes eolian sand transport but provides fringe-toed lizard habitat (1 acre). No other new barriers, such as culverts or ditches would be constructed. Existing curbs extend from both sides of the railroad bridge to the bottom of the bridge's grade on the south side. Due to their elevated position on the railroad bridge overpass, these curbs are not anticipated to interfere with fluvial sand transport processes. In addition, due to the sand ramping effects of that particular area, the curbs are also not anticipated to interfere with eolian sand transport processes.

Loose sand within the Project area would most likely have to be moved to construct the railroad overpass. An existing agreement between the CVWD and the City allows for the removal of sand from roadways and placing it on the Preserve (M. Schwartz, CVWD, pers. comm. and Marcus Fuller, City). While sand is currently present on the west side of the bridge in the Project area, by the time construction begins, this sand may have been transported off-site by the prevailing winds. However, should suitable fringe-toed lizard habitat (i.e., loose sand) be present at the time of construction, and if it can be removed cleanly (e.g., without rocks, fine sediment, and gravel), and deposited on the Preserve for the purposes of retaining it in the system, then conservation measure #4 would be implemented. PBO conservation measure #15 would also apply.

Ground disturbance would affect vegetation through habitat destruction and degradation due to vegetation removal and soil/sand removal and compaction. All previously observed (18) milk-vetch plants and associated seed bank are anticipated to be damaged, uprooted, buried or killed during construction and operation and maintenance. An unknown quantity of seeds would likely be removed, buried too deeply to germinate, or unproductive soils/gravel may be brought to the surface, which could alter the substrate suitability and hydrology.

Depending upon the environmental conditions at the time of the proposed Project, the number of individual milk-vetch plants could be lower than 18 or range up to 40 individuals as discussed above. Proposed PBO conservation measure #18 and #19 would compensate for the loss of milk-vetch within the Project area and milk-vetch seed would be conserved through PBO conservation measure #9. Conservation measure #7 would also reduce plant destruction.

The impacts discussed above could lead to the take of fringe-toed lizards. Based on the quality of habitat in August 2007, which except for one acre of high quality habitat, typically consists of low quality patches of suitable habitat, habitat adjacent to the existing roadway, and observations made by the Service staff on August 1, 2007, the actual number of individuals that may be present in the direct impact area under these conditions is likely to be about 46 fringe-toed lizard individuals. This number is based on one acre of suitable habitat populated by 30 individuals and 32.44 acres of low quality habitat populated by 16 individuals. Impacts to these individuals will be off-set by conservation measures #1, #2, #7, and #8.

Indirect Effects

Indirect effects to 26.34 acres of habitat potentially occupied by the fringe-toed lizard would occur from the construction of the proposed Project (Table 1). The degradation and road edge effects to 26.34 acres of potentially occupied habitat would adversely impact fringe-toed lizards occupying the area by resulting in increased mortality from an increase in road capacity. Indirect effects to fringe-toed lizards would be minimized through the implementation of PBO conservation measures #18 and #19. Additional temporary adverse impacts to fringe-toed lizards include displacement of individuals to the adjoining habitat outside of the Project site Individuals may be impacted due to restriction of their home range and consequent loss of food and cover, as well as increasing competition within the remaining population within the smaller residual habitat base. PBO conservation measure #4 restricts construction staging areas outside of fringe-toed lizard habitat, which would reduce these impacts.

Mediterranean grass occurs on the proposed Project site. Exotic plant species may overtime adversely affect milk-vetch and the fringe-toed lizard within the proposed Project area and surrounding lands. Conservation measures #4, #5, #6, and #8 and PBO conservation measure #6, #8, and #10 were proposed to decrease the spread of invasive weeds to other areas and within the Preserve and Project area.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this Opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act

At the time, we are not aware of any cumulative effects within the action area.

CONCLUSION

After reviewing the current status of the fringe-toed lizard, environmental baseline for the action area, effects of the proposed projects, and cumulative effects, it is the Service's biological opinion that the appended project, as proposed, is not likely to jeopardize the continued existence of the Coachella Valley fringe-toed lizard. Critical habitat has not been designated within the action area, therefore, none would be adversely affected by the proposed project.

Coachella Valley Fringe-toed Lizard

Overall, impacts to the fringe-toed lizard habitat would be relatively minor. The Project is small in size, few individuals would be affected compared to the rangewide distribution of this species, and the numerous Project conservation measures would further avoid and minimize these effects.

The direct and indirect loss of habitat would be offset by acquiring 40.54 acres in an area deemed critical for the long term sustainability of the Preserve System in the Coachella Valley, which is designed to conserve the fringe-toed lizard. All lands acquired to offset direct and indirect effects to the fringe-toed lizard would be preserved in perpetuity and managed for the recovery of the fringe-toed lizard.

Coachella Valley Milk-vetch

Indirect and direct impacts to the milk-vetch would be minimized because the proposed road widening in the affected area is already adjacent to an existing road. The Project is small in size and few plants would be affected, therefore impacts to milk vetch and its habitat would be small compared to the rangewide distribution of the species. Proposed compensation measures would be implemented prior to or at the beginning of construction and would support conservation efforts for this species. In addition, the proposed conservation measures, such as salvaging of seeds and restriction of vehicular traffic outside of the Project area, would further reduce adverse effects.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Caltrans and/or agencies and individuals designated by Caltrans, as the lead Federal agency for the Project. Caltrans has ongoing responsibility to regulate the activity that is covered by this incidental take statement. If Caltrans (1) fails to assume and implement the terms and conditions, or (2) fails to require its designated agency(ies) and individual(s) to adhere to the terms and conditions of this incidental take statement through enforceable terms incorporated into contracts, grants, and permits related to work activities associated with the Project, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of the incidental take, Caltrans or its designated agency(ies) or individual(s), must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR § 402.14(i)(3)].

Amount or Extent of Take

The Service anticipates the following levels of take for the Coachella Valley fringe-toed lizard could occur as a result of constructing and operating Project.

The Service anticipates that a small portion of the estimated 46 individual fringe-toed lizards that potentially populate the Project site would be taken as a result of this proposed action. The incidental take is expected to be in the form of:

1. Accidental injury or death of no more than one (1) fringe-toed lizard as a result of direct and indirect impacts from road construction and associated activities. This number is based on the assumption that effective survey clearance methods would be performed by Caltrans and the presence of an authorized biologist would be on site during all phases of construction and would find fringe-toed lizards that may wander onto the construction site and move them off-site to a secure location.

2. Harassment (flushing or handling) of no more than thirty (30) fringe-toed lizards within the identified affected site within the ROW and access road on the Indian Canyon Drive Street and Bridge. This number is primarily based on the removal of about 1 acre of high quality habitat from the Project site and the potential of moving fringe-toed lizards from the area.

Reasonable and Prudent Measures

The Reasonable and Prudent Measures, and Terms and Conditions stipulated in the PBO shall be implemented as part of this appended Opinion. In addition, the Service requires the following Reasonable and Prudent Measure as necessary and appropriate to minimize take of Coachella Valley fringe-toed lizards for the proposed Project:

Caltrans shall ensure that all conservation measures are implemented to reduce effects to the fringe-toed lizard.

Terms and Conditions

To be exempt from the prohibitions under section 9 of the Act, Caltrans must comply with the following terms and conditions, which implement the reasonable and prudent measure, described above, and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary and shall be incorporated as binding requirements into all applicable funding agreements, contracts, and permits.

Caltrans shall implement the above reasonable and prudent measure through the following terms and conditions:

At least 30 days prior to project construction, Caltrans/City shall submit to the Service for review and approval: (1) a pre-construction survey protocol and clearance survey

protocol, (b) monitoring protocol for the species, (c) fringe-toed lizard fence design specifications during all phases of construction, (d) map of all construction storage and staging areas, and (e) a proposed authorized biologist.

The Service retains the right to access and inspect the Project site for compliance with the proposed Project description and with the terms and conditions of this Opinion. Any habitat destroyed that is not in the identified Project footprint shall be disclosed immediately to the Service for possible re-initiation of consultation.

Reporting Requirements

1. To document compliance with the foregoing terms and conditions, Caltrans or its designated contact, shall submit an annual report to the Service that describes and summarizes the implementation of the proposed Project and its associated conservation measures.

2. Keep the Service informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

Disposition of Sick, Injured, or Dead Specimens

The Service's Division of Law Enforcement, San Diego, California (619) 557-5063 is to be notified within three working days should any fringe-toed lizard(s) be found sick, injured, or dead in the Project area. The Service's Carlsbad Fish and Wildlife Office should be notified concurrently at (760) 431-9440. Written notification to both offices must be made within five calendar days and include the collection date and time, location of the lizard(s), and any other pertinent information. Care must be taken in handling sick or injured lizard(s) to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The remains of intact fringe-toed lizard(s) shall be placed with educational or research institutions holding appropriate State and Federal permits.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans or to develop information.

Caltrans and the City should follow Executive Order 13112 and only replant with native flora to reduce the need for irrigation and to prevent invasive exotic plant species from stabilizing active sand transport areas.

REINITIATION NOTICE

This concludes formal consultation on the Indian Canyon Drive Street and Bridge Widening Project outlined in the initiation request. As provided in 50 CFR § 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

If you have any questions or concerns about this consultation or the consultation process in general, please contact Peggy Bartels of this office at (760) 431-9440 extension 310.

Sincerely

Therese O'Rourke
Assistant Field Supervisor

cc: Scott Quinnell, Caltrans, District 8
Marcus L. Fuller, City of Palms Springs

LITERATURE CITED

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U.S. Department of Transportation. August 2006. Biological Assessment for the Indian Canyon Drive Street and Bridge Widening Project. P53 +Appendices.

Appendix E Coordination and Consultation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

In Reply Refer To:
FWS-ERIV-3180.1

OCT 2 3 2002

Mr. Nathaniel Pickett
Chief, Office of Biological Studies/Permits
Department of Transportation, District 8
464 W Fourth Street, 6th Floor
San Bernadino, California 92401-1400

Attention: Quyen Tang

Re: Request for Candidate, Proposed, Threatened, or Endangered Species for the Proposed Indian Canyon Drive Widening Project in Riverside County, California

Dear Mr. Pickett:

The U.S. Fish and Wildlife Service (Service) has reviewed the information provided in the July 29, 2002, letter from EDAW Inc. to assess the potential presence of federally listed threatened, endangered, or proposed species at the proposed project site. We do not have site specific information for your project area. However, to assist you in evaluating whether or not the proposed project may affect listed species, we are providing the attached list of species that occur in the general project area. We recommend that you seek assistance from a biologist familiar with your project site, and with the listed species to assess the potential for direct, indirect, and cumulative effects likely to result from the proposed activity. You should also contact the California Department of Fish and Game for State-listed and sensitive species that may occur in the area of the proposed project. Please note that State-listed species are protected under the provisions of the California Endangered Species Act.

If it is determined that the proposed project may affect a listed or proposed species, or the designation of any critical habitat you should initiate consultation (or conference for proposed species) with the Service pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation.

Should you have any questions regarding the species listed or your responsibilities under the Act, please call John DiGregoria of my staff at (760) 431-9440.

Sincerely,

Pete Sorensen
Acting Assistant Field Supervisor

cc: Lyndon Quon, Senior Wildlife Biologist, EDAW

Enclosure

Listed Endangered, Threatened and Proposed Species
that may occur near the Proposed Indian Canyon Drive
Project in Riverside, California

Common Name	Scientific Name	Status
PLANTS		
Coachella Valley milk-vetch	*Astragalus lentiginosus coachellae*	E
REPTILES		
flat-tailed horned lizard	*Phrynosoma mcallii*	PT
Coachella Valley fringe-toed lizard	*Uma inornata*	T
MAMMALS		
Palm Springs pocket mouse	*Perognathus longimembris bangsi*	FSC
Palm Springs ground squirrel	*Spermophilus tereticaudus chlorus*	FSC
BIRDS		
burrowing owl	*Speotyto cunicularia*	FSC
INVERTEBRATES		
Coachella Valley giant sand-treader cricket	*Macrobaenetes valgum*	FSC
Coachella Valley Jerusalem crickett	*Stenopelmatus cahuilaensis*	FSC

242

E=Endangered PT=Proposed Threatened T=Threatened
FSC=Federal Species of Concern

)EPARTMENT OF FISH AND GAME
astern Sierra & Inland Deserts Region
7800 Madison St. #223
idio, CA 92201
'60) 775-6108

9 December, 2002

Mr. Lyndon Quon
Senior Wildlife Biologist
EDAW
1420 Kettner Blvd, Suite 620
San Diego, CA 92101

Dear Mr. Quon,

Attached please find a list of species that should be addressed in the CEQA analysis for the road-widening project on Indian Avenue in the City of Palm Springs. If you have any questions I may be reached at the above phone number.

Sincerely,

Kimberly Nicol

Kimberly Nicol
Staff Environmental Scientist
Eastern Sierra-Inland Deserts Region

Species list for Indian Avenue project

'lants
:oachella Valley milkvetch, *Astragalus lentiginosus* var. *coachellae* (FE)
ittle San Bernardino Mountains linanthus, *Linanthus maculatus (or Gilia maculata)**
riple-ribbed milkvetch, *Astragalus tricarinatus* (FE)

ıvertebrates - Insects
oachella Valley giant sand-treader cricket, *Macrobaenetes valgum*
oachella Valley Jerusalem cricket, *Stenopelmatus cahuilaensis*

eptiles
oachella Valley fringe-toed lizard, *Uma inornata* (FT/SE)
esert tortoise, *Gopherus agassizii* (FT/ST)
at-tailed horned lizard, *Phrynosoma mcallii* (FTE/CSC)

rds
ırrowing owl, *Speotyto cunicularia* (CSC)
issal thrasher, *Toxostoma crissale* (CSC)
Conte's thrasher, *Toxostoma lecontei* (CSC)

ımmals
ıachella Valley round-tailed ground squirrel, *Spermophilus tereticaudus chlorus* (CSC)
lm Springs pocket mouse, *Perognathus longimembris bangsi* (CSC)
ninsular bighorn sheep, *Ovis canadensis nelsoni* (FE/ST)

DAW

.W INC

) KETTNER BLVD

E 620

DIEGO CALIFORNIA

11

619 233 1454

619 233 0952

.edaw.com

October 23, 2002

Mr. Daniel Marquez
U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

Subject: Mojave Desert Tortoise and Coachella Valley Milkvetch Survey Results for the Indian Canyon Drive Street and Bridge Widening Project

Dear Mr. Marquez:

This report is notification that focused surveys for the federally and state-listed threatened Mojave desert tortoise (*Gopherus agassizi*) and the federally listed endangered Coachella Valley Milkvetch (*Astragalus lentiginosus* var. *coachellae*) have been conducted for the Indian Canyon Drive Street and Bridge Widening Project. The project site is located between Palm Springs Station Road and Garnet Avenue within the City of Palm Springs in Riverside County (Figures 1 and 2). The federal lead agency for the proposed project is the Federal Highway Administration (FHWA).

INTRODUCTION

Project Description

Implementation of the Preferred Alternative would keep the east edge of the existing pavement mostly in place. The roadway would be expanded primarily along the west side. In addition to the road construction, the existing bridge structure would be widened on the west side. This alternative would not require right-of-way acquisition.

Implementation of the Preferred Alternative would include six 12-foot-wide lanes, three in each direction. The design also incorporates a 4-foot-wide outside shoulder and a 3-foot-wide parkway on both sides of the roadway. The bridge structure would include six 12-foot-wide lanes, three in each direction. Similar to the roadway section, the bridge would also include a 4-foot-wide outside shoulder and a 3-foot-wide parkway on each side. The Preferred Alternative would result in an ultimate six-lane configuration to Palm Springs Station Road.

A maximum 22-foot-high retaining wall would be required for this alternative. The wall would be located to the south of the bridge, between Palm Springs Station Road and Indian Canyon Drive. The Preferred Alternative would allow traffic to flow along the existing lanes while the expansion occurred to the west. Traffic would then be rerouted to the newly constructed west side of the roadway while work is completed on the east lanes.

Existing Conditions

The site ranges in elevation from approximately 650 feet above mean sea level (AMSL) to 720 feet AMSL and slopes gradually toward the southeast region of the Coachella Valley. The site is located south of I-10 along Indian Canyon Drive. The northernmost section consists of urban development. There is only one substantial physical feature on the site, known as Garnet Hill. South of the hill, the eastern section is bounded by a gravel site with a 25-foot-high sand wall that borders Indian Canyon Drive. Across from the gravel pit, the site includes open disturbed sand fields. Historically, the Whitewater River channel occurred in the southern portion of the study area. Being the main hydrological resource to this particular region, the Whitewater River has dramatically decreased in size and now occurs south of the project area, along Route 111.

ED STATES

PE

RALIA

Three soil series occur onsite: Carsitas, Carsitas Variant, and Lithic Torripsamments-Rock outcrop complex (Knecht 1980). The Carsitas series occurs over a majority of the site and consists predominately of coarse-textured gravelly or cobbly granitic alluvium. These soils often form an indefinite pattern of braided stream channels such as the ones that occur onsite within the Whitewater River. This soil typically occurs on slopes ranging from 0 to 9 percent, and elevation ranging from 800 feet AMSL to 220 feet below sea level. Carsitas Variant series only occurs at the top of Garnet Hill. This small area consists of well-drained alluvium soils that form over sandstone. Typically, this series is found on 0 to 30 percent slopes with a fine sand surface layer. The Lithic Torripsamments-Rock outcrop complex series makes up the majority of soils of Garnet Hill. This series is somewhat excessively drained and made from old alluvial fill and sandstone. Slopes range from 15 to 75 percent, and elevations range from 600 to 1,600 feet.

The vegetation types of the project area consist of Sonoran creosote bush scrub, Desert saltbush scrub, Sonoran wash scrub, and tamarisk scrub (Figure 3). Sonoran creosote bush scrub dominates the project site with perennial shrubs such as burro-bush *(Ambrosia dumosa)*, creosote bush *(Larrea tridentata)*, indigo bush (*Psorothamnus schottii*), and brittlebush (*Encelia farinosa*). Subshrubs such as sandpaper plant *(Petalonyx thurberi)* and California croton *(Croton californicus)* dominate the western portion of the project area along Indian Canyon Drive and Palm Springs Station Road. Skeletons of the common annual apricot mallow *(Sphaeralcea ambigua* var. *rugosa)* dominate the roadsides as well as live individuals of rancher's fireweed *(Amsinckia menziesii)* and tiquilia *(Tiquilia plicata)*.

West of Indian Canyon Drive one palo verde tree (*Cercidium floridium*) and one smoke tree *(Psorothamnus spinosus)* were found onsite, indicating a past presence of a desert dry wash woodland community. Most of the area west of Indian Canyon Drive and north of the railroad can be described as Sonoran wash scrub with cheesebush *(Hymenolcea salsola)* as the dominant perennial shrub; however, Sonoran creosote bush scrub and desert saltbush scrub occur along the western roadside with predominantly creosote bush and four-winged saltbush (*Atriplex canescens*).

A population of nonnative tamarisk (*Tamrix* sp.) occurs on the eastern side of the project area along the Union Pacific Railroad right-of-way. However, the majority of the project site is heavily disturbed from previous road construction, commercial development, and mining activities. Much of the site west of Indian Canyon Drive and north of the Southern Pacific Railroad tracks consists of open disturbed sand fields with dirt roads dissecting the desert vegetation, creating a sparse desert community with some diversity but limited numbers of individual plants.

METHODS

Protocol-level Mojave desert tortoise surveys were conducted by EDAW, Inc. (EDAW) senior wildlife biologist Lyndon Quon and Eisenbart Biological Services wildlife biologist Richard Eisenbart. Focused surveys for the Coachella Valley milkvetch were conducted by EDAW botanist Danielle Tannourji. The focused surveys for the desert tortoise and Coachella Valley milkvetch were conducted according to industry standard methodologies. The desert tortoise surveys followed the current Service protocol guidance, dated January 1992 (USFWS 1992).

Focused desert tortoise surveys consisted of walking a series of 10-foot-wide belt transects over the BSA, for 100 percent survey coverage of the study area. The study area is defined as all areas within 500 feet of the Indian Canyon Drive project site. The study area consists of the area 152 meters (500 feet) to either side of Indian Canyon Drive, and extending 152 meters (500 feet) to the north and south of the project extent along the existing roadway. As per the protocol, additional Zones of Influence transects were walked over suitable desert tortoise habitat at distances of 100, 300, 600, 1200, and 2400 feet from the study area boundary.

The methodology for the Coachella Valley milkvetch survey followed the CDFG guidelines for rare, threatened, and endangered plants and plant communities. Focused meandering surveys were conducted twice during the spring season within the proposed project area during the optimal blooming period of this sensitive species.

RESULTS

Mojave Desert Tortoise Survey Results

Surveys following the current USFWS protocol were conducted for the study area and adjacent offsite areas (i.e., the Zones of Influence, as defined in the protocol) on May 20 and 21, 2002. No desert tortoises were observed, and no sign were detected onsite or along the Zones of Influence transects. The disturbed nature of the site and presence of a sandy substrate are not conducive to occupation by the desert tortoise. These habitat factors and the negative results of the protocol-level focused desert tortoise surveys indicate that the species does not occur onsite or within the immediate vicinity of the project area. The Mojave desert tortoise field survey data form is included as an attachment.

Coachella Valley Milkvetch Survey Results

A population of 18 individuals of the endangered Coachella Valley milkvetch was found in the sand system 100 feet from Indian Canyon Drive and 10 feet from Palm Springs Station Road (Figure 3). At EDAW's request, Cameron Barrows, an accredited biologist from the Center for Natural Lands Management, visited the site and confirmed the presence of the species. Although the population did not flower or set seed this spring because of significantly low levels of rainfall, the perennial subshrub could bloom between February and May in the following season with average rainfall and if no ground disturbance occurs. The habitat can be described as a disturbed eolian sand system dominated by native species such as croton and sandpaper plant. The closest known population of Coachella Valley milkvetch in relation to the project site is located just north of the study area, a site known as the Indian Canyon Drive Preserve, which occurs within the larger Whitewater Floodplain Reserve.

CONCLUSION

Focused surveys determined that the federally and state-listed threatened Mojave desert tortoise does not occur within the Indian Canyon Drive Street and Bridge Widening Project study area. However, a focused rare plant survey determined that the federally listed endangered Coachella Valley milkvetch occurs within the study area with a population size of 18 individuals.

If you have any questions or comments regarding this letter report, please feel free to contact Mr. Lyndon Quon at (619) 233-1454.

Sincerely,

Lyndon Quon
Senior Wildlife Biologist

Attachments

References Cited:

Knecht 1980 Arnold A. Knecht. *Soil Survey of Riverside County, California: Coachella Valley Area.* United States Department of Agriculture, Soil Conservation Service. 1980, 89 pgs.

USFWS 1992 Desert tortoise field survey protocol for any Federal Action that may occur within the range of the desert tortoise. January. 23 pages.

nuary 1992

lace a 4 X 6 photograph showing the
rea where the transect was conducted)

M/D/Y
Date 5/20/02
Transect No. ____
State CA
County RIVERSIDE
City PALM SPRI
Recorder EISENBA
Address ____
Project Name ____
Type of Project ____
PRESENCE/ABSE
Quad Name DESERT HOT
Scale ____
Site Name INDIAN CA
T 3S R 4E Sec
¼ Sec ____ ¼¼ sec
UTM Zone ____
Northing ____
Easting ____
Parcel No. ____

no tortoise sign occurs on the project site
Zone of Influence, the summary form should
completed. Please fill in all sections on
e top 2/3 of the page of the summary form.

SUMMARY FORM
FOR PRESENCE-OR-ABSENCE AND CLEARANCE SURVEYS
FOR DESERT TORTOISE SIGN

Slope: high____ low____ Aspect____ Elevation____ft.
nd Form (e.g., mesa, bajada, wash)____
ils SAND
getation: dominant perennials SEE REPORT
other species____
dominant annuals____
other species____
jacent Land Use: immediate SEE REPORT
Within 1 mi.____
Soils____
Vegetation____

ather: Temperature - Air at 5 cm____°C Surface____°C Cloud cover 15 %
Wind speed 30+ Rainfall ___ in. Rainfall in last 30 days ___ in.

Corrected Sign	Live Tortoises Adult/Juv.	TOTAL NUMBER OF Shelter Sites Pallet/Burrow/Den Active/Inactive [1]	Scats [2]	Shell Remains [3]
∅	A= J=		M= F= Unk=	A= J= Unk=

Tracks	Eggshell Fragments	Drinking Sites	Courtship Rings	Other	Neotoma Middens w/sign	Neotoma Middens w/o sign
						6+

SIGNS OF HUMAN DISTURBANCE - NUMBER AND TYPES SEEN

Tire Tracks	Human Footprints	Dog Sign	Trash	Dump Sites	Shotgun/ Rifle Shells	Blading	Ravens	Other
FEW	∅	FEW	COMMON	FEW	FEW	OLD	2	SEE REPORT

STATE OF CALIFORNIA – THE RESOURCES AGENCY
ARNOLD SCHWARZENEGGER, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-6624
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

June 11, 2004

REPLY TO: FHWA040521A

David Bricker, Office Chief
Environmental Support/Cultural Studies
California Department of Transportation, District 8
464 West 4th Avenue, 6th Floor
SAN BERNARDINO CA 92401-1400

Re: Indian Canyon Drive Street and Bridge Widening Project, Palm Springs, Riverside County.

Dear Mr. Bricker:

Thank you for submitting to our office your May 17, 2004 letter and Historic Property Survey Report (HPSR) regarding the proposed Indian Canyon Drive street and bridge widening project in Palm Springs in Riverside County. The proposed project would widen Indian Canyon Road from two to three lanes between Palms Springs Station Road and Garnet Avenue. The existing bridge, which spans the Union Pacific Railroad tracks, will be widened on the west side. The Area of Potential Effects (APE), as depicted in the HPSR, appears adequate and meets the definition set forth in 36 CFR 800.16(d). An archeological resources record search conducted at the Eastern Information Center at the University of California, Riverside and the Southeast Information Center at Imperial Valley College Desert Museum and a pedestrian survey by qualified archeologists revealed no known archeological resources in the project APE.

Pursuant to stipulation VIII.C.5. of *the "Programmatic Agreement (PA) among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California"* (PA), Caltrans is seeking my comments on its determination of the eligibility of two pre-1957 structures for inclusion on the National Register of Historic Places. These properties have been identified as:

- Indian Canyon Drive Bridge (No. 56C0025);
- 6545 North Indian Canyon Drive, Palm Springs.

A review of the submitted HPSR leads me to concur with Caltran's determination that neither of the aforementioned properties is eligible for inclusion on the NRHP under any of the criteria established by 36 CFR 60.4. The properties have no strong associations with significant historical events or persons and are not examples of outstanding architectural or engineering design or function.

Thank you again for seeking my comments on your project. If you have any questions, please contact staff historian Clarence Caesar by phone at (916) 653-6902, or by e-mail at ccaesar@chp.parks.ca.gov.

Sincerely,

Stephen D. Mikesell
Acting State Historic Preservation Officer

ATTACHMENT 2

RESOLUTION

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM SPRINGS, CALIFORNIA, ADOPTING AND ORDERING THE FILING OF A MITIGATED NEGATIVE DECLARATION FOR THE INDIAN CANYON DRIVE AND BRIDGE WIDENING PROJECT, CITY PROJECT NO. 01-11, FEDERAL AID PROJECT NO. STPLN 5282(016) & BRLO 5282(017)

WHEREAS, the City of Palm Springs ("City") submitted an application to the Federal Highway Administration ("FHWA") for Federal Local Assistance Funds from the Surface Transportation Program Local (STPL) Program, and from the Bridge Replacement Local Off System (BRLO) Program to construct the Indian Canyon Drive and Bridge Widening Project, City Project No. 01-11, Federal Aid Project No. STPLN 5282(016) and BRLO 5282(017) ("Project"); and

WHEREAS, the Project will widen Indian Canyon Drive for a distance of approximately 4,000 feet south of its intersection with Garnet Avenue over the Union Pacific Railroad from two lanes to six lanes; and

WHEREAS, the Project is consistent with the Circulation Element of the 2007 Palm Springs General Plan Update, which identifies Indian Canyon Drive as a Major Thoroughfare in the Circulation Element; and

WHEREAS, the Project is listed on the Southern California Association of Governments ("SCAG") 2008 Regional Transportation Improvement Program ("RTIP") as Project ID # RIV990727, approved by the Federal Highway Administration and Federal Transit Administration on November 17, 2008; and

WHEREAS, the Project implements the goals and policies of the General Plan; and

WHEREAS, an Initial Study was prepared pursuant to the provisions of the California Environmental Quality Act ("CEQA"), Division 13 of the Public Resources Code of the State of California, beginning with §21000 (hereinafter "Act"); and

WHEREAS, pursuant to Section 21152 of the Act, on July 13, 2009, a Notice of Intent to Adopt a Mitigated Negative Declaration and Availability of Initial Study, and Notice of Opportunity for Public Hearing, was filed with the California State Clearinghouse; and

WHEREAS, the Initial Study and Mitigated Negative Declaration (IS/MND) was circulated for public comment from July 13 through August 12, 2009; and

WHEREAS, by the close of the public comment period on August 12, 2009, there were no requests for a Public Hearing submitted in response to the Notice of Opportunity for Public Hearing; and

WHEREAS, pursuant to Section 15202 of the CEQA Guidelines, Title 14, Division 6, Chapter 3, Article 13 "Review and Evaluation of EIRs and Negative Declarations", of the California Code of Regulations, CEQA does not require formal hearings at any stage of the environmental review process, and public comments may be restricted to written communications; and

WHEREAS, the IS/MND prepared for this project has concluded, and following public review, it has been determined that the Project will not have a significant effect on the environment with the adoption of avoidance and mitigation measures identified in the MND; and

WHEREAS, the City Council has carefully reviewed and considered all of the evidence presented in connection with the Project, including, but not limited to, the staff report, the IS/MND, and all written and oral testimony presented.

THE CITY COUNCIL OF THE CITY OF PALM SPRINGS DOES HEREBY RESOLVE AS FOLLOWS:

Section 1: The above recitals are all true and correct.

Section 2: The City Clerk of the City of Palm Springs, is hereby designated the custodian of the documents and other materials which constitute the record of proceedings upon which the City Council has based its decision. The custodian of the documents is located at 3200 E. Tahquitz Canyon Way, Palm Springs, California.

Section 3: Pursuant to Section 15063 of the CEQA Guidelines, a Mitigated Negative Declaration ("MND") of environmental impact was prepared and circulated for a 30-day public review period ending on August 12, 2009. The Mitigated Negative Declaration adequately analyzes the general environmental setting of the Project, its potentially significant environmental impacts, and the alternatives and mitigation measures related to each potentially significant environmental impact for the Project, and has determined that there are no potentially significant impacts associated with the Project.

Section 4: The Project implements the following goals and policies of the General Plan:

***Goal CR1**: Establish and maintain an efficient, interconnected circulation system that accommodates vehicular travel, walking, bicycling, public transit, and other forms of transportation.*

***Goal CR2**: Establish improved levels of service for efficient traffic flow and provide a safe circulation system.*

As stated in the Project's Statement of Purpose of Need, the Project will accomplish the following:

- Alleviate traffic congestion,
- Improve intraregional travel by improving "directional mobility"
- Improve local access to commercial and industrial areas within the City of Palm Springs, and
- Develop a transportation facility consistent with the Circulation Element of the General Plan.

***Policy CR2.2**: Make street improvements at problem intersections and bottleneck locations to improve specific traffic operations and safety, with all such improvements to be considered selectively on the basis of specific studies of the affected intersection and streets, and the impacts on the surrounding area and on pedestrian activity.*

As stated in the Project's Statement of Need, the Project will resolve the following:

- Capacity Deficiencies. The capacity of the roadway is limited by its inadequate size from its connection with the Interstate 10 interchange and bottleneck when the existing road narrows to one lane in each direction.

Section 5: The City Council has carefully reviewed and considered all of the evidence presented in connection with the Project, including, but not limited to, the staff report, the Initial Study and public comments received, the proposed Mitigated Negative Declaration, the proposed Environmental Commitment Record (otherwise known as a "Mitigation Monitoring and Reporting Program"), and all written and oral testimony presented. The City Council further finds that on the basis of the entire Project record, there is no substantial evidence that the Project will have a significant effect on the environment and that the Mitigated Negative Declaration reflects the City's independent judgment and analysis.

NOW, THEREFORE, BE IT RESOLVED, that based upon the foregoing, and pursuant to Section 15074 of the CEQA Guidelines, Title 14, Division 6, Chapter 3, Article 6 "Negative Declaration Process", of the California Code of Regulations, the City Council adopts and orders the filing of a Mitigated Negative Declaration, and approves the Environmental Commitment Record (otherwise known as a "Mitigation Monitoring and Reporting Program"), for the Indian Canyon Drive and Bridge Widening Project, City Project No. 01-11, Federal Aid Project No. STPLN 5282(016) and BRLO 5282(017).

ADOPTED this 4th day of November, 2009.

David H. Ready, City Manager

ATTEST:

James Thompson, City Clerk

CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF RIVERSIDE) ss.
CITY OF PALM SPRINGS)

I, JAMES THOMPSON, City Clerk of the City of Palm Springs, hereby certify that Resolution No. ____ is a full, true and correct copy, and was duly adopted at a regular meeting of the City Council of the City of Palm Springs on November 4, 2009, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

James Thompson, City Clerk
City of Palm Springs, California